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Tennessee Valley Authority's Payments in Lieu of Taxes

The Tennessee Advisory Commission on Intergovernmental Relations was directed by the Electric Generation and Transmission Cooperative Act of 2009 (Section 4 of Public Chapter 475, Acts of 2009) to monitor changes in the wholesale distribution of electric power by the Tennessee Valley Authority (TVA) and its distributors for possible effects on the Authority's payments in lieu of taxes (PILOTs) to the states in the Valley region. The Commission's report was to "include recommendations, if any, on adjustments to the state tax system that would keep the state and local governments whole from such future changes." The Act authorized the creation of nonprofit membership cooperatives to generate and transmit electricity in Tennessee. At the time, one such co-op already owned a power-generating facility in Mississippi, and the legislature was concerned that, having authorized them, they had opened the door to a potential decline in TVA's payments to the states if the co-ops began selling electricity directly to distributors.

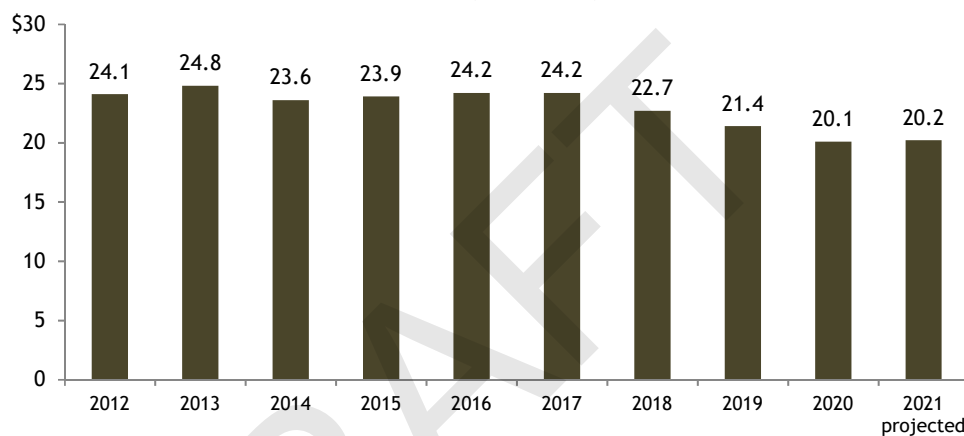
After considering a number of options, including those developed by the Commission,¹ the Tennessee General Assembly passed Public Chapter 1035, Acts of 2010, requiring payments equivalent to TVA's Tennessee PILOT from any other entity providing wholesale electric current for resale within the state, such as the electric generation and transmission cooperatives authorized in 2009. Public Chapter 1035 was designed to ensure that revenue from power sales in the TVA region would not depend on who produced that power or who sold it, and the Act put to rest immediate concerns about the potential loss of TVA revenue created by the 2009 law. The Act also renewed the requirement that the Commission monitor changes in wholesale power supply arrangements in TVA's service area that could affect TVA's payments to the state and its local governments and report to the General Assembly annually. This is the Commission's report for the 2021 legislative session.

Among the factors that could significantly affect TVA revenue, the possibility that distributors might opt out of their TVA contracts and obtain power from other sources occasionally reappears. TVA's largest municipal customer, Memphis Light, Gas, and Water (MLGW) is currently evaluating such a move, as is another Tennessee power provider, Volunteer Electric Cooperative. If a Tennessee distributor were to leave the TVA system, the overall effect on state and local revenue from TVA's PILOT and the equivalent payments required under the 2010 law would depend in part on the cost of wholesale power the distributor purchases from other providers. Regardless, local governments in the distributor's service area would see their share of this revenue decrease.

¹ Tennessee Advisory Commission on Intergovernmental Relations 2010.

Concerns about the problems created by TVA's debt ceiling, which has not been raised since 1979,² and the threat of privatization also reappear from time to time. Both were among the reasons given by power distributors in the region for seeking authorization to form the generation and transmission cooperatives authorized by the 2009 Act. TVA's debt ceiling remains \$30 billion, which because of inflation now has the approximate buying power that \$10 billion would have had in 1979,³ but the threat of privatization has diminished at least for the time being.⁴ Figure 1 shows the level of TVA's debt since 2012.

Figure 1. Tennessee Valley Authority Statutory Debt at Federal Fiscal Year End
(in billions)



Source: Tennessee Valley Authority 2016,a, 2019a 2020a, and 2020b.

To manage within its \$30 billion debt limit, TVA has adopted a number of innovative but by its own account costly financing techniques, some of which can alter the amount of PILOT revenue paid directly to states. The lease-and-lease-back technique used so far to finance the expansion of power production in Tennessee does not affect the amount of the PILOT paid directly to Tennessee, but the sale-and-lease-back technique used at one of its plants in Mississippi reduced the amount paid directly to that state, and the potential for the same exists throughout the region. The difference is in who owns the property and whether it is subject to state and local taxes.

Changes in TVA's supply system continue to affect the balance of PILOTs across the region. TVA has retired numerous coal-fired units at its power plants since 2012, while completing a second nuclear reactor at its Watts Bar facility in Rhea County and building or acquiring several new natural gas-fired facilities. In the states where these new or retired facilities are

² 16 United States Code 831 n-4(a).

³ US Department of Labor, Bureau of Labor Statistics "PPI Commodity Data for Fuels and Related Products and Power: Electric Power."

⁴ Sher 2018 and Collins 2018.

located, the changes have affected the value of TVA power property, one of two factors determining each state's share of the PILOT. TVA's investments in Tennessee combined with retirements in Alabama and Kentucky have generally more than offset coal-fired facility retirements in Tennessee in recent years, shifting the balance of the PILOT toward Tennessee. However, TVA's plan to retire its Bull Run facility in Anderson County by December 2023 will reduce that plant's value and could reduce Tennessee's share of the PILOT in future years unless it too is offset by increases in the value of TVA power property elsewhere in the state or by net reductions in other states.⁵

TVA's decision to make many of these changes predates but is consistent with the management strategy laid out in its 2019 Integrated Resource Plan (IRP).⁶ The 2019 IRP calls for closing a number of old coal-fired generating plants, continuing to use existing nuclear-powered facilities, building or acquiring plants powered by natural gas, expanding solar power capacity, as well as other renewables, and encouraging more energy efficiency. The plan's strategies for increasing energy efficiency, if successful, could reduce TVA revenues and ultimately the PILOT for all recipients, as could other factors, such as the economy and the weather.

Changes in TVA's wholesale power contracts with its distributors also affect TVA's power revenue and, therefore, the PILOT. Rebates for distributors included in a new long-term contract option made available in 2019 have reduced revenue TVA otherwise would have received, though the full effect of this rebate will depend on the number of distributors that opt into these contracts.⁷

None of these policy changes by TVA, nor the possibility that one or more of Tennessee's electric power distributors might leave the TVA system, appear to warrant legislative action at this time but should continue to be monitored.

After Three Years of Increases, TVA's Payments in Lieu of Taxes Decrease

TVA's actual payments in lieu of taxes for federal fiscal year 2019-20 amounted to \$552 million, of which, \$373 million was paid to Tennessee governments, including \$3.4 million in direct payments to counties.⁸ This

⁵ Email correspondence with Michelle Huffman, taxes program manager, Tennessee Valley Authority, December 21, 2020.

⁶ Tennessee Valley Authority 2019c.

⁷ As of September 30, 2020, 142 of TVA's 153 local power companies had opted to sign these contracts. See Tennessee Valley Authority 2020b.

⁸ Letter from Michelle Huffman, taxes program manager, Tennessee Valley Authority, to Amanda McGraw, Tennessee Department of Revenue, October 28, 2020.

was an increase of \$4 million over payments to all states in the previous fiscal year.

Payments for the current fiscal year, federal fiscal year 2020-21, are estimated to decrease \$52 million to a total of \$500 million.⁹ TVA's fiscal year 2019-20 revenue from sales of electricity to its local power company (LPC) and direct industrial customers, which determines the PILOT amount for 2020-21, decreased by \$1 billion from the year before, driven by mild weather, partnership credits to LPCs, and reduced demand for electricity resulting from business closures and temporary shutdowns in response to the COVID-19 pandemic starting in March 2020.¹⁰

Payments to Tennessee are estimated to decrease by \$33 million to a total of \$340 million, of which \$3.4 million will again be paid directly to counties, in federal fiscal year 2020-21.¹¹ However, for the third straight year Tennessee's percentage of the Authority's overall payments increased slightly, primarily because TVA retired the last remaining coal-fired unit at its Paradise facility in Kentucky in February 2020. This decreased the value of TVA power property in that state relative to the other states in the region.¹²

Total payments are based on 5% of prior-year gross proceeds¹³ from power sales, and funds are divided among the eight states in which TVA owns power property¹⁴ based both on revenues from power sold by TVA and on the value of TVA power property located in each state. Although TVA buys power from other sources, those purchases do not affect the amount each state receives from its PILOTs. See appendix A for an explanation of TVA's allocation formula, and figure 2 for how Tennessee's shares of power sales and property value have changed since 2013.

⁹ Federal fiscal year 2020-21 PILOT estimate provided by TVA; email from Rayna Ware, assistant director, financial control, Tennessee Department of Revenue, November 13, 2020. See table 1.

¹⁰ Tennessee Valley Authority 2020d.

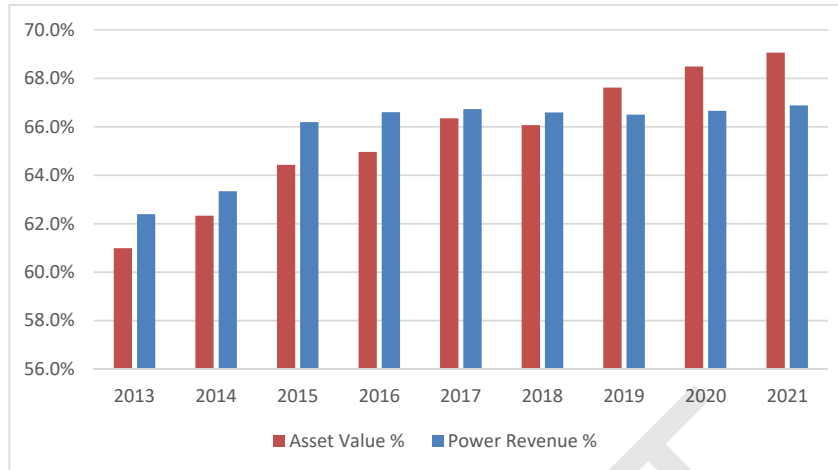
¹¹ Letter from Michelle Huffman, taxes program manager, Tennessee Valley Authority, to Amanda McGraw, Tennessee Department of Revenue, October 28, 2020.

¹² Email correspondence with Michelle Huffman, taxes program manager, Tennessee Valley Authority, December 17, 2020.

¹³ TVA interprets "gross proceeds" as the proceeds from the sale of power to municipalities, cooperatives, and industries. The TVA Act specifically excludes TVA's sales to federal agencies from the PILOT calculation.

¹⁴ TVA interprets "power property" to include facilities that generate electricity, property used to transmit electricity, coal assets, and a portion of the overall value of TVA's reservoir properties.

Figure 2. Tennessee's Share of TVA Power Revenue and Asset Value for PILOT Calculations, Federal Fiscal Year 2013-2021



Source: Michelle Huffman, taxes program manager, Tennessee Valley Authority.

Tennessee receives almost 68% of the total distributed through TVA's formula, a percentage that apart from fiscal year 2017-18 has been increasing since 2008-09. Past increases in this percentage helped offset what would have otherwise been larger decreases in TVA's payments to Tennessee in federal fiscal years 2015-16 and 2016-17. See table 1.

**Table 1. Tennessee Valley Authority Revenue Sharing
Distribution to Tennessee by Federal Fiscal Year (in millions)**

	2020-21*	2019-20	2018-19	2017-18	2016-17	2015-16
TVA's Overall PILOT	\$ 499.6	\$ 551.7	\$ 547.7	\$ 523.7	\$ 517.1	\$ 534.8
Tennessee's Percent	x 67.97%	67.58%	67.06%	66.33%	66.54%	65.78%
Tennessee's Amount	\$ 339.6	\$ 372.8	\$ 367.3	\$ 347.4	\$ 344.1	\$ 351.8
Direct Payment to Counties	- 3.4	3.4	3.4	3.4	3.4	3.4
Tennessee's Share	\$ 336.2	\$ 369.4	\$ 363.9	\$ 344.0	\$ 340.7	\$ 348.5

* Estimate based on unaudited gross receipts. TVA distributes payments monthly from October through August based on this estimate then makes a final payment for the fiscal year in September based on audited revenue figures. It is not unusual for the final payment to be adjusted upward from the original estimated amount.

Note: Share distributed to Tennessee may not equal amount allocated to state minus direct payments to counties because of rounding.

Source: Tennessee Valley Authority.

Tennessee's local governments continue to receive more than 40% of the amount TVA allocates to Tennessee for distribution through the state's own formula. Under Tennessee Code Annotated, Section 67-9-101 et seq., this formula distributes a portion of Tennessee's share to cities and counties with additional payments set aside for local governments in counties with TVA construction. The rest is reserved for the state. Distributions through the formula, which are calculated on a state fiscal year basis, are directly affected by the decreased total payment to Tennessee in federal fiscal year 2020-21 and by TVA construction projects. See appendix B for an explanation of Tennessee's allocation formula.

On a state fiscal year basis, the 2020-21 allocations—excluding impact payments that are set aside for local governments in counties with TVA construction—will decrease by \$7.5 million for counties, by \$3.2 million for cities, and by \$11.6 million for the state's own agencies. Impact payments related to TVA construction will decrease by \$389 thousand for counties and by \$287 thousand for cities because of recent project completions. Combined these amounts result in an overall decrease of about \$23 million from state fiscal year 2019-20, less than the full estimated decrease in payments to Tennessee for federal fiscal year 2020-21 because the state's fiscal year begins on July 1, three months earlier than the federal fiscal year. As a result, Tennessee's distribution to local governments and the state for state fiscal year 2020-21 includes TVA's payments for the last three months of federal fiscal year 2019-20, when the PILOT was larger. See appendixes C and D for the distribution to local governments within the state by county and city since state fiscal year 2013-14, excluding impact payments set aside for local governments in counties with TVA construction, which can be found in appendixes E and F.

Two factors related to the COVID-19 pandemic that began in March 2020 are reducing TVA's revenue from power sales in the current federal fiscal year 2020-21, revenue which will determine the PILOT amount TVA will distribute to states in federal fiscal year 2021-22 and, in turn, payments to Tennessee in the state's fiscal years 2021-22 and 2022-23. The first factor is a lower load forecast due to reduced demand for electricity from commercial and industrial customers whose business operations have been affected by the pandemic. While energy sales appear to have recovered to near-normal, uncertainties about health and the economy will continue in 2021.¹⁵ Second, at its August 2020 meeting, the TVA Board of Directors approved a \$200 million Pandemic Relief Credit "to help communities and businesses recover more quickly from the pandemic." TVA said a 2.5% base rate credit would be applied beginning in October 2020 and remain in effect through the end of federal fiscal year 2021 for all local power companies and direct industrial customers TVA serves.¹⁶

TVA's Efforts to Meet Power Needs and Remain Within Its Debt Limit

To meet the region's power demand, TVA must plan for both short-term and long-term fluctuations in the use of electricity while staying within its statutory debt limit of \$30 billion. The Authority has developed a number of strategies for managing its system to meet demand within these constraints. These strategies have and will continue to affect TVA's payments to Tennessee.

¹⁵ Tennessee Valley Authority 2020e.

¹⁶ Tennessee Valley Authority 2020f.

Short-Term System-Management Strategies

TVA meets short-term-demand increases that result from extreme weather by operating additional facilities that are used only in times of high demand, purchasing power from other utilities, and cutting off power to customers with interruptible contracts. These strategies enabled TVA to meet record power demands during a severe cold snap in January 2018. On January 17, “when temperatures fell into single digits in parts of the Tennessee Valley, TVA customers consumed more power than on any single day in the 85-year history of TVA.” Demand peaked at 32,513 megawatts Thursday morning, the sixth highest winter peak ever. TVA said it was able to handle the increased demand “by operating all of its available generation, buying power from independent power producers and other utilities and implementing some of its interruptible power contracts for customers who agree to curtail consumption during peak demand periods.” TVA spokesman Jim Hopson said, “It takes a collective effort of all of the power distributors and everyone at TVA to meet this unusually high demand.”¹⁷ As Hopson noted, managing peak demand can require temporarily cutting off power to customers that have agreed to allow TVA and its distributors to interrupt service to them during emergencies¹⁸ in exchange for credits on their power bills.¹⁹ One of TVA’s highest summertime peaks came in July 2017, with demand nearing 30,000 megawatts—the highest since the summer of 2012.²⁰ The utility was able to meet this demand even though a reactor at the Watts Bar nuclear plant was idle for repairs at the time.²¹ Extreme weather—in particular, prolonged periods of hotter or colder than normal temperatures—can affect the amount and distribution of TVA’s payments to the states, though individual events may be too short-lived to have a noticeable effect.

Long-Term System-Management Strategies

TVA’s long-term management strategies are laid out in its updated Integrated Resource Plan, which was approved by the TVA Board in August 2019.²² The update, a response to changes in the utility industry including lower-cost natural gas and renewables as well as increased energy conservation efforts,²³ analyzed five strategies for meeting demand within six future scenarios (see figure 3).

¹⁷ Flessner 2018d.

¹⁸ Flessner 2014.

¹⁹ Tennessee Valley Authority 2011.

²⁰ Franklin 2017.

²¹ Flessner 2017b.

²² Tennessee Valley Authority 2019c; and Tennessee Valley Authority “2019 Integrated Resource Plan.”

