



National Rural Utilities
Cooperative Finance Corporation



NRECA
America's Electric Cooperatives

Economic Powerhouses:

The Economic Impacts of
America's Electric Cooperatives

Prepared by



STRATEGEN



This report is prepared by Strategen Consulting Inc. for the National Rural Utilities Cooperative Finance Corporation and National Rural Electric Cooperative Association.

Disclaimer

This document was prepared as an account of work funded by the National Rural Utilities Cooperative Finance Corporation (CFC) and National Rural Electric Cooperative Association (NRECA). While this document is believed to contain correct information, neither the CFC, NRECA, nor Strategen Consulting Inc. (Strategen), nor any of their employees, makes any warranty, express or implied, or assumes any legal responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by its trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the CFC, NRECA, or Strategen. The views and opinions of authors expressed herein do not necessarily state or reflect those of the CFC, NRECA, or Strategen. Strategen is an equal opportunity employer.



**National Rural Utilities
Cooperative Finance Corporation**

About the National Rural Utilities Cooperative Finance Corporation

Created and owned by America's electric cooperative network, the National Rural Utilities Cooperative Finance Corporation (CFC)—a nonprofit finance cooperative—provides unparalleled industry expertise, flexibility and responsiveness to serve the needs of our member-owners. Governed by a 23-member board made up exclusively of electric cooperative directors and executives, CFC helps our member-owners attain their business, financial and strategic objectives through flexible, customized loan products, investment options, services, tools and training.



About the National Rural Electric Cooperative Association

The National Rural Electric Cooperative Association is the national trade association representing nearly 900 local electric cooperatives. From growing suburbs to remote farming communities, electric co-ops serve as engines of economic development for 42 million Americans across 56 percent of the nation's landscape. As local businesses built by the consumers they serve, electric cooperatives have meaningful ties to rural America and invest \$15 billion annually in their communities.

Authors

**Joe Goodenbery
Jennifer Gorman
Shawn Carr
Jordan Ahern**

www.strategen.com

© October 2023,
Strategen. All rights reserved.

Contents

- Authors / About CFC and NRECA 2**
- Executive Summary..... 4**
- Background 6**
- Methodology and Inputs 7**
 - Economic Modeling..... 8
 - Multiplier Analysis 8
 - About the IMPLAN Model 8
- Data Sources and Application 10**
 - Input Data..... 10
 - Geographic Regions..... 10
- Economic Impact Analysis..... 11**
 - Cooperatives in the Economy 11
 - Summary of Results 11
 - Employment..... 12
 - Labor Income 13
 - Total Output 14
 - Value Added..... 15
- Tax Impacts..... 17**
 - Federal Taxes 17
 - State and Local Taxes 18
- Conclusions and Implications 19**
 - Key Findings 19
 - Engines of Economic Development..... 19
- Appendix A | Model Setup..... 21**
- Appendix B | Detailed Modeling Results 23**
 - Table B-1. U.S. jobs supported by electric cooperatives, 2018-2022..... 23
 - Table B-2. Local jobs supported by electric cooperatives, 2018-2022 25
 - Table B-3. U.S. Total Output supported by electric cooperatives, 2018-2022 27
 - Table B-4. Local Output supported by electric cooperatives, 2018-2022 29
 - Table B-5. U.S. GDP supported by electric cooperatives, 2018-2022 31
 - Table B-6. Local Value Added supported by electric cooperatives, 2018-2022 33
 - Table B-7. U.S. Labor Income supported by electric cooperatives, 2018-2022 35
 - Table B-8. Local Labor Income supported by electric cooperatives, 2018-2022 37

Executive Summary

America’s electric cooperatives (co-ops) are crucial engines of economic development both nationally and at home in their local communities. In addition to providing safe, affordable, and reliable electricity to their consumer-members, co-ops create benefits that extend beyond the electric sector. As locally-engaged member-owned electric utilities, co-ops conduct economic activity through the generation, transmission, and distribution of electricity, including investments in new capital, operating and maintenance expenses, and disbursement of capital credits. These activities not only impact the industries in which they directly occur, but also drive economic activity across multiple sectors, creating value for local, statewide, and national economies.

The full value of these economic benefits can be quantified by tracking how co-op investments flow from one industry to another. To do so, Strategen Consulting employed the IMPLAN model to conduct analysis using economic multipliers, which estimate how expenditures in one sector stimulate new activity across multiple sectors, measured through direct, indirect, and induced effects. Direct effects are the impacts within the industry where the initial economic activity occurs. These direct effects create indirect impacts for industries in the supply chain, while induced effects result from employees in the direct and indirect industries spending income in their communities.¹ Every dollar spent generates direct, indirect, and induced activity, and economic multipliers determine the magnitude of impacts from one industry on other sectors. Total impacts are then determined by adding together the direct, indirect, and induced effects.²

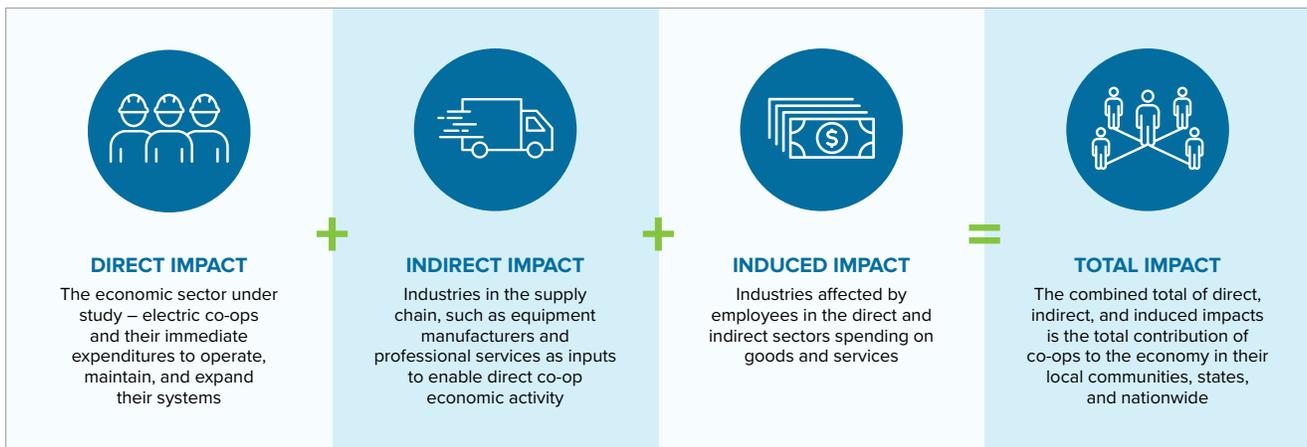


FIGURE 1: Economic Impacts Created by Electric Cooperatives | Source: Strategen Consulting, Inc.

From 2018-2022, electric cooperatives nationwide spent approximately \$409 billion in the U.S. economy. Of this, \$303 billion was spent on operations, \$75 billion was invested in capital improvement projects, \$24 billion went towards maintenance, and \$7 billion was returned to co-op consumer-members in the form of retired capital credits. This spending had a direct impact in the electric sector in which co-ops operate, and further stimulated the economy, creating additional economic activity via indirect and induced impacts.

Strategen found that over this 5-year period, co-ops created more than \$1.1 trillion in total sales output and contributed \$554 billion to U.S. GDP. This provided nearly 623,000 jobs per year for Americans nationwide,

1 For example, electric co-ops providing power to their consumer-members have a direct impact on the electric transmission and distribution sector. These direct effects create indirect impacts in the wider supply chain, such as the manufacturing and supply of equipment and materials used by co-ops. Induced effects result from employees in the direct and indirect industries spending income in their communities, for example on groceries or other local services.
2 For the purposes of this study, the total impact of electric cooperatives measures the resulting effect that direct co-op expenditures have on creating economic activity, through measurable impacts on sales, revenues production, jobs, labor income, and taxes. These impacts do not include additional nonmarket benefits that are enabled through electric co-ops providing safe and reliable electricity, which is foundational to the modern economy.

and \$257 billion in labor income over the 5-year period. Electric co-ops are also critical drivers of economic development within their own communities. Locally, co-ops are responsible for \$791 billion of total output and \$374 billion in value added to the communities they serve. Through this activity, electric co-ops create nearly 424,000 local jobs per year, leading to \$166 billion in labor income for local residents. Figure 2 shows both the total impact that co-ops have nationwide, as well as the portion of these impacts that occur locally, within communities served by electric cooperatives.