²³ Tennessee Valley Authority 2019e.

Figure 3. Planning Scenarios and Strategies Used in TVA's 2019 IRP

SCENARIOS		STRATEGIES	
1	CURRENT OUTLOOK which represents TVA's current forecast for these key uncertainties and reflects modest economic growth offset by increasing efficiencies;	A	BASE CASE which represents TVA's current assumptions for resource costs and applies a planning reserve margin constraint. This constraint applies in every strategy and represents the minimum amount of capacity required to ensure reliable power;
2	ECONOMIC DOWNTURN which represents a prolonged stagnation in the economy, resulting in declining loads (customers using less power) and delayed expansion of new generation;	B	PROMOTE DISTRIBUTED ENERGY RESOURCES which incents DER to achieve higher, long-term penetration levels. The DER options include energy efficiency, demand response, combined heat and power, distributed solar and storage;
3	VALLEY LOAD GROWTH which represents economic growth driven by migration into the Valley and a technology-driven boost to productivity, underscored by increased electrification of industry and transportation;	C	PROMOTE RESILIENCY which incents small, agile capacity to maximize operational flexibility and the ability to respond to short-term disruptions on the power system;
4	DECARBONIZATION which is driven by a strong push to curb greenhouse gas emissions due to concern over climate change, resulting in high CO ₂ emission penalties and incentives for non-emitting technologies;	D	PROMOTE EFFICIENT LOAD SHAPE which incents targeted electrification (by incentivizing customers to increase electricity usage in off-peak hours) and demand response (by incentivizing customers to reduce electricity usage during peak hours). This strategy promotes efficient energy usage for all customers, including those with low income;
5	RAPID DER ADOPTION which is driven by growing consumer awareness and preference for energy choice, coupled with rapid advances in technologies, resulting in high penetration of distributed generation, storage and energy management;	E	PROMOTE RENEWABLES which incents renewables at all scales (from utility size to residential) to meet growing or existing consumer demand for renewable energy.
6	NO NUCLEAR EXTENSIONS which is driven by a regulatory challenge to relicense existing nuclear plants and construct new, large-scale nuclear. This scenario also assumes subsidies to drive small modular reactor (SMR) technology advancements and improved economics.		

Source: Tennessee Valley Authority 2019c.

These strategies could affect the amount and distribution of the Authority's payments to the states in the future. TVA has been continually updating its generating system to meet the needs of the region's growing economy and tighter air-quality standards. As early as the 1960s and 1970s, TVA was investing heavily in nuclear power for both of these reasons. More recently, the Authority has invested in natural gas-powered facilities to meet periodic surges in demand caused by the weather. TVA's implementation of its long-term management strategies, which will affect the distribution of its PILOTs, will be affected by the economics of power production and the requirements of the Clean Air Act (CAA) and other environmental regulations as well as TVA's debt limit.

TVA's Debt Limit and Financing Arrangements

Earlier concerns about TVA's financing arrangements for new generating capacity in the region and their potential effects on PILOTs in the region and across the state have diminished as the Authority has modified its strategies. In order to stay within the \$30 billion debt ceiling imposed on it by the Congress in 1979,²⁴ TVA began using new financing methods,²⁵ some of which affected the distribution of PILOT funds for some states, including the amount those states had available to allocate to their counties and cities. One technique is the leasing of generating facilities, an approach TVA has no current plans to expand.²⁶

Shortly before the Electric Generation and Transmission Cooperative Act was passed in 2009, TVA entered into an agreement with a group of its distributors organized as the Seven States Power Corporation, a nonprofit company.²⁷ Seven States purchased an interest in TVA's Southaven, Mississippi, power plant with the agreement that TVA would continue to operate it. TVA later bought back all of Seven States' interest in the plant.²⁸ Under the sale-and-lease-back arrangement, while it was active, all sales of electricity produced at Southaven were through TVA and, therefore, were accounted for as TVA revenues and subject to the PILOT allocation to states.

Leasing arrangements such as the one used in Southaven during this agreement do not change the total amount of the PILOT under the TVA formula, nor do they change the allocation across states. Section 15d(g) of the Tennessee Valley Authority Act of 1933 says that

. . . power generating and related facilities operated by the Corporation under lease and lease-purchase agreements shall constitute power property held by the Corporation within the meaning of section 13 of this Act . . .

This provision causes facilities operated by TVA under leases to be included in the calculation of the value of power property under Section 13, which means that the value of TVA property in a state does not change when TVA sells a facility and then leases it back as the Authority did with Southaven.²⁹

²⁴ 16 United States Code 831 n-4(a).

²⁵ US General Accounting Office 2003.

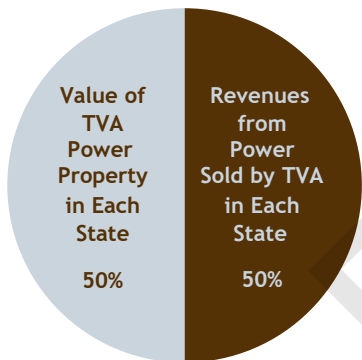
²⁶ Email from Bryan Johnson, senior program manager-taxes, Tennessee Valley Authority, October 29, 2019. For details on existing lease arrangements, see Tennessee Valley Authority 2020b.

²⁷ Tennessee Valley Authority 2009.

²⁸ Tennessee Valley Authority 2013a.

²⁹ Moreover, this means that when TVA leases a facility that it did not previously own, such as the Caledonia plant in Mississippi, the value of TVA power property in the state where the facility is located actually increases.

5% of TVA's Gross Proceeds Is Distributed to States Based on



Although the change in ownership of the Southaven plant did not affect the amount of TVA's PILOT allocated to each state, it did affect the PILOT distribution to the state of Mississippi. When TVA leases power property owned by other entities, it reduces the PILOT distributed to the state in which the property is located to the extent that it reimburses the plant owners for taxes they must pay to the state or local governments. This reduces the amount of TVA PILOT that goes through the state's own allocation formula. Section 15d(g) of the 1933 act goes on to say

. . . that portion of the payment due for any fiscal year under said section 13 to a state where such facilities are located which is determined or estimated by the Board to result from holding such facilities or selling electric energy generated thereby shall be reduced by the amount of any taxes or tax equivalents applicable to such fiscal year paid by the owners or others on account of said facilities to said state and to local taxing jurisdictions therein.

The initial sale-and-lease-back arrangement at the Southaven plant and the Authority's current lease arrangement at the privately-owned Caledonia plant, also in Mississippi, illustrate the effect of this second provision. Privately owned plants are subject to state and local taxes. Consequently, the portion of the TVA PILOT paid directly to Mississippi, related to Caledonia, was reduced by approximately \$1.2 million each in federal fiscal years 2018-19 and 2019-20, and by an estimated \$1.0 million in 2020-21.³⁰ This works much like the \$3+ million in direct payments TVA makes to counties in Tennessee. Direct payments are taken off the top of TVA's PILOT to each state, reducing the amount allocated through the state's statutory formula.

The amount allocated through Tennessee's formula, including the amount retained by the state in its general fund, would be reduced by any taxes paid on account of any plant operated through a sale-and-lease-back arrangement if that were to occur. Tennessee might want to mitigate that reduction by modifying its allocation formula to offset the direct payments of taxes by, for example, reducing the allocation to any particular jurisdiction by the amount of the reimbursement TVA made to the plant owners. It is possible, of course, that the reimbursement amount to those jurisdictions could be greater than the allocation through the state formula, so considerable thought would need to go into making such a change.

TVA chose a somewhat different leasing strategy to raise funds for generating expansions in Tennessee without approaching its debt ceiling. Thus far, arrangements in Tennessee have been lease-and-lease-back agreements, which do not jeopardize the amount of the PILOT controlled

³⁰ Email from Michelle Huffman, program manager-taxes, Tennessee Valley Authority, December 18, 2020; and Schoolfield 2017.

by Tennessee's allocation formula. An example is the natural gas combined cycle plant built between 2010 and 2012 in Hawkins County next to the John Sevier fossil plant and leased to a private company in January 2012. The company paid TVA \$1 billion for the lease and then leased the plant back to TVA for 30 years.³¹ This lease arrangement changes neither the ownership of the property nor TVA revenues and thus has no effect on the PILOT allocation across states or the amount distributed to Tennessee. Similarly, after repurchasing Seven States' 90% share of the Southaven plant, TVA then entered into a leasing arrangement with Southaven Combined Cycle Generation LLC in which the facility is leased to the company and, in turn, the facility is leased back to TVA.³²

Currently, TVA has no reported plans for any new lease arrangements in Tennessee, including sale-lease-back arrangements that would affect the state's share of the Authority's PILOT, in the short-term.³³ However, the possibility exists that TVA could use leasing strategies in the future to finance new construction if its debt limit remains capped at \$30 billion. In its most recent *Form 10-K* filed with the US Securities and Exchange Commission, TVA acknowledges its use of these innovative financing techniques and says that it may eventually seek similar arrangements. But it mentions no immediate plans to do so.³⁴

In the past, TVA has said that

while such leasing transactions allow TVA to diversify its asset financing program, financing an asset by using the proceeds of leasing transactions is typically more costly to TVA than financing an asset with the proceeds of Bonds.³⁵

In April 2015, TVA purchased Quantum Utility Generation's Choctaw combined-cycle natural gas plant near Ackerman, Mississippi. Although the purchase used traditional forms of financing, the acquisition allows for future ownership by Seven States Power Corporation, which could affect the PILOT depending on the type of sale or lease arrangement adopted.³⁶

Rebalancing Power Sources and Increasing Efficiency

As TVA continues to rebalance its generating fleet, the resulting changes could cause shifts in the value of power property from state to state and from county to county, which could affect each state's and county's share of TVA's PILOT. Many of these changes—consistent with environmental

³¹ Tennessee Valley Authority 2013a.

³² Tennessee Valley Authority 2013b.

³³ Email from Bryan Johnson, senior program manager-taxes, Tennessee Valley Authority, October 29, 2019.

³⁴ Tennessee Valley Authority 2020b.

³⁵ Tennessee Valley Authority 2013a.

³⁶ Tennessee Valley Authority 2015b.

mandates, the economics of power production, and the recommendations in TVA's 2019 IRP—involvement of the retirement of existing coal-fired units at TVA power plants. Because retired units are no longer used to produce power, TVA accelerates their depreciation so that only their residual value is included in the PILOT distribution formula.³⁷

Changes in TVA's generating fleet in recent years have generally increased the value of TVA power property in Tennessee relative to other states in the region.³⁸ Although since 2011 TVA has retired coal-fired units at its John Sevier plant in Hawkins County, its Johnsonville plant in Humphreys County, and its Allen plant in Memphis, the resulting reductions in these plants' values have been more than offset both by TVA's investments in its Tennessee facilities and by its retirement of additional coal-fired units and unfinished nuclear facilities in other states. During the same period, investments in TVA's Tennessee facilities include natural gas-fired units completed at its John Sevier plant and its Allen plant, a second nuclear unit completed at its Watts Bar plant in Rhea County, and ongoing construction at Boone Dam on the border of Sullivan and Washington counties. TVA has paid off debt remaining for its unfinished Bellefonte nuclear plant in Alabama and accelerated depreciation of that facility. TVA also retired coal-fired units at its Colbert and Widows Creek plants in Alabama and its Shawnee and Paradise plants in Kentucky, though it built new natural-gas fired units at Paradise. And as discussed above, TVA has already accelerated depreciation on the lone remaining coal-fired unit at its Paradise plant, which it retired in February 2020, decreasing the value of TVA power property in that state relative to others in the region, including Tennessee.³⁹

Future changes, however, could reduce Tennessee's share of TVA power property and the PILOT—which last occurred in 2017-18 when TVA's investments in new natural gas-fired units at Paradise shifted payments toward Kentucky⁴⁰—unless they are offset by increases in the value of TVA power property from investments in Tennessee or by net reductions in other states. In particular, TVA has announced it will retire the lone coal-fired unit at its Bull Run plant in Anderson County by December 2023.⁴¹ Because of this closure, "TVA needs to upgrade the transmission system to ensure power supply to the area remains reliable. Plans include

³⁷ Email from Stephen Schoolfield, senior program manager-taxes, Tennessee Valley Authority, January 6, 2016.

³⁸ Email from Bryan Johnson, senior program manager-taxes, Tennessee Valley Authority, October 29, 2019.

³⁹ Tennessee Valley Authority 2017b, 2018a, 2016f; Flessner 2017a; email from Bryan Johnson, senior program manager-taxes, Tennessee Valley Authority, December 13, 2018; Flessner 2018b; telephone interview with Bryan Johnson, senior program manager-taxes, Tennessee Valley Authority, October 25, 2019; Tennessee Valley Authority 2019b; Flessner 2020a.

⁴⁰ Email from Stephen Schoolfield, senior program manager-taxes, Tennessee Valley Authority, January 11, 2018.

⁴¹ Tennessee Valley Authority 2019b.

a new Anderson 500-kilovolt Substation on existing TVA property near the plant, modifications to transmission lines to connect the new substation to the grid, and improving existing transmission equipment in Anderson, Blount, Knox and Roane counties.”⁴² Any additional work that expands TVA property could help offset the loss of the Bull Run facility.

Shifts involving other types of power property similarly could affect the share of TVA’s PILOT that each state and county receives. For example, TVA has announced plans to relocate its power control center from an existing facility in Hamilton County to a new facility to be built in Meigs County. Construction began in July 2020 and is expected to continue through 2022, with the facility fully operational in 2024.⁴³ To the extent that investment in the new facility increases the value of TVA power property in Tennessee relative to other states, it would shift the balance of the PILOT toward Tennessee. Moreover, because a county’s direct payments from TVA are based on the power property TVA owns in it, the planned relocation has already resulted in an increase in direct payments to Meigs County for the land TVA has purchased there for the new facility. The relocation will not affect TVA’s direct payments to Hamilton County because TVA still owns the building in which the current power control center is located.⁴⁴

TVA’s 2019 IRP also calls for energy efficiency savings of up to 1,800 megawatts by 2028 and up to 2,200 megawatts by 2038.⁴⁵ Some of that improved efficiency will occur through upgrading power transmission and distribution systems; some will occur in private homes and businesses. As customers update their homes, commercial and industrial facilities, and electrical appliances and equipment, those changes reduce existing power demand, which could reduce TVA revenues and ultimately the PILOT for all recipients if the amount of electricity consumed does not continue to grow with the population and the economy.

TVA’s response to increases in energy efficiency includes a change to the way it charges local utilities for wholesale electric service, which it approved in May 2018. Describing the reason for its new rate structure in its 2018 *Form 10-K* filed with the US Securities and Exchange Commission, TVA said that

consistent with national trends, energy demand in the areas served by TVA . . . has been essentially flat over the past five years. TVA anticipates this trend to continue as

⁴² Tennessee Valley Authority. “Bull Run Fossil Plant.”

⁴³ Chattanooga 2020.

⁴⁴ Emails from Bryan Johnson, senior program manager-taxes, Tennessee Valley Authority, December 13, 2018 and December 2, 2019.

⁴⁵ Tennessee Valley Authority 2019c. By way of comparison, TVA’s combined-cycle natural gas plant in Ackerman, Mississippi, is capable of producing 705 megawatts of electricity, enough to power more than 400,000 homes; see, <https://www.tva.gov/Energy/Our-Power-System/Natural-Gas/Ackerman-Combined-Cycle-Plant>.

technological advances, consumer demand for generation, energy management technologies, and distributed energy increase. To accommodate this trend, TVA began working . . . on its long-term pricing and product development strategies in the fall of 2013. . . . At its May 10, 2018 meeting, the TVA Board approved a change to the structure of its wholesale electric power rates.⁴⁶

TVA's previous wholesale rate structure included a

- demand charge, based on a utility's peak monthly demand;
- energy charge, based on the kilowatt-hours used; and a
- separate adjustment for fuel costs.⁴⁷

The new rate structure added a grid access charge, which TVA says will "better recover fixed costs" of providing electricity and "reduce the variability in revenues caused by weather."⁴⁸ Some environmental and consumer groups criticized the new structure, saying that it reduces the potential savings to consumers from energy conservation and renewable energy and that it is "disproportionately burdensome to low-energy users and low-income ratepayers."⁴⁹ According to TVA, the change is intended to be revenue neutral, and the grid access charge will be "offset by a reduction to the energy charge."⁵⁰

The new rate structure did not result in major changes to the PILOT for federal fiscal year 2019-20. Of the then-154 municipal utilities and electric cooperatives in the region that purchase power from TVA, 79 switched to the new rate structure in October 2018, while the remainder switched in October 2019.⁵¹ Because the new rate structure is intended to be revenue neutral, TVA does not anticipate that it will result in substantive changes to either the overall amount of the PILOT or each state's share.⁵² All of the now-153⁵³ LPCs served by TVA operated under the new rate structure in federal fiscal year 2019-20, the revenue from which determined TVA's PILOT for federal fiscal year 2020-21. Revenue from grid access charges increased from \$257 million in FFY 2019 to \$597 million in 2020.⁵⁴ TVA has made no indication it intends to change the rate structure again in the near future.

⁴⁶ Tennessee Valley Authority 2018a.

⁴⁷ Ibid.

⁴⁸ Ibid.

⁴⁹ Flessner 2018a and 2018c.

⁵⁰ Tennessee Valley Authority 2018a.

⁵¹ Tennessee Valley Authority 2019b.

⁵² Telephone interview October 25, 2019, and email October 29, 2019, with Bryan Johnson, senior program manager-taxes, Tennessee Valley Authority; and Tennessee Valley Authority 2018a.

⁵³ Middle Tennessee Electric Member Corporation and the Murfreesboro Electric Department completed a merger effective July 1, 2020, reducing the number of LPCs to 153. See press release at <https://mtemc.com/your-cooperative/news-media/press-releases/med-merger-mte-finalized>.