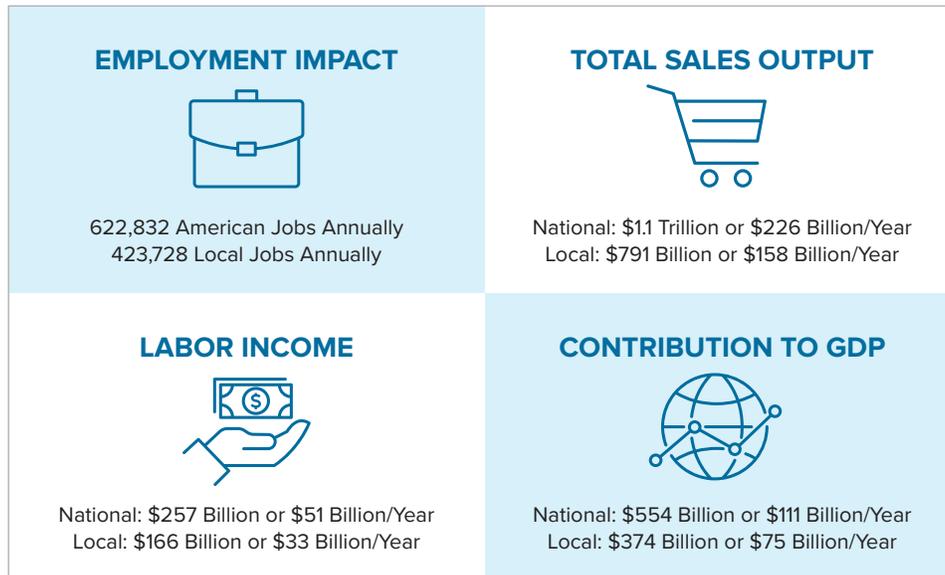


FIGURE 2: Summary of the National and Local* Economic Impact of Electric Cooperatives, 2018-2022 | Source: Strategen Consulting, Inc.

*Local impacts are those that occur specifically in counties served by electric co-ops and are therefore a subset of national impacts, rather than an addition.

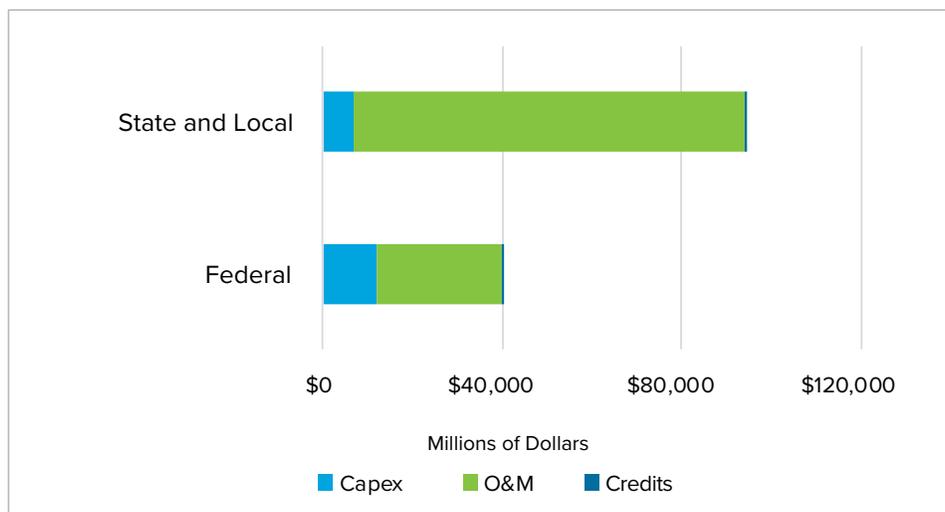


FIGURE 3: Total Tax Revenues, 2018-2022 | Source: Strategen Consulting, Inc.

The direct, indirect, and induced impacts associated with employment, output, GDP, and labor income all generate tax revenues. Using the IMPLAN model, Strategen tracked the resulting tax revenues at the federal, state, and local levels. From 2018 through 2022, electric co-op activity generated \$40.6 billion in federal tax

3 As not-for-profit businesses, most co-ops are tax exempt for federal income tax purposes, but they pay state and local taxes. Co-op employees do pay federal income and payroll taxes, as do associated industries impacted by their economic activity.

revenues, or \$8.1 billion annually over the 5-year period.³ Expenditures made by electric co-ops and the resulting indirect and induced impacts led to a total of \$94.5 billion in state and local tax revenues for jurisdictions across the country. On an annual basis, this results in approximately \$18.9 billion in tax revenues per year.

The findings from this study highlight the substantial impact of electric cooperatives throughout the economy, both nationally and locally. With a history of strong connection to the communities they serve, electric co-ops are well-suited to continue the critical role they play in economic development, as they make investments that further advance the electric system and improve the quality of life for their consumer-members.

Background

Built by and led by the communities they serve, America's electric cooperatives are consumer-owned, democratically governed, not-for-profit utilities that provide safe, affordable, and reliable electricity to their members. Through a focus on consumer and community engagement, co-ops are also crucial engines of economic development both locally and nationally, with a presence in 48 U.S. states. The role of co-ops as economic drivers dates back to their inception nearly a century ago. As part of a national effort to electrify rural areas in the 1930s, co-ops provided rural America with access to reliable and affordable electric supply, boosting growth and productivity in traditional industries like agriculture and mining, while enabling further expansion of industries, such as manufacturing and healthcare, into rural economies. The vast majority of rural electrification, and the economic benefits it provides for local communities, is the product of consumer-owned electric cooperatives. Today, co-ops continue to promote economic development, both as providers of electricity and through growing efforts to increase access to broadband and investment in rural infrastructure.

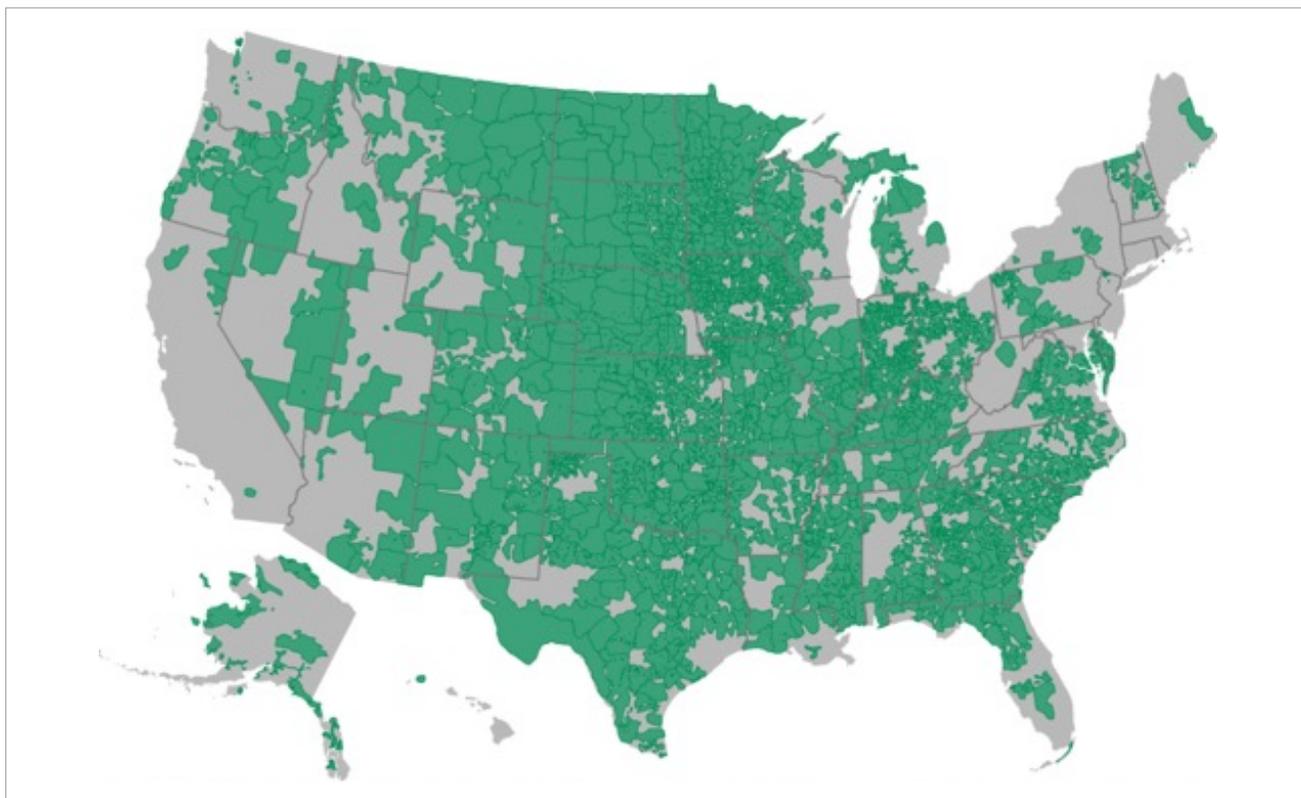


FIGURE 4: Map of Electric Cooperative Service Territories | Source: NRECA

In the electric sector, co-ops provide a range of services, including the generation, transmission, and distribution of electricity. Distribution cooperatives deliver electricity and other services directly, and because they are member-owned, most distribution co-ops also return excess revenues, known as capital credits, back to their consumer-members. Generation and transmission (G&T) cooperatives, which were formed by distribution co-ops, provide wholesale power through their own electric generation facilities or by purchasing power on behalf of the distribution members. More than 42 million Americans are served by more than 830 distribution cooperatives and other rural utility members in 48 states,⁴ about 8 of 10 of which purchase their power from one or more of the nation's 60+ G&T cooperatives.⁵ These co-ops cover 56% of the United States land mass, including service in 92% of the country's persistent poverty counties.⁶

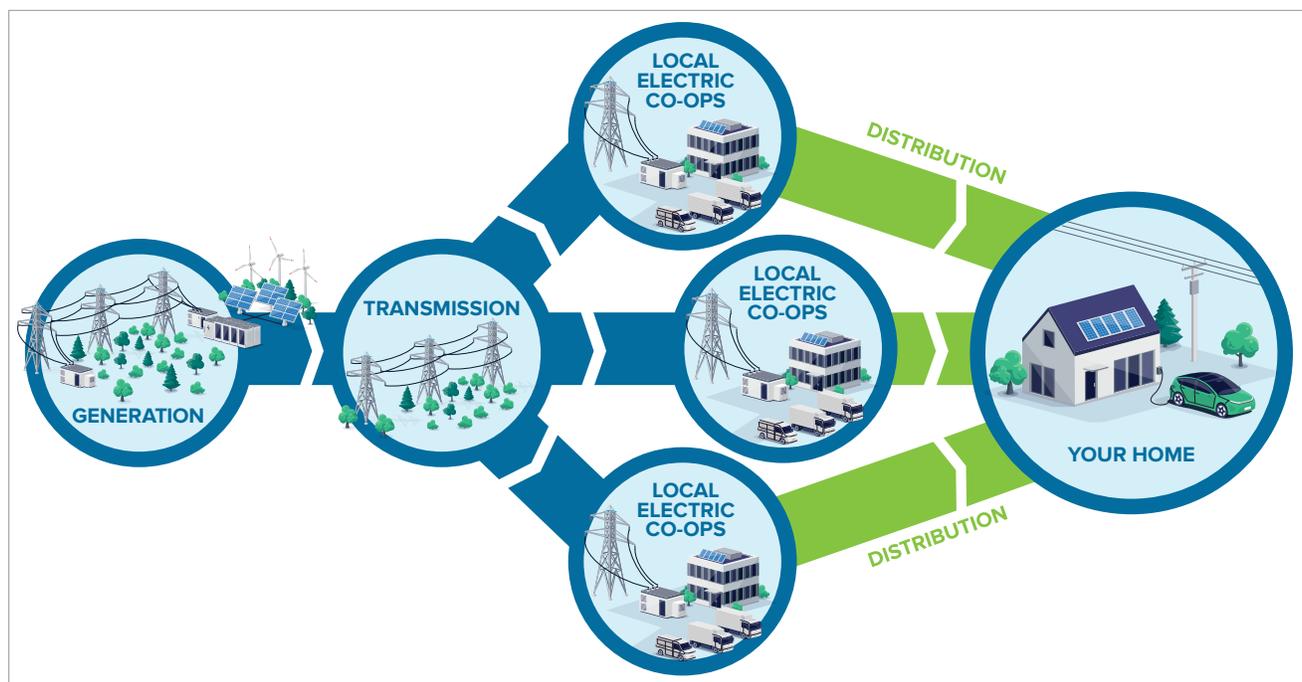


FIGURE 5: Structure of Co-op Activities

Methodology and Inputs

In their role as member-owned electric utilities, co-ops engage in economic activity through the generation, transmission, and distribution of electricity, including investments in new capital, operating and maintenance expenses, and disbursement of capital credits to consumer-members. These activities not only impact the industries in which they directly occur, but also create additional economic activity across multiple economic sectors.

⁴ Although this report uses “cooperatives” or “co-ops” as general terms, the input data include approximately 50 other rural utilities that are also NRECA/CFC members, mostly public power districts, which are especially common in Nebraska, as well as other small municipal, tribal, and mutual utilities.

⁵ NRECA, “Electric Co-Op Facts & Figures,” April 12, 2023.

⁶ Ibid.

Economic Modeling

Multiplier Analysis

The total economic impact resulting from electric co-ops and the additional economic activity they generate can be quantified through analysis using economic multipliers. These multipliers track how spending in one industry flows through the economy, stimulating new activity across multiple industries, measured through direct, indirect, and induced effects. Direct effects are the impacts within the industry where the initial economic activity occurs. For example, electric co-ops providing power to their consumer-members have a direct impact on the electric transmission and distribution sector, among others. These direct effects create indirect impacts for industries in the wider supply chain. In the example of electric power transmission and distribution, this would include the manufacturing and supply of equipment and materials used by co-ops, as well as legal, accounting, and other professional services. Induced effects result from employees in the direct and indirect industries spending income in their communities, for example on groceries or other local services. Every dollar of expenditures generates direct, indirect, and induced activity, and economic multipliers determine the magnitude of impacts from one industry on other sectors. The total impacts of a business or sector under study are calculated by adding together the direct, indirect, and induced effects.