⁵⁴ Tennessee Valley Authority 2020b.

Incentives in New Long-Term Wholesale Power Contracts

Changes in TVA's wholesale power contracts with its distributors can affect TVA's gross power revenue and, therefore, the PILOT. In August 2019, TVA approved a new long-term contract option that "better aligns the length of [distributor] contracts with TVA's long-term commitments."⁵⁵ The new contracts include rebates for distributors and flexibility for them to obtain renewable energy from sources other than TVA in exchange for a 20-year termination notice requirement.⁵⁶

The rebates in these new long-term contracts will reduce revenue TVA otherwise would have received, and they will reduce TVA's PILOT because they will be credited prior to TVA calculating its gross revenue from power sales.⁵⁷ The full effect of the rebates, however, will depend on the number of distributors that opt into these contracts. At the end of the most recent federal fiscal year, 142 of TVA's now-153 distributors had signed the new contracts.⁵⁸ If all distributors were to opt in, TVA's gross revenue reportedly would decrease by up to \$225 million,⁵⁹ and based on Commission staff calculations, the overall PILOT would decrease by up to \$11.3 million for the federal fiscal year, while Tennessee's share would decrease by up to \$7.6 million. Distributions through the state's formula would decrease by up to \$3.8 million for the state, \$2.6 million for counties, and \$1.1 million for cities, based on Commission staff calculations and distributions in state fiscal year 2019-20. Long-term Partnership credits reduced revenue by \$163 million in federal fiscal year 2020,⁶⁰ which reduces the total PILOT for 2021 by \$8.2 million and Tennessee's share by about \$5.5 million. Staff calculations based on TVA's revenue projections for federal fiscal year 2021 estimate the rebates will reduce revenue by approximately \$190 million, the total PILOT by \$9.5 million, and Tennessee's share by \$6.5 million.⁶¹

The provisions that grant distributors flexibility to obtain renewable energy from sources other than TVA either by generating it themselves or by purchasing it from other entities could also affect payments to Tennessee. As of November 16, 2020, 64 distributors had signed flexibility agreements as part of their long-term partnership contracts with TVA.⁶² These agreements allow for "generation of up to five percent of their average total hourly energy sales over the last five TVA fiscal years (FY 2015 to 2019), converted to capacity basis with a minimum availability of

⁵⁵ Tennessee Valley Authority 2019b.

⁵⁶ Tennessee Valley Authority 2019b and Flessner 2019b.

⁵⁷ Telephone interview with Bryan Johnson, senior program manager-taxes, Tennessee Valley Authority, October 15, 2019.

⁵⁸ Tennessee Valley Authority 2020b.

⁵⁹ Flessner 2019b.

⁶⁰ Tennessee Valley Authority 2020b.

⁶¹ See Tennessee Valley Authority 2020e for revenue projections.

⁶² Tennessee Valley Authority 2020b.

one MW per Valley Partner.”⁶³ TVA estimates that a total capacity of 800 MW could be developed if all its LPCs utilized their maximum allocation. (Applying a technology factor to solar installations to account for the difference between nameplate capacity and output could increase total installed capacity to 2,000 MW.)⁶⁴

To the extent that these provisions reduce the amount of power distributors would otherwise purchase from TVA, they too could reduce TVA power revenue and the PILOT, though TVA staff interviewed said it would be difficult to estimate their full effect.⁶⁵ Moreover, the effect on Tennessee revenue would depend in part on the cost of wholesale power that distributors purchased from entities other than TVA. While power purchased at wholesale from these entities would be subject to the equivalent payments required under Public Chapter 1035, Acts of 2010, power that a distributor generated itself for sale to its retail customers would not.⁶⁶ Regardless of the structure of these agreements, a number are in the early stages of development. Appalachian Electric Cooperative “is in the process of preparing to issue a preliminary solicitation and is looking at potential providers.”⁶⁷ BrightRidge, which provides power to Johnson City, Tennessee, is partnering with Silicon Ranch to build a 9 MW solar farm it hopes to have operating at the end of 2021.⁶⁸ Bolivar Energy Authority has also signed a contract with Silicon Ranch for a 3.45 MW solar project in Hardeman County, to be completed in 2022.⁶⁹ Power purchased from solar projects owned and operated by firms like Silicon Ranch is subject to the terms of Public Chapter 1035.

Potential for Changes in TVA's Customer Base

Federal law both prohibits TVA from expanding its service area and protects TVA from competitors. Although the prohibition on expansion—called the fence—makes it unlikely that TVA would be able to replace revenue lost if a distributor were to opt out of its contract and obtain power elsewhere, the protection from competition—called the anti-cherry-picking provision—creates potential hurdles for distributors leaving the TVA system. As described by TVA,

under the TVA Act, subject to certain minor exceptions, TVA may not, without the enactment of authorizing federal legislation, enter into contracts that would have the effect of

⁶³ Tennessee Valley Authority 2020g.

⁶⁴ Ibid.

⁶⁵ Telephone interview with Bryan Johnson, senior program manager-taxes, Tennessee Valley Authority, October 15, 2019.

⁶⁶ Email from Christin Lotz, research director, Tennessee Department of Revenue, October 28, 2019.

⁶⁷ Maloney 2020.

⁶⁸ Bates 2020.

⁶⁹ Silicon Ranch 2020.

making it, or the wholesale customers that distribute TVA power (“local power company customers” or “LPCs”), a source of power supply outside the area for which TVA or its LPCs were the primary source of power supply on July 1, 1957. This provision is referred to as the “fence” because it bounds TVA’s sales activities, essentially limiting TVA to power sales within a defined service area.

In addition, the Federal Power Act includes a provision that helps protect TVA’s ability to sell power within its service area. This provision, called the “anti-cherrypicking” provision, prevents the Federal Energy Regulatory Commission from ordering TVA to provide access to its transmission lines to others to deliver power to customers within TVA’s defined service area. As a result, the anti-cherrypicking provision reduces TVA’s exposure to loss of its customers. . . .

. . . However, other utilities may use their own transmission lines to serve customers within TVA’s service area, and third parties are able to avoid the restrictions on serving end-use customers by selling or leasing generating assets to a customer rather than selling electricity.⁷⁰

Distributors can opt out of their contracts with TVA subject to termination notice requirements of five, 10, or 20 years. Eleven distributors have contracts with 5-year notice requirements and 142 have 20-year requirements.⁷¹ A handful of distributors have left the TVA system in recent decades,⁷² though at least one has since returned.⁷³

Currently, Memphis Light, Gas and Water (MLGW)—which serves the cities and unincorporated areas of Shelby County and has a 5-year termination notice—is studying whether to leave the TVA system.⁷⁴ MLGW accounted for 9% of TVA revenue in federal fiscal year 2019-20,⁷⁵ and its departure would reduce TVA’s PILOT and the share allocated to Tennessee, though decreases in the state’s share could be at least partially offset by equivalent payments required under Public Chapter 1035, Acts of 2010. In August 2020, MLGW published an Integrated Resource Plan and announced their plan to issue requests for proposal (“RFPs”) to validate the cost estimates included in the IRP.⁷⁶ The IRP contained several

⁷⁰ Tennessee Valley Authority 2019b. Also see 16 US Code 831n-4; 16 US Code 824j; and 16 US Code 824k(j).

⁷¹ Tennessee Valley Authority 2020b.

⁷² Kentucky Municipal Power Agency 2018.

⁷³ McGee 2008.

⁷⁴ Tennessee Valley Authority 2019b and Memphis Light, Gas and Water 2019.

⁷⁵ Tennessee Valley Authority 2020b.

⁷⁶ Memphis Light, Gas, and Water 2020.

possible “portfolios” for MLGW to obtain power supply for its customers. These alternatives were compared with MLGW’s current contract with TVA and with a potential 20-year partnership agreement (e.g. including the 3.1% credit) across several performance metrics: least cost, reliability, resiliency, sustainability, etc. Most of the portfolios presented in the IRP involve a combination of MLGW generating some of its own power—by way of third-party construction of solar farms and natural gas combustion turbines—and purchasing the rest from the neighboring Midcontinent Independent System Operator (MISO) market. If MLGW chooses to end its contract with TVA, this combination of own-generation, third-party partnerships, and power purchase would determine the effect on PILOT calculation and allocation. However, at the time of this report, no decision has been made. In October, the Memphis city council rejected a contract between MLGW and its preferred consultant, leaving MLGW unable to proceed with RFPs it needs to make a choice.⁷⁷ Given the timeline proposed by that consultant and the five-year termination period, federal fiscal year 2028 would potentially be the first year of significantly reduced revenue, resulting in possible lower PILOT amounts for 2029 and beyond.

Another of Tennessee’s LPCs, Volunteer Energy Cooperative, is working with the North Georgia Electric Membership Cooperative to consider bids to purchase power from suppliers other than TVA.⁷⁸ Volunteer serves customers in parts of 17 counties and borders Kentucky to the north as well as Georgia to the south.⁷⁹

If MLGW or any other Tennessee distributor were to leave the TVA system, the overall effect on state and local revenue from TVA’s PILOT and the equivalent payments required under the 2010 law would depend in part on the cost of wholesale power purchased from other entities. As discussed above, power purchased at wholesale from entities other than TVA would be subject to the equivalent payments, but power that a distributor generated itself for sale to its retail customers would not.⁸⁰

For individual local governments in Tennessee, the effect on revenue from TVA’s PILOT and the equivalent payments would vary. Equivalent payments made pursuant to the 2010 law would be added to TVA PILOT revenue and allocated to local governments through the state’s TVA PILOT distribution formula. But local governments whose distributors leave TVA’s service area after March 8, 1990, are excluded from the portion of revenue distributed through the formula based on population, county

⁷⁷ Dries 2020.

⁷⁸ Flessner 2020b.

⁷⁹ Tennessee Valley Authority. “Volunteer Energy Cooperative.”

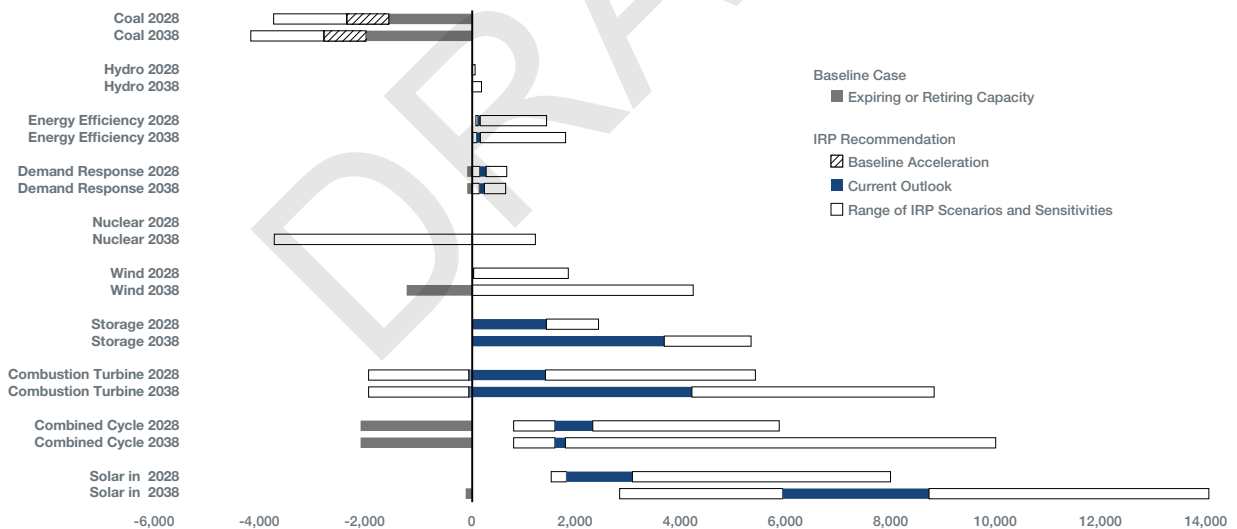
⁸⁰ Email from Christin Lotz, research director, Tennessee Department of Revenue, October 28, 2019.

acreage, or TVA acreage.⁸¹ As a result, revenue distributed to some local governments could increase even if overall revenue decreases because they would receive a larger individual percentage through the formula; however, local governments in the exiting distributor's service area would all see their shares decrease.

The Shift Away from Coal: Environmental and Business Reasons

Since the 1950s, coal-fired plants have been TVA's largest single source of power, but because of their age and changing air-quality requirements, the Authority is shifting emphasis from coal to other power sources (see figure 4 and appendix G). As its coal-fired power plants age, TVA must either retire them or install costly upgrades to meet new air-quality standards that tighten restrictions on the emission of particulates, sulfur dioxide, nitrogen oxides, mercury, lead, and carbon—the major byproducts of burning coal. The cost of upgrading existing coal-fired facilities, the relative cleanliness of other fuels, and the decreasing cost of natural gas have also resulted in a competitive advantage for other methods of generating electricity.

Figure 4. TVA Recommended Range of Capacity Changes in Megawatts by 2028 and 2038



Source: Tennessee Valley Authority 2019c.

⁸¹ Tennessee Code Annotated, Section 67-4-3101(f); Tennessee Code Annotated, Section 67-9-102(a); and email from Christin Lotz, research director, Tennessee Department of Revenue, October 28, 2019.

Fossil Plant Retirements Required by Environmental Agreements

To resolve a series of legal challenges brought under the Clean Air Act by several states, including Tennessee, and environmental groups, TVA entered into two settlements in April 2011 in which it agreed to retire 18 of its 59 coal-fired units before 2018. All of the affected units were retired prior to January 2018. They include two of four coal-fired units at TVA's John Sevier plant in Hawkins County, which as noted above were replaced by a combined-cycle gas plant on an adjacent site, all 10 coal-fired units at its Johnsonville plant in Humphreys County, and six of eight coal-fired units at its Widows Creek plant in Alabama.⁸² See table 2.

Table 2. Tennessee Valley Authority Coal-Fired Units Retired Under Environmental Agreements

Fossil Plant	Units Affected	Existing Scrubbers and SCRs* Prior to Agreements	Requirements Under Environmental Agreements	Retirements Implemented by TVA as a Result of Environmental Agreements
John Sevier	2 of 4	None	<ul style="list-style-type: none"> Retire two units no later than December 31, 2012 	<ul style="list-style-type: none"> Retired Units 1 and 2 on December 31, 2012
Johnsonville	10 of 10	None	<ul style="list-style-type: none"> Retire six units no later than December 31, 2015 Retire four units no later than December 31, 2017 	<ul style="list-style-type: none"> Retired Units 5-10 on December 31, 2015 Retired Units 1-4 on December 31, 2017
Widows Creek	6 of 8	None	<ul style="list-style-type: none"> Retire two of Units 1-6 no later than July 31, 2013 Retire two of Units 1-6 no later than July 31, 2014 Retire two of Units 1-6 no later than July 31, 2015 	<ul style="list-style-type: none"> Retired Units 3 and 5 on July 31, 2013 Retired Units 1, 2, 4, and 6 on July 31, 2014

* Selective catalytic reduction systems ("SCR")

Source: Tennessee Valley Authority 2014, 2017b, and 2018a.

Fossil Plant Retirements for Business Reasons

Because of the competitive advantage over coal of other methods of generating electricity, TVA has retired 16 additional coal-fired units since 2013 and plans to retire one more by the end of 2023. The units retired for business reasons included the two remaining coal-fired units at TVA's John Sevier plant in Hawkins County and one of the 10 units at its Shawnee plant in Kentucky in 2014, the last two units at its Widows Creek plant in Alabama in 2015, and all five coal-fired units at its Colbert plant in Alabama in 2016. TVA retired two of the three coal-fired units at its Paradise plant in Kentucky in 2017 and all three coal-fired units at the Allen plant in Memphis in 2018 following the completion of new natural gas-fired units at each site. TVA retired the remaining coal-fired unit at Paradise in February 2020 and plans to retire the lone unit at its Bull Run plant in Anderson County by December 2023.⁸³ See table 3.

⁸² Tennessee Valley Authority 2014, 2017b, and 2018a.

⁸³ Tennessee Valley Authority 2014, 2017b, 2018a, 2019b, and 2020b.

Table 3. Tennessee Valley Authority Coal-Fired Units Retired for Business Reasons

Fossil Plant	Units Affected	Existing Scrubbers and SCRs* Prior to Agreements	Requirements Under Environmental Agreements	Retirements Implemented or planned by TVA for Business Reasons
Allen	3 of 3	SCRs on all three units	<ul style="list-style-type: none"> • Install scrubbers or retire no later than December 31, 2018 	<ul style="list-style-type: none"> • New gas-fired plant built at site of Allen coal-fired plant began operation on April 30, 2018 • Retired Units 1-3 of coal-fired plant on March 31, 2018
Bull Run	1 of 1	Scrubber and SCRs on unit	<ul style="list-style-type: none"> • Continuously operate existing emission control equipment 	<ul style="list-style-type: none"> • Retire lone unit by December 2023
Colbert	5 of 5	SCR on Unit 5	<ul style="list-style-type: none"> • Remove from service, control, convert, or retire Units 1-4 no later than June 30, 2016 • Remove from service, control, or retire Unit 5 no later than December 31, 2015 • Control or retire removed from service units within three years 	<ul style="list-style-type: none"> • Retired Units 1-5 on April 16, 2016
John Sevier	2 of 4	None	<ul style="list-style-type: none"> • Remove from service two units no later than December 31, 2012 and control, convert, or retire those units no later than December 31, 2015 	<ul style="list-style-type: none"> • Retired Units 3 and 4 on June 25, 2014
Paradise	3 of 3	Scrubbers and SCRs on all three units	<ul style="list-style-type: none"> • Upgrade scrubbers on Units 1 and 2 no later than December 31, 2012 • Continuously operate emission control equipment on Units 1-3 	<ul style="list-style-type: none"> • New gas-fired plant built at site of Paradise coal-fired plant began operation on April 7, 2017 • Retired Units 1 and 2 of coal-fired plant on April 15, 2017 • Retired Unit 3 of coal-fired plant in February 2020
Shawnee	1 of 10	None	<ul style="list-style-type: none"> • Control, convert, or retire Units 1 and 4 no later than December 31, 2017 	<ul style="list-style-type: none"> • Retired Unit 10 on June 30, 2014
Widows Creek	2 of 8	Scrubbers and SCRs on Units 7 and 8	<ul style="list-style-type: none"> • Continuously operate existing emissions control equipment on Units 7 and 8 	<ul style="list-style-type: none"> • Retired Units 7 and 8 on September 30, 2015

* Selective catalytic reduction systems ("SCR")

Source: Tennessee Valley Authority 2014a, 2017b, 2018a, 2019b, and 2020b; Associated Press 2018.

TVA plans to continue operating 24 other coal-fired units. These include both units at its Cumberland plant in Stewart County, all four units at its Gallatin plant in Sumner County, all nine units at its Kingston plant in Roane County, and the nine remaining units at its Shawnee plant in Kentucky. TVA decided to add pollution control devices to two of the units at Shawnee and all four units at Gallatin rather than retire them—TVA had the option to control or retire these units under the environmental settlements it agreed to in 2011 and has now completed all requirements of these settlements.⁸⁴ See table 4.

⁸⁴ Tennessee Valley Authority 2017b and 2018a.

Table 4. Tennessee Valley Authority Coal-Fired Units that Continue to be Operated and Other Actions Taken or Planned

Fossil Plant	Units Affected	Existing Scrubbers and SCRs* Prior to Agreements	Requirements Under Environmental Agreements	Other Actions Taken or Planned
Cumberland	2 of 2	Scrubbers and SCRs on both units	<ul style="list-style-type: none"> Continuously operate existing emission control equipment 	<ul style="list-style-type: none"> Continuously operate existing emission control equipment
Gallatin	4 of 4	None	<ul style="list-style-type: none"> Control, convert, or retire all four units no later than December 31, 2017 	<ul style="list-style-type: none"> Added scrubbers and SCRs on all four units in 2016
Kingston	9 of 9	Scrubbers and SCRs on all nine units	<ul style="list-style-type: none"> Continuously operate existing emission control equipment 	<ul style="list-style-type: none"> Continuously operate existing emission control equipment
Shawnee	9 of 10**	None	<ul style="list-style-type: none"> Control, convert, or retire Units 1 and 4 no later than December 31, 2017 	<ul style="list-style-type: none"> Added scrubbers and SCRs on Units 1 and 4 in 2017; remaining units have none

* Selective catalytic reduction systems ("SCR")

** Unit 10 at Shawnee was idled in 2010 and retired. Tennessee Valley Authority "Shawnee Fossil Plant Emissions."

Source: Tennessee Valley Authority 2014, 2017b, 2018a, and 2020b.

While TVA has announced no further plans to retire or modify these units, its latest *Form 10-K* filing notes that, on October 13, 2020, the EPA published final revisions to its "existing steam-electric effluent limitation guidelines ("ELGs"), which regulate water discharge pollutants and require the application of certain pollutant control technologies." TVA says these stricter guidelines "will impact long-term investment decisions relative to the long-term compliance and operability" of its existing coal-fired generation facilities.⁸⁵

New Energy Sources to Meet the Region's Needs

As TVA retires existing coal-fired units, new energy sources—including natural gas, nuclear, wind, and solar—are being developed to meet the region's electricity needs. As noted above, new natural gas-fired units became commercially operational at TVA's Paradise plant in Kentucky in 2017 and at its Allen plant in Memphis in 2018. A second nuclear reactor at TVA's Watts Bar plant in Rhea County also became commercially operational in 2016.⁸⁶ While TVA cited no need for another large nuclear facility when it announced the sale of its unfinished Bellefonte nuclear plant in Alabama in November 2016,⁸⁷ it submitted an application with the US Nuclear Regulatory Commission earlier that year for the future placement of nuclear units known as small modular reactors at a site near Oak Ridge. That "Early Site Permit" was approved in 2019, though TVA says it has "no plans to build [small modular reactors] at this time."⁸⁸ The permit is valid through 2039, which TVA says provides it with "a great

⁸⁵ Tennessee Valley Authority 2020b.

⁸⁶ Tennessee Valley Authority 2016f.

⁸⁷ Tennessee Valley Authority 2016b.

⁸⁸ Tennessee Valley Authority 2016e and Flessner 2019a.

deal of flexibility to make new nuclear decisions based on energy needs and economic factors.”⁸⁹ TVA has contracts to purchase electricity from nine wind farms.⁹⁰ It owns 14 solar sites, including one at its Allen plant in Memphis that was completed in 2017.⁹¹ It has twelve solar power purchase contracts with providers in Tennessee, Alabama, and Mississippi. Three of these were providing power as of September 30, 2020, with one in Alabama to commence in 2021, one in Alabama and one in Tennessee to begin in 2022, and one in Mississippi and five in Tennessee to begin in 2023.⁹²

Several of these solar agreements have been made using TVA’s latest utility-scale program for renewable energy development, called “Green Invest.” In order to qualify for federal tax incentives for solar generation, these projects are built by private solar companies who sell the power generated to TVA for distribution to participants in the Green Invest program and other customers.⁹³ As such, revenue from these agreements does not affect the PILOT amount, and because the properties are not owned by TVA their location does not alter the balance of TVA property.

TVA continues to modify its renewable energy incentive programs both within the changing market for renewables, such as wind, solar, and hydroelectric, and as part of its ongoing effort to rebalance its generating system. These programs have no effect on TVA’s gross revenues, nor do they affect power sales in any state, and so have little to no effect on PILOTs to the several states. Participants continue to buy power from their local power companies and sell all of the power they generate through a system called dual metering to TVA. Their only potential effect would be the extent to which they reduce the Authority’s acquisition of new power property in any particular state.

TVA has in the past encouraged the private sector to develop small and medium renewable energy projects by buying electricity from participants in several programs. The Green Power Providers program buys power from homeowners and businesses who install small renewable energy projects—including solar, wind, biomass, and hydro—with individual capacities of 50 kilowatts or less.⁹⁴ Two other programs—Distributed Solar Solutions and the Renewable Standard Offer—purchase power from medium-sized projects.⁹⁵ Although TVA continues to purchase electricity

⁸⁹ Tennessee Valley Authority 2020b.

⁹⁰ Tennessee Valley Authority “Wind Energy Contracts.”

⁹¹ Tennessee Valley Authority 2017a; and Tennessee Valley Authority “Our Power System.”

⁹² Tennessee Valley Authority 2020b.

⁹³ Flessner 2020c.

⁹⁴ Tennessee Valley Authority “Green Power Providers.” A 50-kilowatt solar installation can provide enough power for approximately five average-sized homes in Tennessee; email from Grace Robertson, marketing manager, Lightwave Solar, February 23, 2015.

⁹⁵ Tennessee Valley Authority 2017b; Tennessee Valley Authority “Guidelines for Renewable Standard Offer”; and Tennessee Valley Authority “Guidelines for Distributed Solar Solutions (2017).”

from existing participants in these programs, it is no longer accepting new applicants for any of them.⁹⁶

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⁹⁶ Tennessee Valley Authority "Green Power Providers"; and Tennessee Valley Authority 2017b.

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Appendix A: TVA's Allocation Formula

Section 13 - In Lieu of Tax Payments Overview

Overview:

Section 13 of the TVA Act requires TVA to pay 'tax equivalent payments' to states in which its power operations are carried out and to counties in which it has acquired reservoir land, allocable to power purposes, or power properties that were formerly subject to local ad valorem taxation. Power operations are determined to be carried out if TVA has power sales and/or holds power property in a given state.

Calculation:

The total tax equivalent payments to be paid to the states and counties is determined by taking 5 percent of gross proceeds from the sale of power, from the prior fiscal year, (excluding sales to federal agencies, off-system sales, and interdivisional sales). The resulting amount is essentially the "bucket" of tax equivalent payments that are to be distributed to the states and counties which TVA carries out its power operations. Currently, the eight states in which TVA carries out its power operations are: Alabama, Georgia, Illinois, Kentucky, Mississippi, North Carolina, Tennessee, and Virginia. The percentage amount to be allocated to each state is determined by a two-part calculation; **1.)** 50 percent is based on the ratio of TVA power property within the respective state, compared to TVA's total net book value of power properties for the prior fiscal year, and **2.)** 50 percent is based on the ratio of power sales within the respective state, compared to TVA's total power sales for the prior fiscal year. The two percentages, calculated above, are then averaged and the resulting percentage is multiplied by the total "bucket" of tax equivalent payments to be distributed, and the resulting dollar amount represents the payments to be distributed to the respective state during TVA's fiscal year.

Direct Payments to counties:

The TVA Act also requires TVA to directly make payments to counties in which TVA has acquired/purchased reservoir land, allocable to power purposes, or power property from a privately owned and operated utility company. (E.g. TVA purchases a power plant from Southern Company in order to serve a given load in the TVA service territory. Whereas Southern Company has historically paid property taxes to the county in which this power property is located, TVA is not subject to taxation and therefore the county cannot levy property taxes for this power property. However, in an effort to keep the county whole, the TVA Act requires TVA to make payments "in-lieu" of taxes to the county.) The amount to be paid to the county is determined by taking the average of the prior two years property tax bills and the resulting amount is paid, annually, to the county for as long as TVA owns the property. In addition, any direct payments to a county reduce the amount paid directly to the state by TVA. While this reduces the total amount paid directly to the state, it doesn't change the overall tax equivalent payments that the state is due, determined above.

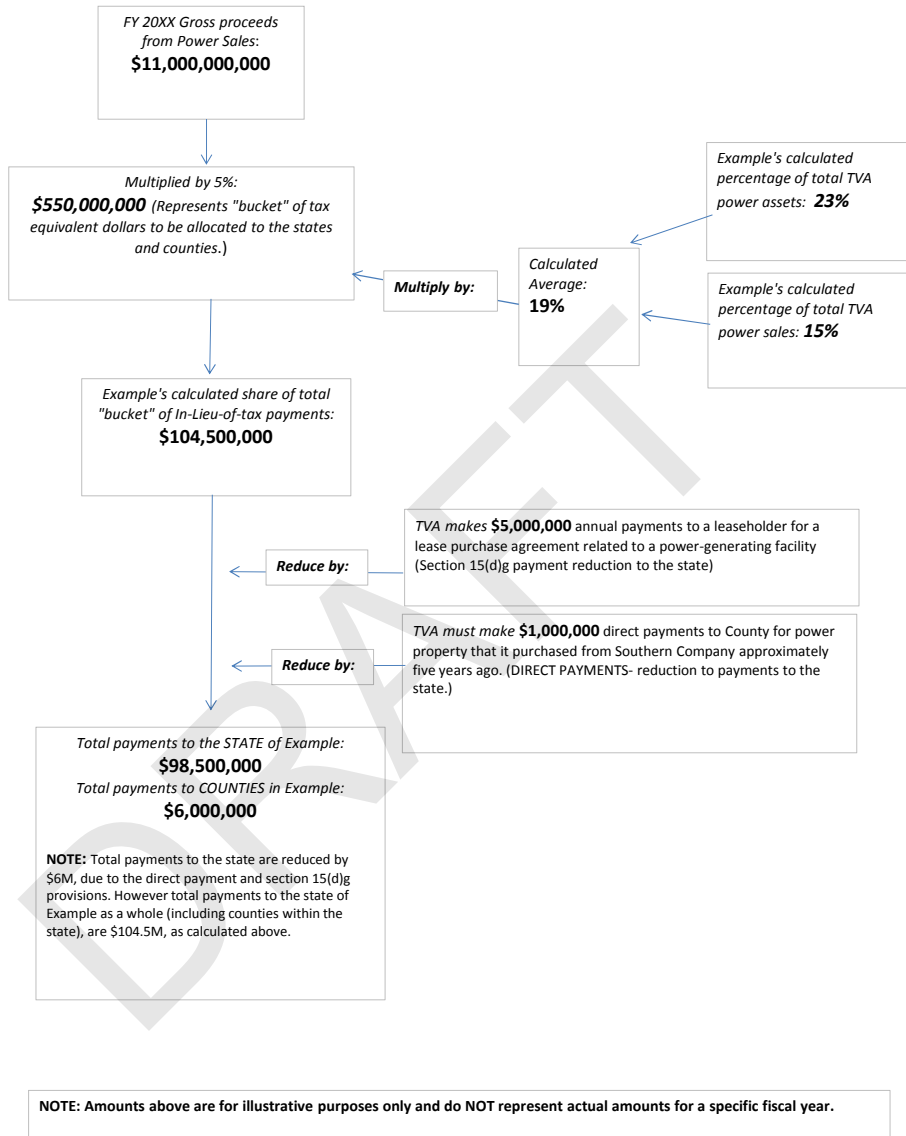
Section 15(d)g of the TVA Act:

This section recognizes that generating facilities operated by TVA under lease or lease purchase agreements constitute power property held by TVA within the meaning of Section 13. As such, any property taxes reimbursed by TVA to the leaseholder, as a result of the negotiated lease agreement, will reduce the overall amount owed to the state by TVA. This section essentially prevents a "double-dipping" on the tax payments to the county/state since TVA has already reimbursed the leaseholder for the property taxes.

Additional Facts:

- The TVA Board, each November, approves the estimated (based on unaudited financial numbers) payments, for the current fiscal year, to be paid during the months of October through August.
- In addition, the Board approves the "final" payment for September of the prior fiscal year which is based off audited financial data.
- Each state redistributes the tax equivalent payments to the counties based upon each state's individual legislation.
- Once TVA has remitted the tax equivalent payments to the individual states it has no authority to dictate how the monies are redistributed.

Example: State of Example's Tax Equivalent Payments for FY20XX



Source: Schoolfield 2017.

Appendix B: Tennessee's Allocation Formula

The TVA Act of 1933 (TVA Act) specifically directs that 5% of the Authority's "gross proceeds" be paid as payments in lieu of taxes (PILOTs) to states and local governments where the authority owns and operates property. (48 Stat. 58-59, 16 USC. § 831.) TVA interprets "gross proceeds" as their operating revenues from the sale of power to municipalities, cooperatives, and industries. The TVA Act specifically excludes sales to federal agencies from the PILOT calculation. Payments to each state are based on the amount of TVA-owned property and sales in each state. Tennessee's share based on those two factors has been more than 60% of the total each year since federal fiscal year 2010-11.

Each state determines its own method of distributing the payments. The following chart shows the formula used by the State of Tennessee in distributing the funds among the state government, its agencies, counties, and cities.

Tennessee Valley Authority (Tennessee State Revenue Sharing Act)

Title 67, Chapter 9, Part 1

From the Allocation of TVA Payments in Lieu of Taxes in Tennessee

(after direct payments to counties and 1977-78 base payment to state, counties, and cities)

	Basis of Apportionment (§67-9-101)	Proration to Counties and Municipalities (§67-9-102)
Paid to areas with TVA construction <i>(remainder allocated to CTAS, TACIR and Tennessee Central Economic Authority)</i>	3%	
Retained by the State	48.5%	
Paid to Local Governments	48.5%	
<i>Counties—70% of Local Share</i>		
• <i>Based on Percent of State Population</i>		30% <i>(14.55% of total)</i>
• <i>Based on Percent of State Land</i>		30% <i>(14.55% of total)</i>
• <i>Based on County's Percent of TVA Acreage in Tennessee</i>		10% <i>(4.85% of total)</i>
<i>Municipalities—30% of Local Share Based on Percent of State Population</i>		30% <i>(14.55% of total)</i>
Total Allocated by State	100%	

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Appendix C: Distribution of Counties' Share of TVA Payments in Lieu of Taxes to Tennessee by Tennessee Fiscal Year