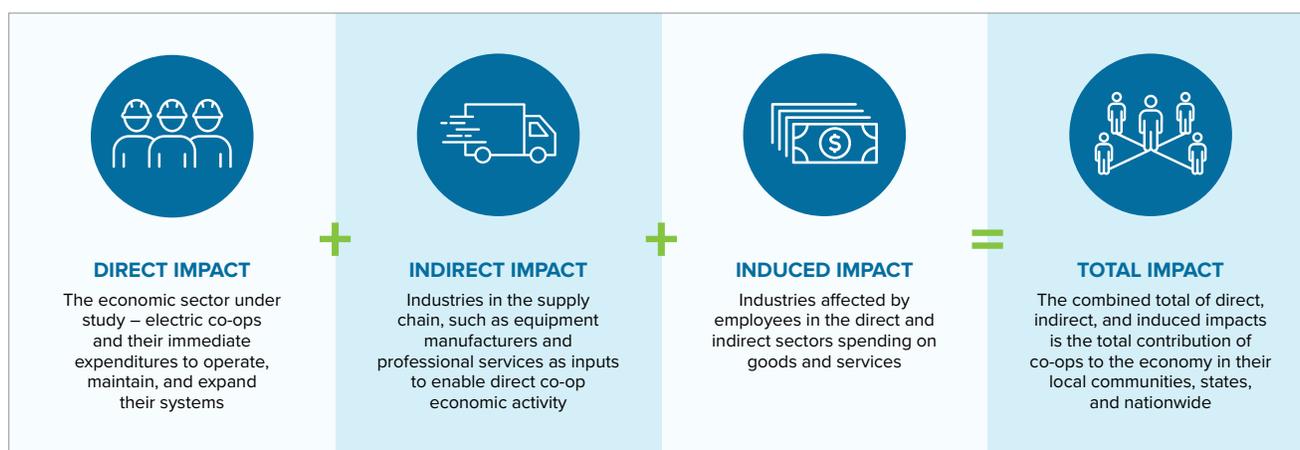


FIGURE 6: Economic Impacts Created by Electric Cooperatives | Source: Strategen Consulting, Inc.

About the IMPLAN Model

To estimate the total economic impact of electric co-ops nationwide, Strategen employed the IMPLAN model to conduct multiplier analysis. IMPLAN is an “input-output” software model of the United States economy utilized by academics, governments, economic developers, corporations, nonprofits, and consultants to analyze the effects of economic activity on different outputs such as state and local tax revenues, employment, sales, gross domestic product (GDP), and labor income.⁷

At the core of the IMPLAN model is an input-output dollar flow table, which accounts for the relationships between different sectors of the economy by region. The model uses national industry data and county-level economic data to generate economic multipliers, which in turn estimate the total economic implications of economic activity. IMPLAN Sector codes are based on definitions put forth by the Bureau of Economic Analysis.⁸ Each year, IMPLAN gathers current data at the national level, compiles it into the IMPLAN data format, and

⁷ IMPLAN, “Economic Input Output modeling application, data, and solution,” Accessed August 9, 2023, <https://implan.com/>.

⁸ IMPLAN, “How IMPLAN Works,” Accessed September 9, 2023 <https://support.implan.com/hc/en-us/articles/360038285254-How-IMPLAN-Works>.

derives new national input-output matrices, as well as national tables for deflators, margins, and regional purchasing coefficients.

Using this information, IMPLAN models the way a dollar spent in one sector of the economy generates waves of economic activity, known as economic multiplier effects, that ripple through other sectors of the economy. The results of IMPLAN modeling are divided into the direct, indirect, and induced effects.⁹

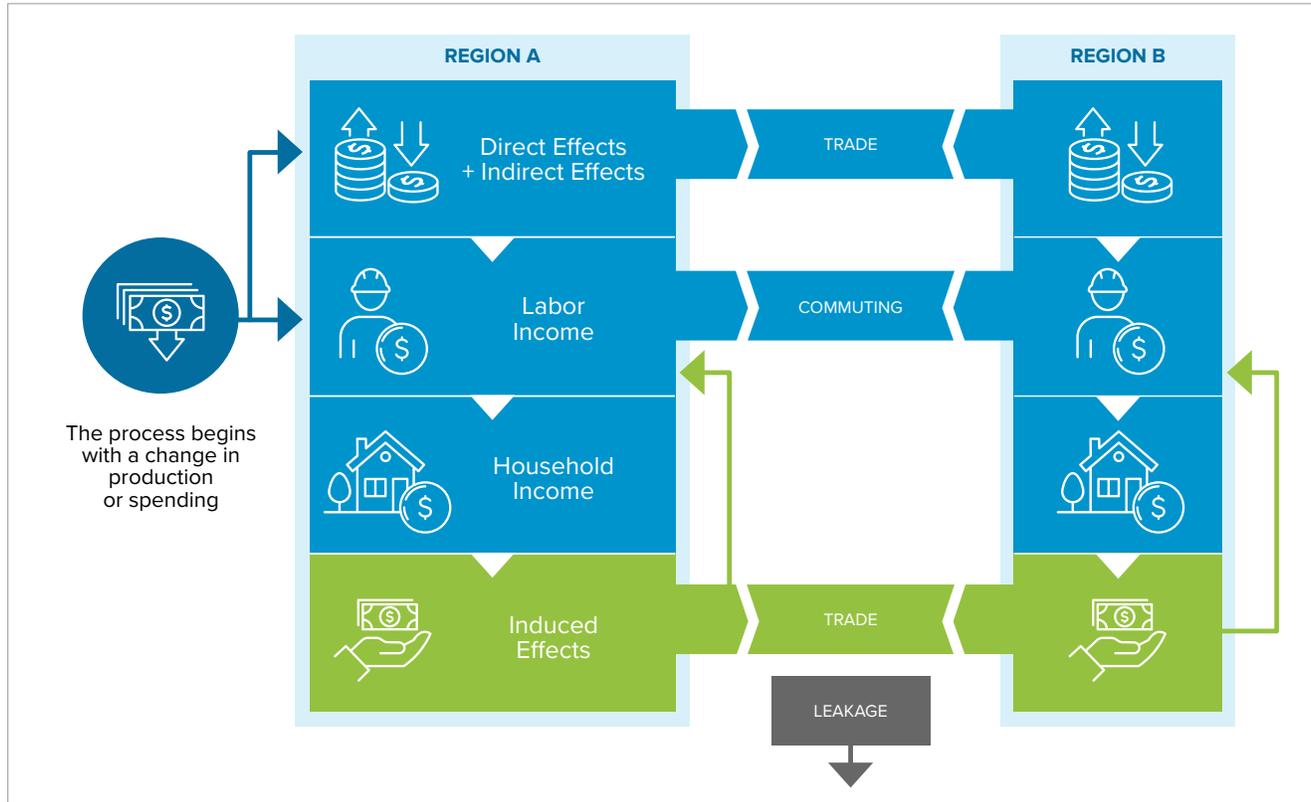


FIGURE 7: Visualization of Multi-Region Impact Analysis in IMPLAN | Source: IMPLAN figure, recreated by Strategen Consulting, Inc. for this report.

⁹ IMPLAN, "How IMPLAN Works," Accessed September 9, 2023 <https://support.implan.com/hc/en-us/articles/360038285254-How-IMPLAN-Works>.

¹⁰ Data for all co-ops in the study were provided to Strategen directly by CFC, aggregated to the state-level. The data include co-op expenditures related to capital investment, operations, and maintenance activities, as well as the number of employees, payroll, and capital credits paid by distribution cooperatives to consumer-members. Information on electric generation by technology type was also included, to allow for operating expenditures towards power generation to be appropriately assigned for each technology.

Data Sources and Application

Input Data

To perform the analysis, Strategen relied on data for the years 2018 through 2022, reported by 816 distribution co-ops and 62 G&T co-ops across the nation.¹⁰ These data were compiled and categorized into four primary expenditure categories and implemented as inputs to the IMPLAN model. Appendix A provides a detailed description of Strategen’s methodology for allocating input data to the appropriate economic sectors in IMPLAN for modeling.



FIGURE 8: Electric Cooperative Input Expenditure Categories | Source: Strategen Consulting, Inc.

Geographic Regions

When modeling economic impacts, a geographic region must be assigned for all economic activity included in the analysis, due to regional variation in spending patterns and resulting variation in the magnitudes of economic multipliers. That is, expenditures made in one industry in rural South Dakota are likely to have a vastly different impact than expenditures in the same industry in Los Angeles, as those direct expenditures ripple through their respective regional economies to create indirect and induced impacts.