County	2020-21	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
Anderson	\$ 1,161,579	\$ 1,240,594	\$ 1,209,200	\$ 1,148,257	\$ 1,140,471	\$ 1,173,627	\$ 1,157,568	\$ 1,107,511
Bedford	810,094	871,080	853,927	806,433	800,352	826,171	813,673	774,647
Benton	1,731,788	1,856,422	1,822,570	1,725,938	1,714,385	1,766,920	1,741,324	1,662,030
Bledsoe	507,635	545,815	525,639	496,430	492,676	508,555	500,872	476,869
Blount	1,483,920	1,593,273	1,538,002	1,454,729	1,443,998	1,489,557	1,467,505	1,398,641
Bradley	1,083,356	1,164,376	1,121,118	1,059,194	1,051,291	1,084,953	1,068,668	1,017,788
Campbell	1,330,786	1,428,757	1,392,427	1,316,850	1,307,542	1,348,530	1,328,569	1,266,520
Cannon	378,197	405,909	391,265	370,065	367,340	378,865	373,289	355,867
Carroll	804,059	865,172	832,797	786,049	780,040	805,454	793,157	754,741
Carter	863,123	927,466	879,608	831,239	825,098	851,393	838,655	798,916
Cheatham	578,715	614,263	591,333	558,137	553,870	571,916	563,184	535,905
Chester	409,882	441,037	424,574	400,739	397,676	410,633	404,364	384,777
Claiborne	955,457	1,025,956	1,005,159	950,425	943,604	973,360	958,919	913,968
Clay	284,598	306,230	294,798	278,249	276,122	285,118	280,766	267,166
Cocke	769,632	822,801	795,345	754,642	749,426	771,553	760,844	727,398
Coffee	991,625	1,066,873	1,027,328	969,841	962,603	993,854	978,703	931,481
Crockett	369,375	397,448	382,618	361,141	358,381	370,056	364,407	346,771
Cumberland	1,074,162	1,155,766	1,112,664	1,050,235	1,042,213	1,076,151	1,059,729	1,006,632
Davidson	4,733,171	5,088,979	4,900,954	4,628,778	4,593,798	4,741,771	4,670,173	4,446,488
Decatur	646,256	691,692	658,650	624,479	620,217	638,793	629,779	601,716
DeKalb	422,309	454,404	438,393	413,787	410,625	424,001	417,529	397,308
Dickson	834,653	897,964	864,514	816,079	809,854	836,184	823,445	783,642
Dyer	787,458	847,311	815,685	769,896	764,011	788,979	776,934	739,302
Fayette	977,492	1,051,342	1,011,838	955,036	947,735	978,614	963,673	916,995
Fentress	629,153	676,975	651,704	615,119	610,417	630,305	620,682	590,617
Franklin	1,279,143	1,371,158	1,183,321	1,120,924	1,113,088	1,147,012	1,130,560	1,079,303
Gibson	946,514	1,018,457	980,440	925,401	918,328	948,247	933,771	888,542
Giles	826,366	888,733	855,804	808,090	801,957	827,896	815,345	776,135
Grainger	1,001,043	1,071,128	1,036,650	983,113	976,602	1,005,707	991,550	947,604
Greene	1,134,096	1,219,325	1,172,530	1,107,440	1,099,096	1,134,480	1,117,355	1,063,869
Grundy	464,716	499,725	481,224	454,442	450,999	465,559	458,514	436,505
Hambleton	915,171	981,718	946,369	895,606	889,305	916,902	903,504	861,818
Hamilton	3,502,196	3,760,660	3,658,020	3,458,866	3,433,751	3,542,017	3,489,550	3,326,019
Hancock	273,673	294,472	283,481	267,569	265,524	274,174	269,989	256,913
Hardeman	867,772	933,732	899,025	848,556	842,070	869,506	856,231	814,757
Hardin	1,095,765	1,175,850	1,146,888	1,085,003	1,077,274	1,110,917	1,094,593	1,043,767
Hawkins	1,308,016	1,393,622	1,356,948	1,291,118	1,282,909	1,318,698	1,301,342	1,247,268
Haywood	683,490	735,421	707,991	668,267	663,010	684,599	674,151	641,516
Henderson	867,765	933,604	893,489	843,627	837,362	864,648	851,486	810,501
Henry	1,748,274	1,875,847	1,777,904	1,682,427	1,670,799	1,722,705	1,697,459	1,619,085
Hickman	806,363	866,351	834,577	788,690	782,792	807,737	795,667	757,959
Houston	423,568	454,519	440,770	417,012	414,070	426,986	420,714	401,205
Humphreys	1,576,576	1,687,868	1,648,788	1,562,903	1,552,477	1,599,168	1,576,452	1,505,955
Jackson	392,603	422,445	406,675	383,846	380,911	393,322	387,317	368,556
Jefferson	1,035,256	1,100,173	1,055,684	1,006,702	1,000,580	1,027,208	1,014,289	974,060
Johnson	507,043	543,332	521,881	494,271	490,759	505,769	498,499	475,815
Knox	3,605,000	3,870,233	3,735,811	3,532,625	3,506,590	3,617,045	3,564,161	3,397,172
Lake	225,180	242,296	233,251	220,157	218,474	225,592	222,148	211,388
Lauderdale	670,631	721,589	694,284	655,321	650,313	671,477	661,229	629,212
Lawrence	912,944	982,111	945,560	892,645	885,845	914,610	900,692	857,208

Appendix C: Distribution of Counties' Share of TVA Payments in Lieu of Taxes to Tennessee by Tennessee Fiscal Year (continued)

County	2020-21	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
Lewis	372,714	400,798	385,957	364,473	361,711	373,390	367,739	350,084
Lincoln	812,383	873,683	841,293	794,397	788,370	813,863	801,528	762,990
Loudon	1,145,913	1,212,826	1,189,182	1,137,478	1,131,078	1,159,187	1,145,537	1,103,081
Macon	462,467	497,620	479,044	452,186	448,729	463,349	456,275	434,174
Madison	1,231,304	1,324,771	1,275,651	1,204,133	1,194,946	1,233,824	1,214,961	1,156,193
Marion	1,219,655	1,302,034	1,242,589	1,180,630	1,172,933	1,206,616	1,190,264	1,139,383
Marshall	598,395	643,170	619,527	585,272	580,870	599,491	590,481	562,331
Maury	1,192,117	1,281,766	1,249,817	1,180,372	1,171,466	1,209,217	1,190,947	1,133,882
McMinn	914,021	977,685	944,436	895,732	889,511	915,988	903,169	863,151
McNairy	749,089	806,027	775,931	732,372	726,774	750,453	738,589	702,813
Meigs	792,830	849,100	833,143	789,534	779,845	803,409	791,935	756,365
Monroe	1,634,647	1,743,996	1,679,319	1,596,020	1,585,671	1,630,983	1,608,999	1,540,592
Montgomery	1,699,016	1,828,069	1,759,965	1,661,232	1,648,543	1,702,216	1,676,246	1,595,111
Moore	231,641	248,748	216,533	204,769	203,279	209,673	206,575	196,911
Morgan	685,407	737,230	709,774	670,131	664,854	686,398	675,974	643,406
Obion	774,607	833,471	802,361	757,329	751,541	776,021	764,176	727,170
Overton	590,181	635,041	611,335	577,016	572,606	591,262	582,235	554,033
Perry	679,910	729,051	703,299	665,771	661,077	681,478	671,581	640,758
Pickett	196,494	211,430	203,537	192,111	190,643	196,854	193,849	184,459
Polk	817,050	866,641	832,290	794,851	790,102	810,455	800,594	769,837
Putnam	890,097	957,698	921,975	870,259	863,646	891,761	878,158	835,657
Rhea	1,178,824	1,259,320	1,219,463	1,157,939	1,150,431	1,183,879	1,167,614	1,117,108
Roane	1,591,843	1,697,315	1,687,870	1,604,918	1,594,781	1,639,940	1,620,023	1,551,797
Robertson	929,055	999,490	962,217	908,258	901,323	930,656	916,354	872,017
Rutherford	2,391,830	2,571,699	2,476,705	2,338,930	2,321,247	2,396,046	2,359,854	2,246,782
Scott	688,257	740,572	712,926	672,904	667,760	689,517	678,990	646,101
Sequatchie	375,261	403,100	388,389	367,092	364,355	375,932	370,330	352,829
Sevier	1,278,590	1,374,699	1,323,002	1,249,557	1,240,164	1,280,090	1,260,762	1,200,413
Shelby	7,172,587	7,702,525	7,422,378	7,016,977	6,964,888	7,185,270	7,078,634	6,745,491
Smith	489,395	524,664	510,067	482,866	479,384	494,172	487,014	464,662
Stewart	2,861,905	3,066,904	2,946,487	2,791,312	2,772,961	2,857,324	2,816,181	2,688,874
Sullivan	1,792,441	1,924,751	1,891,853	1,788,290	1,775,264	1,831,340	1,804,161	1,719,425
Sumner	1,682,567	1,809,384	1,739,358	1,642,536	1,624,332	1,676,777	1,651,393	1,572,119
Tipton	871,659	937,835	902,844	852,219	845,712	873,233	859,917	818,315
Trousdale	215,953	230,477	223,026	211,912	210,501	216,542	213,616	204,485
Unicoi	312,350	336,068	323,508	305,365	303,033	312,896	308,124	293,214
Union	1,101,418	1,177,314	1,126,542	1,069,374	1,062,503	1,093,583	1,078,448	1,031,532
Van Buren	340,091	365,362	353,285	333,888	331,407	341,952	336,847	320,909
Warren	784,319	840,784	796,824	754,461	749,031	772,074	760,921	726,089
Washington	1,188,742	1,277,167	1,231,386	1,163,691	1,155,001	1,191,801	1,173,993	1,118,365
Wayne	875,682	942,190	906,454	855,624	849,097	876,736	863,361	821,581
Weakley	834,728	898,081	864,107	815,671	809,450	835,781	823,040	783,237
White	594,614	639,166	618,027	583,823	579,453	598,047	589,045	560,941
Williamson	1,839,894	1,978,126	1,902,192	1,796,604	1,783,034	1,840,433	1,812,660	1,725,892
Wilson	1,359,603	1,461,825	1,407,649	1,329,458	1,319,411	1,361,917	1,341,350	1,277,095
Total	\$ 102,129,184	\$ 109,601,944	\$ 105,652,995	\$ 99,936,128	\$ 99,201,346	\$ 102,309,124	\$ 100,805,418	\$ 96,107,481

Appendix D: Distribution of Cities' Share of TVA Payments in Lieu of Taxes to Tennessee by Tennessee Fiscal Year

City	2020-21	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
Adams	\$ 7,236	\$ 7,786	\$ 7,496	\$ 7,178	\$ 7,142	\$ 7,428	\$ 7,337	\$ 7,003
Adamsville	25,340	27,258	26,248	25,139	25,015	26,012	25,693	24,530
Alamo	28,136	30,275	29,149	27,912	27,773	28,886	28,529	27,233
Alcoa	96,577	103,918	100,053	95,807	95,330	99,149	97,925	93,477
Alexandria	11,042	11,881	11,439	10,954	10,899	11,336	11,196	10,687
Algood	39,950	42,986	41,388	39,632	39,434	41,014	40,508	38,667
Allardt	7,247	7,798	7,508	7,189	7,153	7,440	7,348	7,014
Altamont	11,945	12,853	12,375	11,850	11,791	12,263	12,112	11,561
Ardmore	13,865	14,919	14,364	13,755	13,686	14,235	14,059	13,420
Arlington	151,078	162,561	156,516	137,094	136,411	141,876	140,125	133,759
Ashland City	59,736	64,277	61,886	51,493	51,236	53,289	52,631	50,240
Athens	153,977	165,670	159,514	152,751	151,990	158,074	156,125	149,039
Atoka	108,293	116,525	112,191	107,430	94,630	98,422	97,207	92,791
Atwood	10,722	11,537	11,108	10,636	10,583	11,007	10,872	10,378
Auburntown	3,075	3,309	3,186	3,050	3,035	3,157	3,118	2,976
Baileyton	4,927	5,301	5,104	4,887	4,863	5,058	4,995	4,768
Baneberry	5,510	5,928	5,708	5,466	5,438	5,656	5,586	5,333
Bartlett	645,691	694,770	668,931	640,545	637,351	662,887	654,705	604,217
Baxter	15,603	16,789	16,164	15,478	15,401	16,018	15,821	15,102
Bean Station	34,909	37,562	36,165	34,631	34,458	35,839	35,257	33,656
Beersheba Spring	5,452	5,867	5,649	5,409	5,382	5,598	5,529	5,277
Bell Buckle	5,715	6,150	5,921	5,670	5,641	5,868	5,795	5,532
Belle Meade	33,286	35,816	34,484	33,021	32,856	34,172	33,751	32,217
Bells	27,856	29,974	28,859	27,634	27,497	28,598	28,245	26,962
Benton	15,831	17,035	16,401	15,705	15,627	16,253	16,052	15,323
Berry Hill	11,008	11,844	11,404	10,920	10,865	6,302	6,224	5,941
Bethel Springs	8,207	8,831	8,503	8,142	8,101	8,426	8,322	7,944
Big Sandy	7,046	7,530	7,276	6,996	6,964	7,216	7,135	6,842
Blaine	21,215	22,828	21,979	21,046	20,941	21,780	21,511	20,534
Bluff City	20,259	21,765	20,972	20,101	20,003	20,787	20,536	19,623
Bolivar	61,919	66,626	64,148	61,426	61,120	63,569	62,784	59,932
Braden	3,223	3,468	3,339	3,198	3,182	3,309	3,268	3,120
Bradford	12,003	12,913	12,434	11,907	11,848	12,322	12,170	11,618
Brentwood	501,677	539,809	519,734	458,127	455,842	474,106	429,531	410,018
Brighton	31,263	33,639	32,388	31,013	30,859	32,095	31,699	30,259
Bristol	308,781	331,981	319,767	306,349	304,839	316,910	313,042	298,983
Brownsville	117,808	126,750	122,043	116,871	116,289	120,942	119,451	114,032
Bruceston	16,894	18,179	17,502	16,760	16,676	17,344	17,130	16,352
Bulls Gap	8,436	9,077	8,739	8,369	8,327	8,660	8,554	8,165
Burlison	4,858	5,227	5,033	4,819	4,795	4,987	4,926	4,702
Burns	16,780	18,056	17,384	16,646	16,563	17,227	17,014	16,241
Byrdstown	9,179	9,876	9,509	9,106	9,060	9,423	9,307	8,884
Calhoun	5,601	6,027	5,803	5,556	5,529	5,750	5,679	5,421
Camden	40,944	44,057	42,418	40,618	40,416	42,035	41,516	39,630
Carthage	26,359	28,362	27,308	26,149	26,018	27,061	26,727	25,513
Caryville	26,256	28,252	27,201	26,047	25,917	26,955	26,623	25,413
Cedar Hill	3,589	3,862	3,718	3,561	3,543	3,685	3,639	3,474
Celina	17,089	18,388	17,704	16,953	16,868	17,544	17,327	16,540
Centertown	2,778	2,989	2,878	2,755	2,742	2,852	2,816	2,688
Centerville	41,811	44,977	43,310	41,479	41,273	42,921	42,393	40,474
Chapel Hill	16,517	17,773	17,112	16,386	16,304	16,957	16,748	15,987
Charleston	7,441	8,007	7,709	7,382	7,345	7,639	7,545	7,202
Charlotte	14,117	15,190	14,625	14,004	13,934	14,493	14,314	13,664

Appendix D: Distribution of Cities' Share of TVA Payments in Lieu of Taxes to Tennessee by Tennessee Fiscal Year (continued)

City	2020-21	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
Chattanooga	1,959,629	2,105,311	2,028,614	1,944,355	1,934,875	2,010,675	1,986,387	1,898,099
Church Hill	77,008	82,861	79,780	76,394	76,013	79,059	78,083	74,536
Clarksburg	4,492	4,834	4,654	4,456	4,434	4,612	4,555	4,348
Clarksville	1,519,503	1,634,997	1,574,193	1,507,393	1,499,878	1,559,970	1,540,715	1,470,723
Cleveland	472,674	508,544	489,660	468,913	466,579	485,242	479,262	457,524
Clifton	30,794	33,135	31,902	30,549	30,396	31,614	31,224	29,805
Clinton	114,618	123,169	118,667	113,722	113,165	117,614	116,189	111,007
Coalmont	9,613	10,344	9,959	9,537	9,489	9,869	9,747	9,305
Collegedale	94,668	101,864	98,075	93,914	93,445	97,189	95,990	91,629
Collierville	520,663	560,239	539,403	516,514	513,938	534,530	527,932	503,948
Collinwood	11,225	12,078	11,629	11,135	11,080	11,524	11,382	10,864
Columbia	402,328	432,461	416,597	399,169	397,208	412,886	407,863	389,602
Cookeville	356,108	383,176	368,926	353,270	351,509	365,593	361,080	344,676
Coopertown	48,900	52,617	50,660	48,510	48,268	50,202	49,583	47,330
Copperhill	4,046	4,354	4,192	4,014	3,994	4,154	4,103	3,917
Cornersville	13,648	14,686	14,139	13,539	13,472	14,012	13,839	13,210
Cottage Grove	1,006	1,082	1,042	998	993	1,033	1,020	974
Covington	103,310	111,162	107,028	102,486	101,975	106,061	104,752	99,993
Cowan	20,105	21,614	20,819	19,946	19,848	20,633	20,382	19,467
Crab Orchard	8,596	9,249	8,905	8,527	8,485	8,825	8,716	8,320
Cross Plains	19,592	21,081	20,297	19,436	19,339	20,114	19,866	18,963
Crossville	132,183	142,231	136,941	124,984	124,361	129,343	127,747	119,432
Crump	16,323	17,564	16,910	16,193	16,112	16,758	16,551	15,799
Cumberland City	16,721	16,992	16,849	16,693	16,676	16,816	16,771	16,607
Cumberland Gap	5,647	6,076	5,850	5,602	5,574	5,797	5,726	5,465
Dandridge	32,953	35,396	34,110	32,697	32,538	33,809	33,402	31,921
Dayton	84,749	90,997	87,708	84,094	83,688	86,938	85,897	82,110
Decatur	18,266	19,654	18,924	18,121	18,030	18,753	18,521	17,680
Decaturville	9,986	10,739	10,343	9,907	9,858	10,250	10,124	9,668
Decherd	27,009	29,060	27,980	26,794	26,660	27,727	27,385	26,142
Dickson	166,178	178,809	172,159	164,853	164,032	170,604	168,498	160,843
Dover	16,197	17,428	16,780	16,068	15,988	16,629	16,423	15,677
Dowelltown	4,058	4,366	4,204	4,026	4,005	4,166	4,115	3,928
Doyle	6,138	6,605	6,359	6,089	6,059	6,302	6,224	5,941
Dresden	34,349	36,960	35,585	34,075	33,905	35,264	34,828	33,246
Ducktown	5,430	5,842	5,625	5,386	5,359	5,574	5,505	5,255
Duntlap	55,061	59,245	57,042	54,622	54,350	56,527	55,829	53,294
Dyer	26,759	28,793	27,722	26,546	26,413	27,472	27,133	25,900
Dyersburg	195,977	210,874	203,031	194,415	193,446	201,197	198,713	189,686
Eagleville	6,904	7,429	7,153	6,849	6,815	7,088	7,000	6,682
East Ridge	239,802	258,030	248,433	237,891	236,705	246,189	243,150	232,104
Eastview	8,059	8,671	8,349	7,994	7,954	8,273	8,171	7,800
Elizabethton	163,329	175,645	169,161	162,037	161,236	167,644	165,591	158,127
Elkton	6,607	7,109	6,845	6,554	6,522	6,783	6,699	6,395
Englewood	18,702	20,034	19,333	18,563	18,476	19,169	18,947	18,140
Enville	2,160	2,325	2,238	2,143	2,132	2,218	2,191	2,091
Erin	15,134	16,284	15,679	15,013	14,939	15,537	15,345	14,648
Erwin	69,717	75,014	72,225	69,161	68,816	71,573	70,690	67,479
Estill Springs	25,888	27,673	26,733	25,700	25,584	26,513	26,215	25,133
Ethridge	5,315	5,719	5,507	5,273	5,247	5,457	5,389	5,145
Etowah	39,893	42,925	41,329	39,575	39,377	40,955	40,450	38,612
Fairview	91,468	98,420	94,760	90,739	90,286	90,594	89,476	85,411
Farragut	259,200	278,902	268,529	257,134	255,852	242,633	239,638	228,751
Fayetteville	78,089	84,020	80,898	77,467	77,081	80,167	79,178	75,584
Finger	3,406	3,665	3,529	3,379	3,362	3,497	3,454	3,297
Forest Hills	57,610	61,989	59,684	57,151	56,866	59,144	58,414	55,761
Franklin	810,662	872,269	839,835	804,202	748,991	778,995	769,381	691,474
Friendship	7,641	8,221	7,915	7,580	7,542	7,844	7,747	7,395

**Appendix D: Distribution of Cities' Share of TVA Payments in Lieu of Taxes to Tennessee
by Tennessee Fiscal Year (continued)**

City	2020-21	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
Friendsville	10,436	11,229	10,812	10,353	10,301	10,714	10,582	10,101
Gadsden	5,372	5,781	5,566	5,330	5,303	5,515	5,447	5,200
Gainesboro	10,996	11,832	11,392	10,909	10,854	11,289	11,150	10,643
Gallatin	394,046	423,998	408,229	390,906	388,957	355,313	350,927	334,984
Galloway	7,773	8,364	8,053	7,711	7,672	7,980	7,881	7,523
Garland	3,543	3,813	3,671	3,515	3,498	3,638	3,593	3,430
Gates	7,396	7,958	7,662	7,337	7,300	7,593	7,499	7,158
Gatlinburg	45,082	48,509	46,705	44,723	44,500	46,283	45,712	43,635
Germantown	458,629	493,490	475,137	454,974	452,706	470,844	465,032	443,906
Gibson	4,527	4,871	4,689	4,490	4,468	4,647	4,590	4,381
Gilt Edge	5,452	5,867	5,649	5,409	5,382	5,598	5,529	5,277
Gleason	16,517	17,773	17,112	16,386	16,304	16,957	16,748	15,987
Goodlettsville	181,986	195,819	188,537	180,536	179,636	186,833	184,527	176,144
Gordonsville	13,865	14,919	14,364	13,755	13,686	14,235	14,059	13,420
Grand Junction	3,715	3,997	3,849	3,685	3,667	3,814	3,767	3,596
Graysville	17,169	18,474	17,787	17,032	16,947	17,626	17,408	16,618
Greenback	12,162	13,087	12,600	12,065	12,005	12,486	12,332	11,772
Greenbrier	73,533	79,122	76,180	72,947	72,583	75,491	74,560	71,172
Greeneville	172,384	185,471	178,581	171,012	170,160	176,969	174,788	166,857
Greenfield	24,942	26,837	25,839	24,743	24,619	25,606	25,290	24,141
Gruettli-Laager	20,724	22,299	21,470	20,558	20,456	21,276	21,013	20,058
Guys	5,327	5,732	5,518	5,284	5,258	5,469	5,401	5,156
Halls	25,776	27,735	26,704	25,571	25,443	26,462	26,136	24,948
Harriman	75,582	81,100	78,195	75,004	74,645	77,516	76,596	73,252
Harrogate	50,169	53,982	51,975	49,769	49,521	51,505	50,869	48,558
Hartsville	27,079	29,137	28,054	26,863	26,729	27,800	27,457	26,210
Henderson	72,116	77,597	74,711	71,541	71,184	74,036	73,122	69,800
Hendersonville	587,212	631,846	608,348	582,532	579,628	602,851	595,410	568,360
Henning	10,802	11,623	11,191	10,716	10,662	11,090	10,953	10,455
Henry	5,304	5,707	5,495	5,262	5,235	5,445	5,378	5,134
Hickory Valley	1,132	1,218	1,172	1,123	1,117	1,162	1,147	1,095
Hohenwald	43,198	46,463	44,744	42,856	42,644	44,342	43,798	41,820
Hollow Rock	8,207	8,831	8,503	8,142	8,101	8,426	8,322	7,944
Hornbeak	6,093	6,556	6,312	6,044	6,014	6,255	6,178	5,897
Hornsby	3,463	3,727	3,588	3,436	3,419	3,556	3,512	3,352
Humboldt	96,615	103,958	100,092	95,845	95,367	99,188	97,964	93,513
Huntingdon	45,551	49,013	47,190	45,188	44,963	46,764	46,187	44,089
Huntland	9,967	10,725	10,326	9,888	9,839	10,233	10,107	9,647
Huntsville	18,095	19,470	18,746	17,950	17,861	18,577	18,023	17,204
Jacksboro	23,090	24,845	23,921	22,906	22,792	23,705	23,412	22,349
Jackson	746,960	803,618	773,789	741,019	737,332	766,812	757,366	723,030
Jamestown	22,393	24,095	23,198	22,214	22,103	22,989	22,705	21,674
Jasper	37,984	40,871	39,351	37,681	37,493	38,995	38,514	36,278
Jefferson City	97,478	104,855	100,971	96,705	96,225	100,063	98,833	94,363
Jellico	26,919	28,965	27,888	26,704	26,571	27,636	27,295	26,055
Johnson City	724,876	779,745	750,858	719,123	715,553	744,102	734,954	701,702
Jonesborough	57,736	62,124	59,814	57,276	56,990	59,274	58,542	55,882
Kenton	14,643	15,756	15,170	14,526	14,453	15,033	14,847	14,173
Kimball	15,946	17,158	16,520	15,819	15,740	16,370	16,168	15,434
Kingsport	586,092	630,641	607,187	581,421	578,522	601,701	594,274	567,165
Kingston	70,648	75,804	73,090	70,108	69,772	72,455	71,595	68,471
Kingston Springs	31,503	33,897	32,637	31,252	31,096	32,342	31,942	30,491
Knoxville	2,082,150	2,237,563	2,155,743	2,065,855	2,055,742	2,136,605	2,110,695	2,016,510
Lafayette	51,140	55,028	52,981	50,733	50,480	52,502	51,854	49,499
Lafollette	85,390	91,868	88,458	84,711	84,289	87,660	86,580	82,654
Lagrange	1,520	1,636	1,575	1,508	1,501	1,561	1,541	1,471
Lakeland	142,082	152,882	147,196	140,950	140,247	145,866	144,066	137,521
Lakesite	20,872	22,459	21,624	20,706	20,603	21,428	21,164	20,202

Appendix D: Distribution of Cities' Share of TVA Payments in Lieu of Taxes to Tennessee by Tennessee Fiscal Year (continued)

City	2020-21	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
La Vergne	393,372	423,272	407,531	369,531	367,689	382,421	377,700	360,541
Lawrenceburg	119,198	128,258	123,488	118,248	117,659	122,373	120,862	115,371
Lebanon	374,931	403,370	388,398	371,949	370,099	308,125	304,331	290,541
Lenoir City	100,307	107,816	103,863	99,520	99,032	102,938	101,687	97,136
Lewisburg	127,552	137,196	132,119	126,541	125,914	130,931	129,324	123,479
Lexington	87,666	94,314	90,814	86,969	86,536	89,995	88,887	84,858
Liberty	3,543	3,813	3,671	3,515	3,498	3,638	3,593	3,430
Linden	10,386	11,175	10,759	10,303	10,252	10,662	10,531	10,053
Livingston	46,385	49,911	48,055	46,016	45,786	47,621	47,033	44,896
Lobelville	10,253	11,033	10,622	10,172	10,121	10,526	10,396	9,924
Lookout Mountain	20,941	22,533	21,695	20,774	20,670	21,499	21,233	20,269
Loretto	19,592	21,081	20,297	19,436	19,339	20,114	19,866	18,963
Loudon	64,781	69,456	66,994	64,290	63,986	66,419	65,639	62,806
Louisville	45,951	49,444	47,605	45,585	45,357	47,175	28,268	26,984
Luttrell	12,276	13,210	12,718	12,179	12,118	12,603	12,448	11,882
Lynchburg	6,612	7,109	6,847	6,560	6,527	6,786	6,703	6,402
Lynnville	3,336	3,586	3,454	3,310	3,294	3,424	3,382	3,231
Madisonville	52,318	56,294	54,201	51,901	51,642	53,711	53,048	50,638
Manchester	115,472	124,249	119,628	114,551	113,980	118,547	117,084	111,765
Martin	131,556	141,524	136,276	130,511	129,862	135,049	133,387	127,346
Maryville	314,753	338,677	326,081	312,244	310,687	323,135	319,147	304,648
Mason	18,392	19,790	19,054	18,245	18,154	18,882	18,649	17,801
Maury City	7,704	8,290	7,982	7,643	7,605	7,909	7,812	7,457
Maynardville	27,582	29,679	28,575	27,362	27,226	28,317	27,967	26,697
McEwen	20,157	21,677	20,877	19,997	19,898	20,690	20,436	19,515
McKenzie	60,696	65,310	62,881	60,213	59,912	62,313	61,544	58,748
McLemoresville	4,024	4,329	4,168	3,992	3,972	4,131	4,080	3,894
McMinnville	155,772	167,592	161,369	154,532	153,763	159,913	157,943	150,779
Medina	55,118	59,308	57,102	54,679	49,487	51,470	50,834	38,490
Medon	2,583	2,780	2,676	2,563	2,550	2,652	2,619	2,500
Memphis	7,591,343	8,153,386	7,857,488	7,532,413	7,495,841	7,788,276	7,694,573	7,353,958
Michie	6,755	7,269	6,999	6,702	6,668	6,935	6,850	6,539
Middleton	8,070	8,683	8,360	8,006	7,966	8,285	8,183	7,811
Milan	89,742	96,563	92,972	89,026	88,582	92,132	90,994	86,860
Milledgeville	3,029	3,259	3,138	3,005	2,990	3,110	3,071	2,932
Millersville	73,613	79,208	76,263	73,026	72,662	75,573	74,641	71,250
Millington	127,245	136,917	131,825	126,231	125,602	130,634	129,022	115,526
Minor Hill	6,138	6,605	6,359	6,089	6,059	6,302	6,224	5,941
Mitchellville	2,160	2,325	2,238	2,143	2,132	2,218	2,191	2,091
Monteagle	13,625	14,661	14,116	13,517	13,449	13,988	13,815	13,188
Monterey	32,645	35,121	33,818	32,386	32,224	33,513	33,100	31,599
Morrison	7,933	8,536	8,218	7,870	7,830	8,144	8,044	7,678
Morristown	333,053	358,368	345,041	330,399	328,751	341,923	337,703	322,361
Moscow	6,355	6,838	6,584	6,305	6,273	6,525	6,444	6,151
Mosheim	26,999	29,051	27,971	26,784	26,650	27,718	27,376	26,132
Mount Carmel	62,057	66,774	64,290	61,562	61,255	63,709	62,923	60,064
Mount Juliet	358,646	385,907	371,555	319,309	317,717	330,446	284,515	271,590
Mount Pleasant	58,583	63,008	60,678	52,086	51,828	53,890	53,230	50,828
Mountain City	28,931	31,130	29,972	28,700	28,557	29,701	29,335	28,002
Munford	69,841	75,149	72,355	69,284	66,874	69,553	68,695	65,574
Murfreesboro	1,405,796	1,512,580	1,456,362	1,237,287	1,231,123	1,280,412	1,264,619	1,207,209
Nashville	5,148,424	5,539,230	5,333,483	4,876,338	4,852,060	5,046,186	4,983,984	4,757,875
New Hope	12,368	13,308	12,813	12,269	12,208	12,697	12,541	11,971
New Johnsonville	22,787	24,482	23,590	22,610	22,499	23,381	23,099	22,071
New Market	15,248	16,407	15,797	15,127	15,051	15,655	15,461	14,759
New Tazewell	34,715	37,353	35,964	34,438	34,266	35,639	35,199	33,600
Newbern	37,870	40,748	39,233	37,568	37,380	38,878	38,398	36,654
Newport	79,531	85,565	82,388	78,898	78,505	81,645	80,639	76,982

**Appendix D: Distribution of Cities' Share of TVA Payments in Lieu of Taxes to Tennessee
by Tennessee Fiscal Year (continued)**

City	2020-21	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
Niota	9,662	10,287	9,958	9,597	9,556	9,881	9,777	9,399
Nolensville	126,845	136,487	131,411	89,990	89,541	93,129	67,930	64,844
Normandy	1,612	1,734	1,670	1,599	1,591	1,655	1,634	1,560
Norris	18,620	20,036	19,291	18,472	18,380	19,116	18,880	18,023
Oak Hill	53,598	57,672	55,527	53,171	52,906	55,025	54,346	50,107
Oak Ridge	338,542	364,025	350,609	335,870	334,212	347,471	343,222	327,779
Oakdale	2,423	2,607	2,511	2,404	2,392	2,488	2,457	2,345
Oakland	75,705	81,459	78,430	75,101	74,727	77,721	76,762	73,274
Obion	12,791	13,763	13,251	12,689	12,626	13,131	12,969	12,380
Oliver Springs	36,932	39,739	38,262	36,638	36,455	37,916	37,448	35,747
Oneida	42,888	46,147	44,431	42,546	42,334	44,030	43,486	41,511
Orlinda	9,819	10,565	10,172	9,741	9,692	10,080	9,956	9,504
Orme	1,440	1,550	1,492	1,429	1,422	1,479	1,460	1,394
Palmer	7,681	8,265	7,958	7,620	7,582	7,886	7,789	7,435
Paris	116,089	124,913	120,267	115,164	114,590	119,181	117,710	112,362
Parkers Crossroads	3,772	4,059	3,908	3,742	3,723	3,873	3,825	3,651
Parrottsville	3,006	3,235	3,114	2,982	2,967	3,086	3,048	2,910
Parsons	27,619	29,680	28,595	27,403	27,268	28,341	27,997	26,748
Pegram	23,924	25,743	24,785	23,734	23,615	24,561	24,258	23,156
Petersburg	6,599	7,071	6,823	6,549	6,518	6,764	6,686	6,399
Philadelphia	7,498	8,068	7,768	7,439	7,402	7,698	7,603	7,258
Pigeon Forge	67,155	72,259	69,572	66,619	66,287	68,943	68,092	64,999
Pikeville	18,380	19,777	19,042	18,234	18,143	18,870	18,637	17,790
Piperton	22,975	24,722	19,326	18,506	18,414	16,957	16,748	15,987
Pittman Center	5,738	6,174	5,945	5,692	5,664	5,891	5,818	5,554
Plainview	24,290	26,136	25,164	24,096	23,976	24,937	24,629	23,510
Pleasant Hill	6,435	6,925	6,667	6,384	6,352	6,607	6,525	6,229
Pleasant View	48,260	51,928	49,997	47,875	46,813	48,689	48,088	45,903
Portland	131,223	141,197	135,946	130,177	129,528	134,718	133,055	127,010
Powells Crossroads	15,111	16,260	15,655	14,991	14,916	15,514	15,322	14,626
Pulaski	89,959	96,796	93,197	89,242	88,797	92,355	91,215	87,071
Puryear	7,670	8,253	7,946	7,609	7,571	7,874	7,777	7,424
Ramer	3,646	3,924	3,778	3,617	3,599	3,743	3,697	3,529
Red Bank	133,178	143,301	137,971	132,116	131,458	136,725	135,037	128,902
Red Boiling Springs	12,711	13,677	13,168	12,610	12,547	13,049	12,888	12,303
Ridgely	20,518	22,077	21,256	20,354	20,253	21,064	20,804	19,859
Ridgeside	4,458	4,797	4,618	4,422	4,400	4,577	4,520	4,315
Ridgetop	23,478	25,263	24,323	23,291	23,175	21,991	21,720	20,733
Ripley	96,531	103,869	100,006	95,762	95,285	99,102	97,879	93,432
Rives	3,726	4,010	3,860	3,697	3,678	3,826	3,778	3,607
Rockford	9,785	10,528	10,137	9,707	9,658	10,045	9,921	9,470
Rockwood	63,577	68,409	65,865	63,070	62,756	65,270	64,464	61,536
Rocky Top	20,858	22,405	21,590	20,696	20,595	21,400	21,142	20,204
Rogersville	50,523	54,363	52,342	50,121	49,871	51,869	51,229	48,901
Rossville	12,094	13,013	10,670	10,217	10,166	7,792	7,696	7,346
Rutherford	13,157	14,157	13,630	13,052	12,987	13,507	13,340	12,734
Rutledge	14,848	15,977	15,383	14,730	14,657	15,244	15,056	14,372
Saltito	6,710	7,220	6,951	6,656	6,623	6,888	6,803	6,494
Samburg	2,480	2,669	2,570	2,461	2,448	2,547	2,515	2,401
Sardis	4,355	4,686	4,512	4,320	4,299	4,471	4,416	4,215
Saulsberry	1,280	1,378	1,326	1,270	1,264	1,314	1,298	1,239
Savannah	80,012	86,078	82,884	79,376	78,981	82,137	81,126	77,449
Scotts Hill	11,248	12,103	11,653	11,158	11,102	11,547	11,405	10,887
Selmer	50,254	54,074	52,063	49,854	49,605	51,593	50,956	48,641
Sevierville	169,253	182,118	175,345	167,904	167,067	173,760	171,616	163,819
Sharon	10,830	11,650	11,218	10,744	10,690	11,117	10,980	10,483
Shelbyville	236,396	254,064	244,762	234,544	233,394	242,587	239,641	228,934
Signal Mountain	95,594	102,860	99,035	94,832	94,359	98,140	96,929	92,525