The IMPLAN model features industry-level economic multipliers available at several levels of geography. This gives users the option to model impacts at the national, state, county, or even zip code levels, depending on the locational precision of their inputs. To assess the impact of co-op economic activity in the communities they serve, this study was performed at the county-level, in order to utilize the most accurate local multipliers. To do so, Strategen created custom regions and custom multipliers within the IMPLAN model for each state, composed only of counties served by electric cooperatives in the state.¹¹ The distribution and G&T cooperative input data provided by CFC, aggregated to the state-level, were then applied to these custom regions. This approach allowed Strategen to calculate and report the economic impacts that co-ops create within their communities, driving local economic activity. In order to estimate the full impact of co-ops nationwide, however, the economic interactions that electric cooperatives have with regions outside of their service territories (i.e., in counties not served by co-ops) were also modeled using the multi-regional input-output (MRIO) functionality in the IMPLAN model. Through this methodology, which links multiple geographies to capture the flow of economic activity across regional and state boundaries, Strategen’s analysis tracks both the benefits that co-ops provide directly to their local economies, as well as the far-reaching impact they have across the entire country.

¹¹ Data on counties in each state that are served by electric cooperatives were provided directly to Strategen by NRECA and sourced to the U.S. Energy Information Administration’s Form 861.

Economic Impact Analysis

Using the provided input data, assigned to the appropriate sectors in the IMPLAN model as described in the previous section, Strategen performed multiplier analysis to estimate the full economic impact of electric cooperatives in the U.S. for years 2018-2022.

Cooperatives in the Economy

Over the 5-year study period, electric cooperatives nationwide spent approximately \$409 billion in the U.S. economy. Of this, \$303 billion was spent on operations, \$75 billion was invested in capital improvement projects, \$24 billion went towards maintenance, and \$7 billion was returned to co-op consumer-members in the form of retired capital credits. This spending had a direct impact in these sectors and further stimulated the economy, creating additional economic activity via indirect impacts throughout the supply chain and induced impacts resulting from employees in direct and indirect industries spending their labor income.

Cooperative	Input Category	Annual Average	5-Year Total
G&T	CapEx	\$5.5	\$27.5
	OpEx	\$20.3	\$101.6
	Maintenance	\$1.6	\$8.1
	Total	\$27.4	\$137.2
Distribution	CapEx	\$9.4	\$47.1
	OpEx	\$40.4	\$201.9
	Maintenance	\$3.2	\$15.8
	Capital Credits	\$1.4	\$6.9
	Total	\$54.3	\$271.7
Combined	CapEx	\$14.9	\$74.6
	OpEx	\$60.7	\$303.5
	Maintenance	\$4.8	\$23.9
	Capital Credits	\$1.4	\$6.9
	Total	\$81.8	\$408.9

FIGURE 9: Summary of Electric Co-op Expenditures, 2018-2022 (Billion 2022\$) | Source: Strategen Consulting, Inc.

Summary of Results

Economic activity from electric cooperatives leads to far-reaching impacts across the country, even in counties where they do not serve consumers directly. From 2018 through 2022, co-ops ultimately created more than \$1.1 trillion in total output and contributed \$554 billion to U.S. GDP. This activity supported nearly 623,000 jobs per year and \$257 billion in labor income for Americans nationwide over the 5-year period.

Electric co-ops are also critical drivers of economic development within their own communities. Locally, co-ops are responsible for \$791 billion of sales output and \$374 billion in value added to the communities they serve. Through this activity, electric co-ops create nearly 424,000 local jobs per year, leading to \$166 billion in labor income for local residents.

Figure 10 shows both the total impact that co-ops have nationwide, as well as the portion of these impacts that occur locally, within communities served by electric cooperatives.

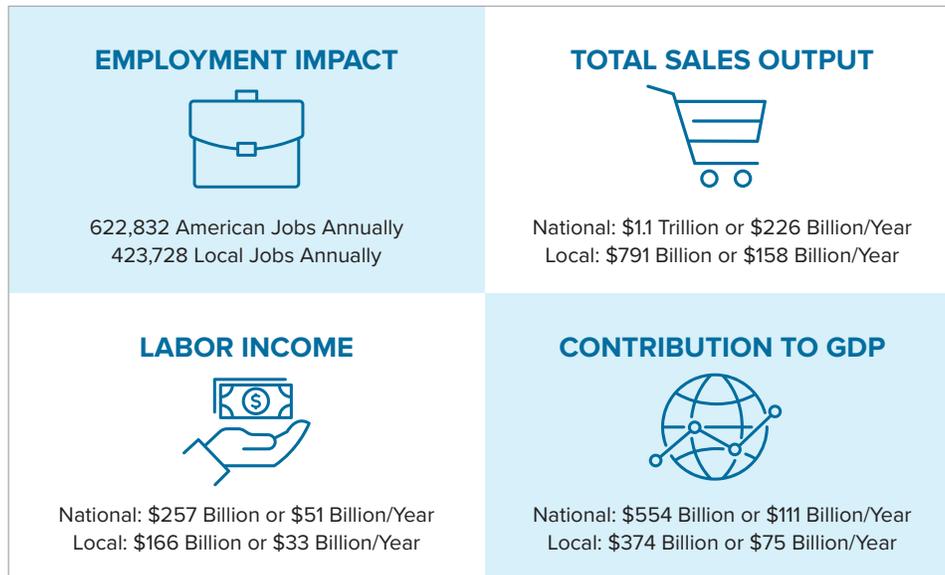


FIGURE 10: Summary of National and Local* Economic Impact of Electric Cooperatives, 2018-2022 | Source: Strategen Consulting, Inc.

*Local impacts are those that occur specifically in counties served by electric co-ops and are therefore a subset of national impacts, rather than an addition.

Employment

Figure 11 provides detail on the average annual employment supported through co-op economic activity from 2018 to 2022, separated by type of impact. Over the period, electric co-op directly employed approximately 69,442 workers per year and created 98,429 jobs for direct contractors through their spending on capital projects, for a total of 167,871 direct jobs.¹²

Through the supply chain, electric co-ops also supported 239,184 indirect jobs per year, with 129,463 of these jobs performed by local residents of co-op communities. Spending of labor income from employees in the direct and indirect industries, combined with household spending of capital credits returned to co-op consumer-members, led to a total of 215,777 induced jobs nationally and 126,394 induced jobs locally.

¹² Strategen's methodology of modeling direct co-op activity within counties served by electric co-ops necessarily includes and assumption that these activities occur in these counties and are performed by local workers in co-op communities. As a result, all direct employees are classified as local labor in the results.