Appendix D: Distribution of Cities' Share of TVA Payments in Lieu of Taxes to Tennessee by Tennessee Fiscal Year (continued)

City	2020-21	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
Silerton	1,269	1,365	1,314	1,259	1,252	1,303	1,287	1,228
Slayden	2,035	2,189	2,108	2,018	2,008	2,089	2,063	1,969
Smithville	51,781	55,716	53,644	51,368	51,112	53,160	52,503	50,118
Smyrna	543,193	584,481	562,744	538,864	536,177	469,095	463,305	442,257
Sneedville	15,854	17,059	16,425	15,728	15,649	16,276	16,076	15,345
Soddy Daisy	145,328	156,375	150,559	144,170	143,451	149,199	147,357	140,663
Somerville	35,366	38,054	36,639	35,084	34,909	36,308	35,860	34,231
South Carthage	15,111	16,260	15,655	14,991	14,916	15,514	15,322	14,626
South Fulton	26,908	28,953	27,876	26,693	26,560	27,624	27,283	26,044
South Pittsburg	34,520	37,119	35,751	34,247	34,078	35,430	34,997	33,422
Sparta	58,344	62,750	60,430	57,882	57,595	59,888	59,153	56,483
Spencer	18,300	19,691	18,959	18,155	18,064	18,788	18,556	17,713
Spring City	24,015	25,736	24,830	23,834	23,722	24,618	24,331	23,288
Spring Hill	462,207	497,339	478,843	414,231	412,166	376,142	371,499	321,243
Springfield	187,919	202,203	194,683	186,421	185,492	192,924	190,542	181,886
St. Joseph	8,939	9,618	9,260	8,867	8,823	9,177	9,064	8,652
Stanton	5,167	5,559	5,353	5,125	5,100	5,304	5,239	5,001
Stantonville	3,235	3,481	3,351	3,209	3,193	3,321	3,280	3,131
Sunbright	6,310	6,789	6,537	6,259	6,228	6,478	6,398	6,107
Surgoinsville	20,586	22,151	21,327	20,422	20,321	21,135	20,874	19,926
Sweetwater	69,176	74,397	71,648	68,628	68,288	71,005	70,135	66,970
Tazewell	25,387	27,317	26,301	25,185	25,059	26,063	25,742	24,572
Tellico Plains	10,097	10,862	10,459	10,017	9,967	10,365	10,238	9,774
Tennessee Ridge	15,637	16,826	16,200	15,512	15,435	16,054	15,855	15,135
Thompson's Station	54,021	58,127	55,965	53,590	30,250	31,462	31,073	24,274
Three Way	19,535	21,020	20,238	19,379	19,283	20,055	19,808	18,908
Tiptonville	51,026	54,905	52,863	50,619	50,367	52,385	51,738	49,388
Toone	4,161	4,477	4,310	4,128	4,107	4,272	4,219	4,027
Townsend	5,121	5,510	5,305	5,080	5,055	5,257	5,192	4,957
Tracy City	16,929	18,215	17,538	16,794	16,710	17,380	17,165	16,385
Trenton	48,740	52,445	50,494	48,352	48,110	50,038	49,420	47,175
Trezevant	9,819	10,565	10,172	9,741	9,692	10,080	9,956	9,504
Trimble	7,281	7,835	7,543	7,223	7,187	7,475	7,383	7,048
Troy	15,671	16,863	16,235	15,546	15,469	16,089	15,890	15,168
Tullahoma	213,912	230,120	221,587	212,212	211,158	219,591	216,889	207,066
Tusculum	30,440	32,753	31,535	30,197	30,046	31,250	30,865	29,462
Unicoi	41,516	44,672	43,010	41,185	40,980	42,622	42,095	40,183
Union City	124,536	134,002	129,019	123,544	122,928	127,853	126,275	120,538
Vanleer	4,515	4,858	4,678	4,479	4,457	4,635	4,578	4,370
Viola	1,497	1,611	1,551	1,485	1,478	1,537	1,518	1,449
Vonore	16,849	18,129	17,455	16,714	16,631	17,297	17,084	16,308
Walden	21,695	23,344	22,476	21,522	21,415	22,273	21,998	20,999
Wartburg	10,493	11,291	10,871	10,410	10,358	10,773	10,640	10,156
Wartrace	7,441	8,007	7,709	7,382	7,345	7,639	7,545	7,202
Watauga	5,235	5,633	5,424	5,193	5,168	5,375	5,308	5,067
Watertown	16,883	18,166	17,491	16,748	16,665	17,333	17,119	16,341
Waverly	46,923	50,489	48,611	46,549	46,317	48,172	47,578	45,416
Waynesboro	27,994	30,121	29,001	27,770	27,632	28,739	28,384	27,095
Westmoreland	25,216	27,133	26,123	25,015	24,890	25,887	25,568	24,406
White Bluff	36,646	39,432	37,965	36,354	36,173	37,622	37,158	35,470
White House	132,595	142,673	137,367	131,538	115,707	120,343	118,857	113,457
White Pine	25,102	27,010	26,005	24,902	24,777	25,770	25,452	24,296
Whiteville	53,015	57,045	54,923	52,593	52,330	54,427	53,755	51,313
Whitwell	19,421	20,897	20,120	19,266	19,170	19,938	19,692	18,797
Williston	4,515	4,858	4,678	4,479	4,457	4,635	4,578	4,370
Winchester	100,537	107,948	104,046	99,760	99,278	103,134	101,898	97,407
Winfield	11,945	12,853	12,375	11,850	11,791	12,263	12,112	11,561
Woodbury	30,634	32,962	31,737	30,390	30,238	31,450	31,062	29,651

**Appendix D: Distribution of Cities' Share of TVA Payments in Lieu of Taxes to Tennessee
 by Tennessee Fiscal Year (continued)**

City	2020-21	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
Woodland Mills	4,321	4,649	4,476	4,286	4,265	4,436	4,381	4,182
Yorkville	3,269	3,518	3,387	3,243	3,227	3,356	3,315	3,164
Total	\$ 42,492,115	\$ 45,694,727	\$ 44,002,320	\$ 41,552,235	\$ 41,237,328	\$ 42,569,233	\$ 41,924,787	\$ 39,911,386

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Appendix E: Impact Payments Distributed to Counties in Areas Affected by TVA Construction by Tennessee Fiscal Year

County	2020-21	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
Anderson	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bedford	-	-	-	-	-	-	-	-
Benton	-	-	-	-	-	-	-	-
Bledsoe	-	-	-	-	-	-	-	-
Blount	-	-	-	-	-	-	-	-
Bradley	-	-	-	-	-	-	-	-
Campbell	-	-	-	-	-	-	-	-
Cannon	-	-	-	-	-	-	-	-
Carroll	-	-	-	-	-	-	-	-
Carter	-	-	-	-	-	-	-	-
Cheatham	-	-	-	-	-	-	-	-
Chester	-	-	-	-	-	-	-	-
Claiborne	-	-	-	-	-	-	-	-
Clay	-	-	-	-	-	-	-	-
Cocke	-	-	-	-	-	-	-	-
Coffee	-	-	-	-	-	-	-	-
Crockett	-	-	-	-	-	-	-	-
Cumberland	-	-	-	-	-	-	-	-
Davidson	-	-	-	-	-	-	-	-
Decatur	-	-	-	-	-	-	-	-
DeKalb	-	-	-	-	-	-	-	-
Dickson	-	-	-	-	-	-	-	-
Dyer	-	-	-	-	-	-	-	-
Fayette	-	-	-	-	-	-	-	-
Fentress	-	-	-	-	-	-	-	-
Franklin	-	-	-	-	-	-	-	-
Gibson	-	-	-	-	-	-	-	-
Giles	-	-	-	-	-	-	-	-
Grainger	-	-	-	-	-	-	-	-
Greene	-	-	-	-	-	-	-	-
Grundy	-	-	-	-	-	-	-	-
Hamblen	-	-	-	-	-	-	-	-
Hamilton	-	-	-	-	-	-	-	-
Hancock	-	-	-	-	-	-	-	-
Hardeman	-	-	-	-	-	-	-	-
Hardin	-	-	-	-	-	-	-	-
Hawkins	-	-	-	-	94,093	192,291	291,767	371,390
Haywood	-	-	-	-	-	-	138,513	264,448
Henderson	-	-	-	-	-	-	-	-
Henry	-	-	-	-	-	-	-	-
Hickman	-	-	-	-	-	-	-	-
Houston	-	-	-	-	-	-	-	-
Humphreys	-	-	-	-	-	-	-	-
Jackson	-	-	-	-	-	-	-	-
Jefferson	-	-	-	-	-	-	-	-
Johnson	-	-	-	-	-	-	-	-
Knox	-	-	-	-	-	-	-	-
Lake	-	-	-	-	-	-	-	-
Lauderdale	-	-	-	-	-	-	-	-

Appendix E: Impact Payments Distributed to Counties in Areas Affected by TVA Construction by Tennessee Fiscal Year (continued)

County	2020-21	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
Lawrence	-	-	-	-	-	-	-	-
Lewis	-	-	-	-	-	-	-	-
Lincoln	-	-	-	-	-	-	-	-
Loudon	-	-	-	-	-	-	-	-
Macon	-	-	-	-	-	-	-	-
Madison	-	-	-	-	-	-	-	-
Marion	-	-	-	-	-	-	-	-
Marshall	-	-	-	-	-	-	-	-
Maury	-	-	-	-	-	-	-	-
McMinn	-	-	26	9,785	39,170	160,097	158,150	150,970
McNairy	-	-	-	-	-	-	-	-
Meigs	-	-	200,358	380,086	569,656	776,106	766,666	731,857
Monroe	-	-	22	8,363	33,425	136,614	134,953	128,825
Montgomery	-	-	-	-	-	-	-	-
Moore	-	-	-	-	-	-	-	-
Morgan	-	-	-	-	-	-	-	-
Obion	-	-	-	-	-	-	-	-
Overton	-	-	-	-	-	-	-	-
Perry	-	-	-	-	-	-	-	-
Pickett	-	-	-	-	-	-	-	-
Polk	-	-	-	-	-	-	-	-
Putnam	-	-	-	-	-	-	-	-
Rhea	-	-	170,414	323,282	484,521	660,117	652,088	622,481
Roane	-	-	117,906	223,672	335,230	456,721	451,166	430,682
Robertson	-	-	-	-	-	-	-	-
Rutherford	-	-	-	-	-	-	-	-
Scott	-	-	-	-	-	-	-	-
Sequatchie	-	-	-	-	-	-	-	-
Sevier	-	-	-	-	-	-	-	-
Shelby	229,972	372,309	481,630	457,129	456,750	-	-	-
Smith	-	-	-	-	-	-	-	-
Stewart	-	-	-	-	-	-	-	-
Sullivan	582,549	628,740	610,017	578,612	578,132	-	-	-
Sumner	252,373	408,575	528,545	501,334	501,840	501,559	495,459	472,964
Tipton	-	-	-	-	-	-	-	-
Trousdale	-	-	-	-	-	-	-	-
Unicoi	-	-	-	-	-	-	-	-
Union	-	-	-	-	-	-	-	-
Van Buren	-	-	-	-	-	-	-	-
Warren	-	-	-	-	-	-	-	-
Washington	563,768	608,469	590,350	559,958	559,493	-	-	-
Wayne	-	-	-	-	-	-	-	-
Weakley	-	-	-	-	-	-	-	-
White	-	-	-	-	-	-	-	-
Williamson	-	-	-	-	-	-	-	-
Wilson	-	-	-	-	-	-	-	-
Total	\$ 1,628,661	\$ 2,018,093	\$ 2,699,268	\$ 3,042,223	\$ 3,652,310	\$ 2,883,505	\$ 3,088,761	\$ 3,173,617

Appendix F: Impact Payments Distributed to Cities in Areas Affected by TVA Construction by Tennessee Fiscal Year

City	2020-21	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
Adams	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Adamsville	-	-	-	-	-	-	-	-
Alamo	-	-	-	-	-	-	-	-
Alcoa	-	-	-	-	-	-	-	-
Alexandria	-	-	-	-	-	-	-	-
Algood	-	-	-	-	-	-	-	-
Allardt	-	-	-	-	-	-	-	-
Altamont	-	-	-	-	-	-	-	-
Ardmore	-	-	-	-	-	-	-	-
Arlington	3,277	5,305	6,862	5,958	5,953	-	-	-
Ashland City	-	-	-	-	-	-	-	-
Athens	-	-	7	2,520	10,086	41,224	40,722	38,873
Atoka	-	-	-	-	-	-	-	-
Atwood	-	-	-	-	-	-	-	-
Auburntown	-	-	-	-	-	-	-	-
Baileyton	-	-	-	-	-	-	-	-
Baneberry	-	-	-	-	-	-	-	-
Bartlett	14,004	22,671	29,328	27,836	27,813	-	-	-
Baxter	-	-	-	-	-	-	-	-
Bean Station	-	-	-	-	5,056	10,333	-	-
Beersheba Spring	-	-	-	-	-	-	-	-
Bell Buckle	-	-	-	-	-	-	-	-
Belle Meade	-	-	-	-	-	-	-	-
Bells	-	-	-	-	-	-	-	-
Benton	-	-	-	-	-	-	-	-
Berry Hill	-	-	-	-	-	-	-	-
Bethel Springs	-	-	-	-	-	-	-	-
Big Sandy	-	-	-	-	-	-	-	-
Blaine	-	-	-	-	-	-	-	-
Bluff City	6,438	6,948	6,741	6,394	6,389	-	-	-
Bolivar	-	-	-	-	-	-	-	-
Braden	-	-	-	-	-	-	-	-
Bradford	-	-	-	-	-	-	-	-
Brentwood	-	-	-	-	-	-	-	-
Brighton	-	-	-	-	-	-	-	-
Bristol	99,190	107,054	103,867	98,519	98,438	-	-	-
Brownsville	-	-	-	-	-	-	75,881	144,872
Bruceton	-	-	-	-	-	-	-	-
Bulls Gap	-	-	-	-	1,222	2,497	3,789	4,823
Burlison	-	-	-	-	-	-	-	-
Burns	-	-	-	-	-	-	-	-
Byrdstown	-	-	-	-	-	-	-	-
Calhoun	-	-	0	92	367	1,501	1,483	1,415
Camden	-	-	-	-	-	-	-	-
Carthage	-	-	-	-	-	-	-	-
Caryville	-	-	-	-	-	-	-	-
Cedar Hill	-	-	-	-	-	-	-	-
Celina	-	-	-	-	-	-	-	-

**Appendix F: Impact Payments Distributed to Cities in Areas Affected by TVA Construction
 by Tennessee Fiscal Year (continued)**

City	2020-21	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
Centertown	-	-	-	-	-	-	-	-
Centerville	-	-	-	-	-	-	-	-
Chapel Hill	-	-	-	-	-	-	-	-
Charleston	-	-	-	-	-	-	-	-
Charlotte	-	-	-	-	-	-	-	-
Chattanooga	-	-	-	-	-	-	-	-
Church Hill	-	-	-	-	11,154	22,794	34,586	44,025
Clarksburg	-	-	-	-	-	-	-	-
Clarksville	-	-	-	-	-	-	-	-
Cleveland	-	-	-	-	-	-	-	-
Clifton	-	-	-	-	-	-	-	-
Clinton	-	-	-	-	-	-	-	-
Coalmont	-	-	-	-	-	-	-	-
Collegedale	-	-	-	-	-	-	-	-
Collierville	11,292	18,281	23,649	22,446	22,428	-	-	-
Collinwood	-	-	-	-	-	-	-	-
Columbia	-	-	-	-	-	-	-	-
Cookeville	-	-	-	-	-	-	-	-
Coopertown	-	-	-	-	-	-	-	-
Copperhill	-	-	-	-	-	-	-	-
Cornersville	-	-	-	-	-	-	-	-
Cottage Grove	-	-	-	-	-	-	-	-
Covington	-	-	-	-	-	-	-	-
Cowan	-	-	-	-	-	-	-	-
Crab Orchard	-	-	-	-	-	-	-	-
Cross Plains	-	-	-	-	-	-	-	-
Crossville	-	-	-	-	-	-	-	-
Crump	-	-	-	-	-	-	-	-
Cumberland City	-	-	-	-	-	-	-	-
Cumberland Gap	-	-	-	-	-	-	-	-
Dandridge	-	-	-	-	-	-	-	-
Dayton	-	-	38,525	73,084	109,535	149,231	147,416	140,723
Decatur	-	-	27,242	51,679	77,453	105,523	104,240	99,507
Decaturville	-	-	-	-	-	-	-	-
Decherd	-	-	-	-	-	-	-	-
Dickson	-	-	-	-	-	-	-	-
Dover	-	-	-	-	-	-	-	-
Dowelltown	-	-	-	-	-	-	-	-
Doyle	-	-	-	-	-	-	-	-
Dresden	-	-	-	-	-	-	-	-
Ducktown	-	-	-	-	-	-	-	-
Dunlap	-	-	-	-	-	-	-	-
Dyer	-	-	-	-	-	-	-	-
Dyersburg	-	-	-	-	-	-	-	-
Eagleville	-	-	-	-	-	-	-	-
East Ridge	-	-	-	-	-	-	-	-
Eastview	-	-	-	-	-	-	-	-
Elizabethton	-	-	-	-	-	-	-	-