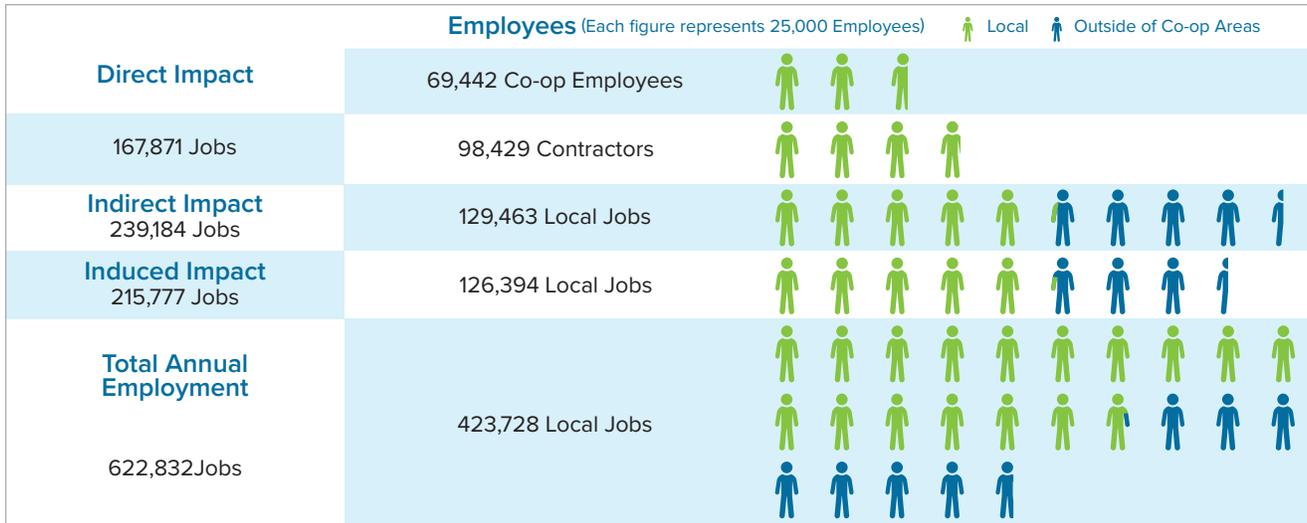


FIGURE 11: Annual Average Employment Supported by Electric Co-op Activity, 2018-2022 | Source: Strategen Consulting, Inc.

Appendix B includes further detail on employment impacts for each year, including impacts specifically for G&T and distribution cooperatives.

Labor Income

Labor income measures the impact on total earnings, including wages, salaries, and the value of employee benefits. In this way, it represents the full compensation workers receive for their labor. From 2018 to 2022, economic activity from electric cooperatives led to a total of \$257 billion in labor income for workers across the U.S., with an average of \$51 billion per year.

Dividing this annual contribution to employee earnings by the average number of jobs supported over the 5-year period yields an average total compensation of \$82,671 per worker. As shown in Figure 8, the average compensation per job varies significantly by direct, indirect, and induced impacts. This is largely due to the industries affected by each type of impact. That is, direct impacts are based on co-op employees and direct contractors, while indirect impacts occur in industries through the supply chain, which tend to receive higher compensation. Induced impacts, conversely, are experienced in more service-oriented industries where total compensation can be lower.

Year	Direct	Indirect	Induced	Total
2018	\$12.9 B	\$23.7 B	\$11.9 B	\$48.6 B
2019	\$13.0 B	\$23.1 B	\$11.8 B	\$47.9 B
2020	\$14.3 B	\$23.1 B	\$12.2 B	\$49.5 B
2021	\$14.3 B	\$26.5 B	\$13.2 B	\$54.1 B
2022	\$14.9 B	\$28.5 B	\$14.0 B	\$57.4 B
Total	\$69.4 B	\$124.9 B	\$63.1 B	\$257.5 B
Avg per Job	\$82,733	\$104,449	\$58,483	\$82,671

FIGURE 12: Electric Cooperative Impact on Labor Income, 2018-2022 | Source: Strategen Consulting, Inc.

Locally, approximately \$33 billion of the average annual labor income is earned in communities served by electric cooperatives. Detailed results by type of co-op and expenditure category are presented in Appendix B to this report.

Total Output

Total sales output measures the gross value of all economic activity that occurs as a result of electric cooperative expenditures. That is, total output accounts for all revenues, production, and sales, including those that are not final products. This means that the value of intermediate inputs required for production is counted towards output, in addition to the value of the good or service that is ultimately sold to consumers. As a result, impacts on total output are larger than impacts to GDP, which measures only the net value added.¹³

Over the 5-year period, electric cooperatives had an overall impact of \$1.13 trillion on total output nationwide, averaging approximately \$226 billion per year. Of this total, the large majority of impacts, around 76%, were the result of co-op operational expenditures. This is intuitive, as co-op operations include many of the core business functions carried out by electric utilities, particularly the generation, transmission, and distribution of electricity. Strategen’s analysis, conducted at the county level, found that \$791 billion of the 5-year impact on total output, or \$158 billion annually, occurred in areas served by electric cooperatives, representing a tremendous local impact.

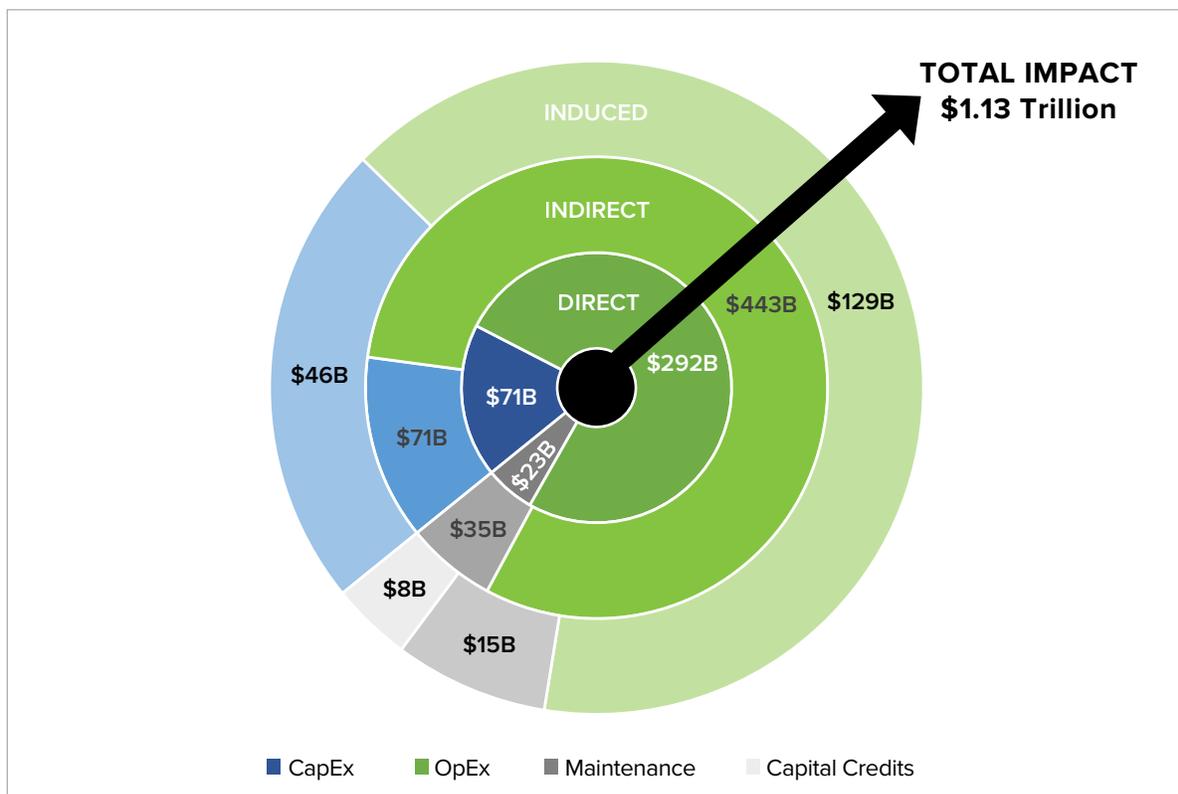


FIGURE 13: Co-op Impacts on Total Output, 2018-2022 | Source: Strategen Consulting, Inc.

Detailed tables showing full direct, indirect, and induced impacts for each year, separately for G&T cooperatives and distribution cooperatives, are included in Appendix B.

¹³ For example, GDP includes the value of electricity sold by co-ops as a final product to their consumer-members, but does not include the value of fuel purchased by co-ops as an intermediate input used to generate electricity. Total output would include both values.

Value Added

As discussed in the previous section, value added measures the total net value of final goods and services resulting from co-op economic activity. At the national level, this can be considered analogous to the contribution to GDP, while at the state or local level, it represents gross state product and gross regional product, respectively.