**Appendix F: Impact Payments Distributed to Cities in Areas Affected by TVA Construction
by Tennessee Fiscal Year (continued)**

City	2020-21	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
Elkton	-	-	-	-	-	-	-	-
Englewood	-	-	1	287	1,148	4,693	4,636	4,425
Enville	-	-	-	-	-	-	-	-
Erin	-	-	-	-	-	-	-	-
Erwin	-	-	-	-	-	-	-	-
Estill Springs	-	-	-	-	-	-	-	-
Ethridge	-	-	-	-	-	-	-	-
Etowah	-	-	2	653	2,616	10,690	10,560	10,081
Fairview	-	-	-	-	-	-	-	-
Farragut	-	-	-	-	-	-	-	-
Fayetteville	-	-	-	-	-	-	-	-
Finger	-	-	-	-	-	-	-	-
Forest Hills	-	-	-	-	-	-	-	-
Franklin	-	-	-	-	-	-	-	-
Friendship	-	-	-	-	-	-	-	-
Friendsville	-	-	-	-	-	-	-	-
Gadsden	-	-	-	-	-	-	-	-
Gainesboro	-	-	-	-	-	-	-	-
Gallatin	54,157	87,677	113,421	107,582	107,690	94,533	93,383	89,143
Gallaway	-	-	-	-	-	-	-	-
Garland	-	-	-	-	-	-	-	-
Gates	-	-	-	-	-	-	-	-
Gatlinburg	-	-	-	-	-	-	-	-
Germantown	9,947	16,103	20,832	19,772	19,756	-	-	-
Gibson	-	-	-	-	-	-	-	-
Gilt Edge	-	-	-	-	-	-	-	-
Gleason	-	-	-	-	-	-	-	-
Goodlettsville	8,801	14,248	18,431	17,482	17,500	49,708	49,103	46,874
Gordonsville	-	-	-	-	-	-	-	-
Grand Junction	-	-	-	-	-	-	-	-
Graysville	-	-	8,047	15,265	22,879	31,170	30,791	29,393
Greenback	-	-	-	-	-	-	-	-
Greenbrier	-	-	-	-	-	-	-	-
Greeneville	-	-	-	-	-	-	-	-
Greenfield	-	-	-	-	-	-	-	-
Gruetli-Laager	-	-	-	-	-	-	-	-
Guys	-	-	-	-	-	-	-	-
Halls	-	-	-	-	-	-	-	-
Harriman	-	-	13,819	26,214	39,289	53,528	52,877	50,476
Harrogate	-	-	-	-	-	-	-	-
Hartsville	-	-	-	-	-	-	-	-
Henderson	-	-	-	-	-	-	-	-
Hendersonville	80,705	130,657	169,021	160,320	160,481	160,392	158,441	151,247
Henning	-	-	-	-	-	-	-	-
Henry	-	-	-	-	-	-	-	-
Hickory Valley	-	-	-	-	-	-	-	-
Hohenwald	-	-	-	-	-	-	-	-
Hollow Rock	-	-	-	-	-	-	-	-

**Appendix F: Impact Payments Distributed to Cities in Areas Affected by TVA Construction
 by Tennessee Fiscal Year (continued)**

City	2020-21	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
Hornbeak	-	-	-	-	-	-	-	-
Hornsby	-	-	-	-	-	-	-	-
Humboldt	-	-	-	-	-	-	-	-
Huntingdon	-	-	-	-	-	-	-	-
Huntland	-	-	-	-	-	-	-	-
Huntsville	-	-	-	-	-	-	-	-
Jacksboro	-	-	-	-	-	-	-	-
Jackson	-	-	-	-	-	-	-	-
Jamestown	-	-	-	-	-	-	-	-
Jasper	-	-	-	-	-	-	-	-
Jefferson City	-	-	-	-	-	-	-	-
Jellico	-	-	-	-	-	-	-	-
Johnson City	283,447	305,921	296,811	281,531	281,297	-	-	-
Jonesborough	23,155	24,991	24,247	22,999	22,980	-	-	-
Kenton	-	-	-	-	-	-	-	-
Kimball	-	-	-	-	-	-	-	-
Kingsport	179,865	194,127	188,346	178,650	263,392	173,482	263,229	334,998
Kingston	-	-	12,913	24,497	36,715	50,021	49,413	47,169
Kingston Springs	-	-	-	-	-	-	-	-
Knoxville	-	-	-	-	-	-	-	-
Lafayette	-	-	-	-	-	-	-	-
Lafollette	-	-	-	-	-	-	-	-
Lagrange	-	-	-	-	-	-	-	-
Lakeland	3,082	4,989	6,454	6,125	6,120	-	-	-
Lakesite	-	-	-	-	-	-	-	-
La Vergne	-	-	-	-	-	-	-	-
Lawrenceburg	-	-	-	-	-	-	-	-
Lebanon	-	-	-	-	-	-	-	-
Lenoir City	-	-	-	-	-	-	-	-
Lewisburg	-	-	-	-	-	-	-	-
Lexington	-	-	-	-	-	-	-	-
Liberty	-	-	-	-	-	-	-	-
Linden	-	-	-	-	-	-	-	-
Livingston	-	-	-	-	-	-	-	-
Lobelville	-	-	-	-	-	-	-	-
Lookout Mountain	-	-	-	-	-	-	-	-
Loretto	-	-	-	-	-	-	-	-
Loudon	-	-	-	-	-	-	-	-
Louisville	-	-	-	-	-	-	-	-
Luttrell	-	-	-	-	-	-	-	-
Lynchburg	-	-	-	-	-	-	-	-
Lynnville	-	-	-	-	-	-	-	-
Madisonville	-	-	2	860	3,436	14,045	13,874	13,245
Manchester	-	-	-	-	-	-	-	-
Martin	-	-	-	-	-	-	-	-
Maryville	-	-	-	-	-	-	-	-
Mason	-	-	-	-	-	-	-	-
Maury City	-	-	-	-	-	-	-	-

**Appendix F: Impact Payments Distributed to Cities in Areas Affected by TVA Construction
by Tennessee Fiscal Year (continued)**

City	2020-21	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
Maynardville	-	-	-	-	-	-	-	-
McEwen	-	-	-	-	-	-	-	-
McKenzie	-	-	-	-	-	-	-	-
McLemoresville	-	-	-	-	-	-	-	-
McMinnville	-	-	-	-	-	-	-	-
Medina	-	-	-	-	-	-	-	-
Medon	-	-	-	-	-	-	-	-
Memphis	160,370	259,628	335,863	318,777	318,513	-	-	-
Michie	-	-	-	-	-	-	-	-
Middleton	-	-	-	-	-	-	-	-
Milan	-	-	-	-	-	-	-	-
Milledgeville	-	-	-	-	-	-	-	-
Millersville	7,819	12,658	16,375	15,532	15,548	15,539	15,350	14,653
Millington	2,760	4,468	5,780	5,486	5,481	-	-	-
Minor Hill	-	-	-	-	-	-	-	-
Mitchellville	297	481	622	590	590	590	583	556
Monteagle	-	-	-	-	-	-	-	-
Monterey	-	-	-	-	-	-	-	-
Morrison	-	-	-	-	-	-	-	-
Morristown	-	-	-	-	-	-	-	-
Moscow	-	-	-	-	-	-	-	-
Mosheim	-	-	-	-	-	-	-	-
Mount Carmel	-	-	-	-	8,988	18,369	27,871	35,477
Mount Juliet	-	-	-	-	-	-	-	-
Mount Pleasant	-	-	-	-	-	-	-	-
Mountain City	-	-	-	-	-	-	-	-
Munford	-	-	-	-	-	-	-	-
Murfreesboro	-	-	-	-	-	-	-	-
Nashville	-	-	-	-	-	-	-	-
New Hope	-	-	-	-	-	-	-	-
New Johnsonville	-	-	-	-	-	-	-	-
New Market	-	-	-	-	-	-	-	-
New Tazewell	-	-	-	-	-	-	-	-
Newbern	-	-	-	-	-	-	-	-
Newport	-	-	-	-	-	-	-	-
Niota	-	-	-	135	539	2,202	2,176	2,077
Nolensville	-	-	-	-	-	-	-	-
Normandy	-	-	-	-	-	-	-	-
Norris	-	-	-	-	-	-	-	-
Oak Hill	-	-	-	-	-	-	-	-
Oak Ridge	-	-	63,827	121,081	181,471	247,239	244,231	233,143
Oakdale	-	-	-	-	-	-	-	-
Oakland	-	-	-	-	-	-	-	-
Obion	-	-	-	-	-	-	-	-
Oliver Springs	-	-	7,031	13,338	19,991	27,236	26,905	25,683
Oneida	-	-	-	-	-	-	-	-
Orlinda	-	-	-	-	-	-	-	-
Orme	-	-	-	-	-	-	-	-

**Appendix F: Impact Payments Distributed to Cities in Areas Affected by TVA Construction
 by Tennessee Fiscal Year (continued)**

City	2020-21	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
Palmer	-	-	-	-	-	-	-	-
Paris	-	-	-	-	-	-	-	-
Parkers Crossroads	-	-	-	-	-	-	-	-
Parrottsville	-	-	-	-	-	-	-	-
Parsons	-	-	-	-	-	-	-	-
Pegram	-	-	-	-	-	-	-	-
Petersburg	-	-	-	-	-	-	-	-
Philadelphia	-	-	-	-	-	-	-	-
Pigeon Forge	-	-	-	-	-	-	-	-
Pikeville	-	-	-	-	-	-	-	-
Piperton	-	-	-	-	-	-	-	-
Pittman Center	-	-	-	-	-	-	-	-
Plainview	-	-	-	-	-	-	-	-
Pleasant Hill	-	-	-	-	-	-	-	-
Pleasant View	-	-	-	-	-	-	-	-
Portland	17,945	29,053	37,583	35,648	35,684	35,842	35,406	33,799
Powells Crossroads	-	-	-	-	-	-	-	-
Pulaski	-	-	-	-	-	-	-	-
Puryear	-	-	-	-	-	-	-	-
Ramer	-	-	-	-	-	-	-	-
Red Bank	-	-	-	-	-	-	-	-
Red Boiling Springs	-	-	-	-	-	-	-	-
Ridgely	-	-	-	-	-	-	-	-
Ridgeside	-	-	-	-	-	-	-	-
Ridgetop	-	-	-	-	-	-	-	-
Ripley	-	-	-	-	-	-	-	-
Rives	-	-	-	-	-	-	-	-
Rockford	-	-	-	-	-	-	-	-
Rockwood	-	-	12,104	22,961	34,413	46,885	46,315	44,212
Rocky Top	-	-	-	-	-	-	-	-
Rogersville	-	-	-	-	7,318	14,955	22,691	28,884
Rossville	-	-	-	-	-	-	-	-
Rutherford	-	-	-	-	-	-	-	-
Rutledge	-	-	-	-	-	-	-	-
Saltillo	-	-	-	-	-	-	-	-
Samburg	-	-	-	-	-	-	-	-
Sardis	-	-	-	-	-	-	-	-
Saulsbury	-	-	-	-	-	-	-	-
Savannah	-	-	-	-	-	-	-	-
Scotts Hill	-	-	-	-	-	-	-	-
Selmer	-	-	-	-	-	-	-	-
Sevierville	-	-	-	-	-	-	-	-
Sharon	-	-	-	-	-	-	-	-
Shelbyville	-	-	-	-	-	-	-	-
Signal Mountain	-	-	-	-	-	-	-	-
Silerton	-	-	-	-	-	-	-	-
Slayden	-	-	-	-	-	-	-	-
Smithville	-	-	-	-	-	-	-	-

**Appendix F: Impact Payments Distributed to Cities in Areas Affected by TVA Construction
by Tennessee Fiscal Year (continued)**

City	2020-21	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
Smyrna	-	-	-	-	-	-	-	-
Sneedville	-	-	-	-	-	-	-	-
Soddy Daisy	-	-	-	-	-	-	-	-
Somerville	-	-	-	-	-	-	-	-
South Carthage	-	-	-	-	-	-	-	-
South Fulton	-	-	-	-	-	-	-	-
South Pittsburg	-	-	-	-	-	-	-	-
Sparta	-	-	-	-	-	-	-	-
Spencer	-	-	-	-	-	-	-	-
Spring City	-	-	10,613	20,133	30,175	41,111	40,611	38,767
Spring Hill	-	-	-	-	-	-	-	-
Springfield	-	-	-	-	-	-	-	-
St. Joseph	-	-	-	-	-	-	-	-
Stanton	-	-	-	-	-	-	3,333	6,362
Stantonville	-	-	-	-	-	-	-	-
Sunbright	-	-	-	-	-	-	-	-
Surgoinsville	-	-	-	-	2,982	6,094	9,246	11,769
Sweetwater	-	-	3	1,129	4,512	18,443	18,218	17,391
Tazewell	-	-	-	-	-	-	-	-
Tellico Plains	-	-	0	165	661	2,700	2,668	2,546
Tennessee Ridge	-	-	-	-	-	-	-	-
Thompson's Station	-	-	-	-	-	-	-	-
Three Way	-	-	-	-	-	-	-	-
Tiptonville	-	-	-	-	-	-	-	-
Toone	-	-	-	-	-	-	-	-
Townsend	-	-	-	-	-	-	-	-
Tracy City	-	-	-	-	-	-	-	-
Trenton	-	-	-	-	-	-	-	-
Trezevant	-	-	-	-	-	-	-	-
Trimble	-	-	-	-	-	-	-	-
Troy	-	-	-	-	-	-	-	-
Tullahoma	-	-	-	-	-	-	-	-
Tusculum	-	-	-	-	-	-	-	-
Unicoi	-	-	-	-	-	-	-	-
Union City	-	-	-	-	-	-	-	-
Vanleer	-	-	-	-	-	-	-	-
Viola	-	-	-	-	-	-	-	-
Vonore	-	-	1	277	1,107	4,523	4,468	4,265
Walden	-	-	-	-	-	-	-	-
Wartburg	-	-	-	-	-	-	-	-
Wartrace	-	-	-	-	-	-	-	-
Watauga	399	430	418	396	396	-	-	-
Watertown	-	-	-	-	-	-	-	-
Waverly	-	-	-	-	-	-	-	-
Waynesboro	-	-	-	-	-	-	-	-
Westmoreland	3,466	5,611	7,258	6,884	6,891	6,887	6,804	6,495
White Bluff	-	-	-	-	-	-	-	-
White House	9,140	14,797	19,142	18,157	16,588	16,579	16,377	15,633

**Appendix F: Impact Payments Distributed to Cities in Areas Affected by TVA Construction
 by Tennessee Fiscal Year (continued)**

City	2020-21	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
White Pine	-	-	-	-	-	-	-	-
Whiteville	-	-	-	-	-	-	-	-
Whitwell	-	-	-	-	-	-	-	-
Williston	-	-	-	-	-	-	-	-
Winchester	-	-	-	-	-	-	-	-
Winfield	-	-	-	-	-	-	-	-
Woodbury	-	-	-	-	-	-	-	-
Woodland Mills	-	-	-	-	-	-	-	-
Yorkville	-	-	-	-	-	-	-	-
Total	\$ 979,554	\$ 1,266,098	\$ 1,625,188	\$ 1,731,456	\$ 2,053,041	\$ 1,480,559	\$ 1,657,675	\$ 1,773,001

Note: For cities that cross multiple counties, individual amounts calculated under state distribution formula for portion of city in each county have been combined by Commission staff and are reported in appendix as a single total.

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Appendix G: TVA 2019 IRP Recommendations by Resource Type

Coal: Continue with announced plans to retire Paradise in 2020 and Bull Run in 2023. Evaluate retirements of up to 2,200 MW of additional coal capacity if cost-effective.

Hydro: All portfolios reflect continued investment in the hydro fleet to maintain capacity. Consider additional hydro capacity where feasible.

Energy Efficiency: Achieve savings of up to 1,800 MW by 2028 and up to 2,200 MW by 2038. Work with our local power company partners to expand programs for low-income residents and refine program designs and delivery mechanisms with the goal of lowering total cost.

Demand Response: Add up to 500 MW of demand response by 2038 depending on availability and cost of the resource.

Nuclear: Pursue option for second license renewal of Browns Ferry for an additional 20 years. Continue to evaluate emerging nuclear technologies including Small Modular Reactors as part of technology innovation efforts.

Wind: Existing wind contracts expire in the early 2030s. Consider the addition of up to 1,800 MW of wind by 2028 and up to 4,200 MW by 2038 if cost effective.

Storage: Add up to 2,400 MW of storage by 2028 and up to 5,300 MW by 2038. Additions may be a combination of utility and distributed scale. The trajectory and timing of additions will be highly dependent on the evolution of storage technologies.

Gas Combustion Turbine: Evaluate retirements of up to 2,000 MW of existing combustion turbines if cost effective. Add up to 5,200 MW of combustion turbines by 2028 and up to 8,600 MW by 2038 if a high level of load growth materializes. Future CT needs are driven by demand for electricity, solar penetration, and evolution of other peaking technologies.

Gas Combined Cycle: Add between 800 and 5,700 MW of combined cycle by 2028 and up to 9,800 MW by 2038 if a high level of load growth materializes. Future CC needs are driven by demand for electricity and gas prices, as well as by solar penetration that tends to drive CT instead of CC additions.

Solar: Add between 1,500 and 8,000 MW of solar by 2028 and up to 14,000 MW by 2038. Additions may be a combination of utility and distributed scale. Future solar needs are driven by pricing, customer demand, and demand for electricity.

Source: Tennessee Valley Authority, *Integrated Resource Plan* (2019), 9-3 and 9-4.