Strategen's analysis found that electric cooperatives contributed a total of \$554 billion to U.S. GDP over the 5-year period. This contribution averages approximately \$111 billion per year, which accounts for 0.43% of the \$25.5 trillion U.S. GDP in 2022 reported by the U.S. Bureau of Economic Analysis.¹⁴ Although this appears to be a small fraction, in context, it accounts for a relatively large portion of U.S. economic activity. For example, there were 11 U.S. states that contributed less than \$100 billion to U.S. GDP in 2022, including Hawaii, West Virginia, and Delaware.¹⁵

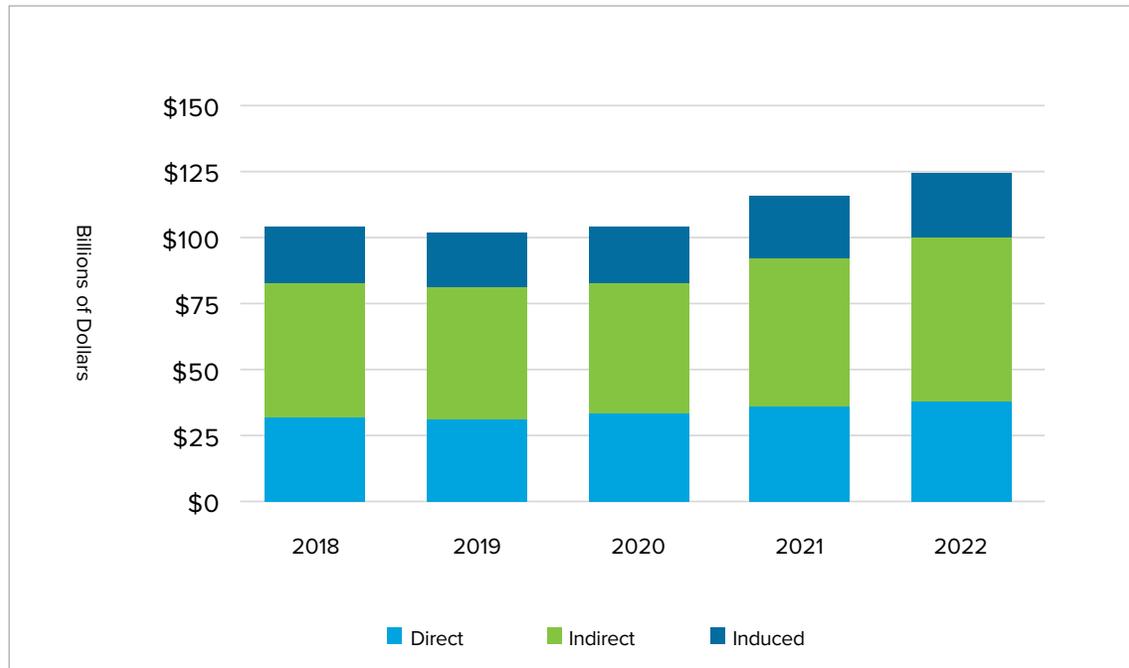


FIGURE 14: Electric Cooperative Contribution to U.S. GDP | Source: Strategen Consulting, Inc.

¹⁴ U.S. Bureau of Economic Analysis, "Gross Domestic Product," Accessed September 8, 2023, <https://www.bea.gov/data/gdp/gross-domestic-product>.

¹⁵ U.S. Bureau of Economic Analysis, "Gross Domestic Product by State and Personal Income by State," Accessed September 8, 2023, <https://www.bea.gov/news/2023/gross-domestic-product-state-and-personal-income-state-1st-quarter-2023>.

¹⁶ University of Illinois, Department of Agricultural and Consumer Economics, "Agriculture's Contributions to County Economic Activity," February 10, 2023.

Of the total value added contributed by electric cooperatives, \$374 billion occurred directly in co-op communities, or approximately \$75 billion per year. This is a substantial finding, given that the GDP contribution of nonmetropolitan (or rural) counties has been estimated to be roughly 10% of total U.S. GDP,¹⁶ translating to \$2.5 trillion in 2022. These results suggest that electric co-ops are responsible for the equivalent of 2.9% of total rural GDP contribution.

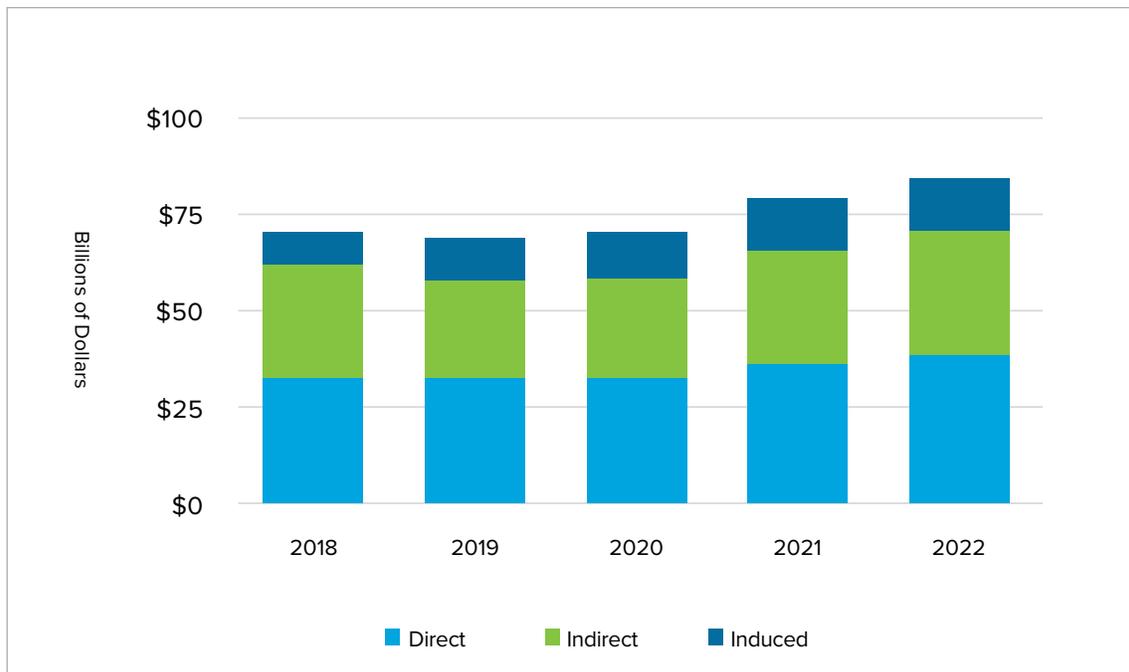


FIGURE 15: Electric Cooperative Contribution to GDP in Local Areas | Source: Strategen Consulting, Inc.

Further detail on impacts to value added, including breakdowns between G&Ts and distribution co-ops, is provided in Appendix B.

¹⁶ University of Illinois, Department of Agricultural and Consumer Economics, "Agriculture's Contributions to County Economic Activity," February 10, 2023.

Tax Impacts

The direct, indirect, and induced impacts associated with employment, output, value added, and labor income all generate tax revenues. Using the IMPLAN model, Strategen tracked the resulting tax revenues, separately at the federal, state, and local levels.

Federal Taxes

As discussed in previous sections, electric cooperative expenditures lead to additional economic activity, which in turn supports federal tax revenues, primarily in the form of income corporate profit taxes.¹⁷ From 2018 through 2022, electric co-op activity generated \$40.6 billion in federal tax revenues, or \$8.1 billion annually over the 5-year period.

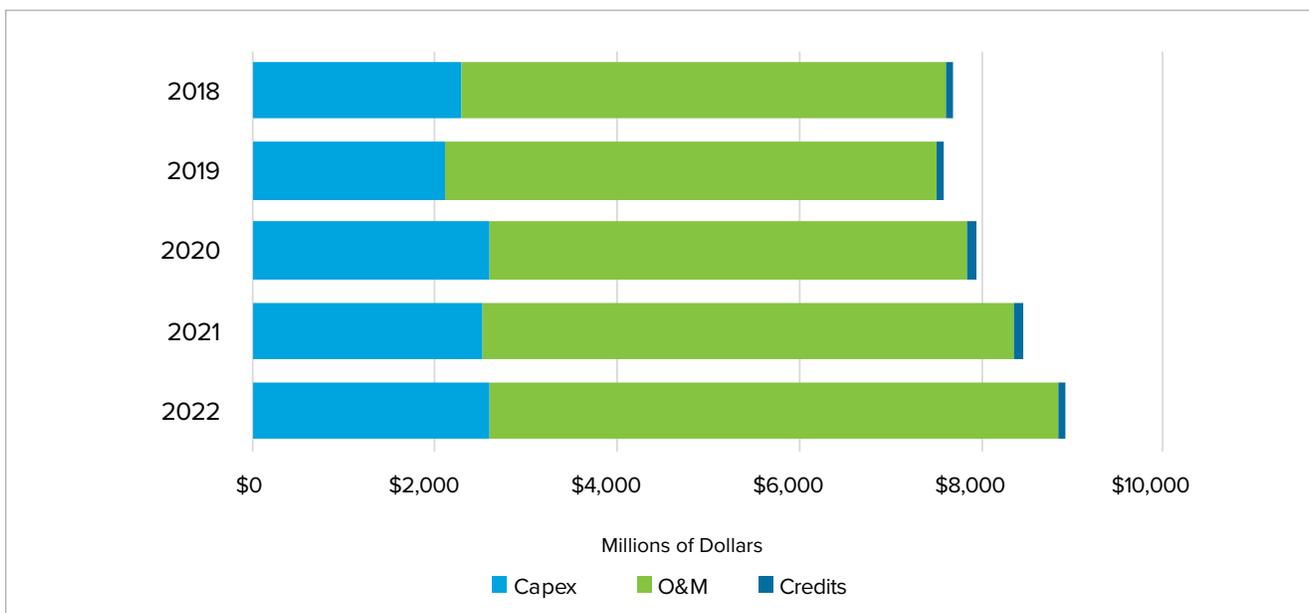


FIGURE 16: Federal Tax Revenues Supported by Electric Co-ops | Source: Strategen Consulting, Inc.

¹⁷ As not-for-profit businesses, most co-ops are tax exempt for federal income tax purposes, but they pay state and local taxes. Co-op employees do pay federal income and payroll taxes, as do associated industries impacted by their economic activity.

State and Local Taxes

The IMPLAN model also allows the calculation of state and local tax revenues. The types and rates for taxes collected by these jurisdictions can vary across geographies, but the major categories include taxes on sales, income, and corporate profits, as well as property taxes and severance taxes. Over the 5-year period, expenditures made by electric co-ops and the resulting indirect and induced impacts led to a total of \$94.5 billion in state and local tax revenues for jurisdictions across the country. On an annual basis, this results in approximately \$18.9 billion in tax revenues per year.

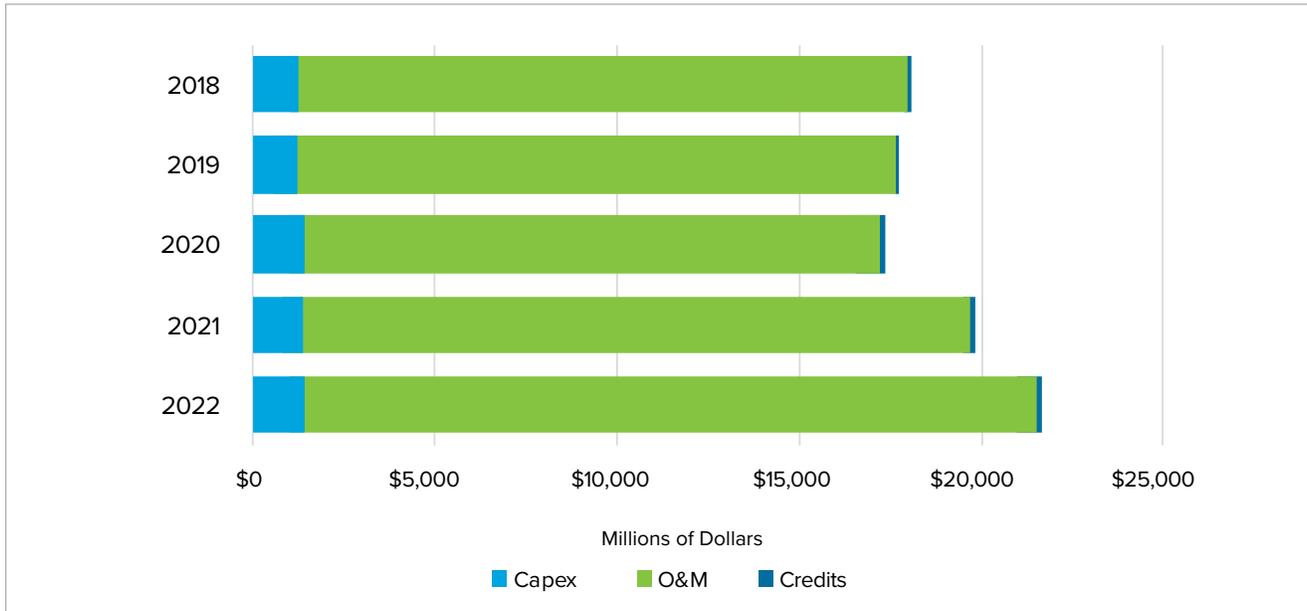


FIGURE 17: State and Local Tax Revenues Supported by Electric Co-ops | Source: Strategen Consulting, Inc.

Conclusions and Implications

The findings from this study highlight the vast economic impact of electric cooperatives on a national scale. With operations in nearly every state, co-ops have a far-reaching footprint that creates value for Americans all over the U.S. As consumer-owned and operated utilities, co-ops also enable economic benefits for their communities that extend beyond providing safe, reliable, and affordable electricity for their members. Indeed, much of the substantial direct, indirect, and induced impacts resulting from electric co-op activity accrue locally, driving economic development and output, and creating jobs and labor income for the residents in areas they serve.

Key Findings

Over the 5-year period from 2018 to 2022, electric distribution and G&T cooperatives invested nearly \$409 billion across the U.S., including:

- + \$75 billion in capital expenditures
- + \$304 billion in operational expenditures
- + \$24 billion toward maintenance activities
- + \$7 billion in retired capital credits disbursed to consumer-members

Through this economic activity, electric cooperatives supported:

- + 167,871 direct jobs annually for co-op employees and direct contractors
- + 622,832 total jobs per year at the national level, 423,728 of which are local jobs in counties served by electric co-ops
- + \$257 billion in total labor income nationally, with \$166 billion accruing to workers in co-op communities
- + \$1.1 trillion in total output, for an average of \$226 billion per year
- + \$111 billion in contribution to U.S. GDP annually, including \$75 billion per year towards gross regional product in local co-op areas
- + \$41 billion in total federal tax revenues, \$8 billion annually
- + \$95 billion in state and local taxes, \$19 billion on an annual basis

Engines of Economic Development

The findings from this study highlight the consistent and expanding impact of electric cooperatives on the American workforce and economies both local and nationwide. For many rural communities, co-ops present a pathway for economic improvement, particularly in areas of need. As noted previously, electric cooperatives serve territory in more than 90% of the nation's persistent poverty counties.^{18,19}

¹⁸ Benson C. Bishaw, M. Glassman, B. "Persistent Poverty in Counties and Census Tracts," United States Census Bureau, May 2023, <https://www.census.gov/content/dam/Census/library/publications/2023/acs/acs-51%20persistent%20poverty.pdf>.

¹⁹ Persistent poverty counties are defined as any county that has had 20% or more of its population living in poverty over the last 30 years by the United States Treasury's Community Development Financial Institutions Fund (CDFI).

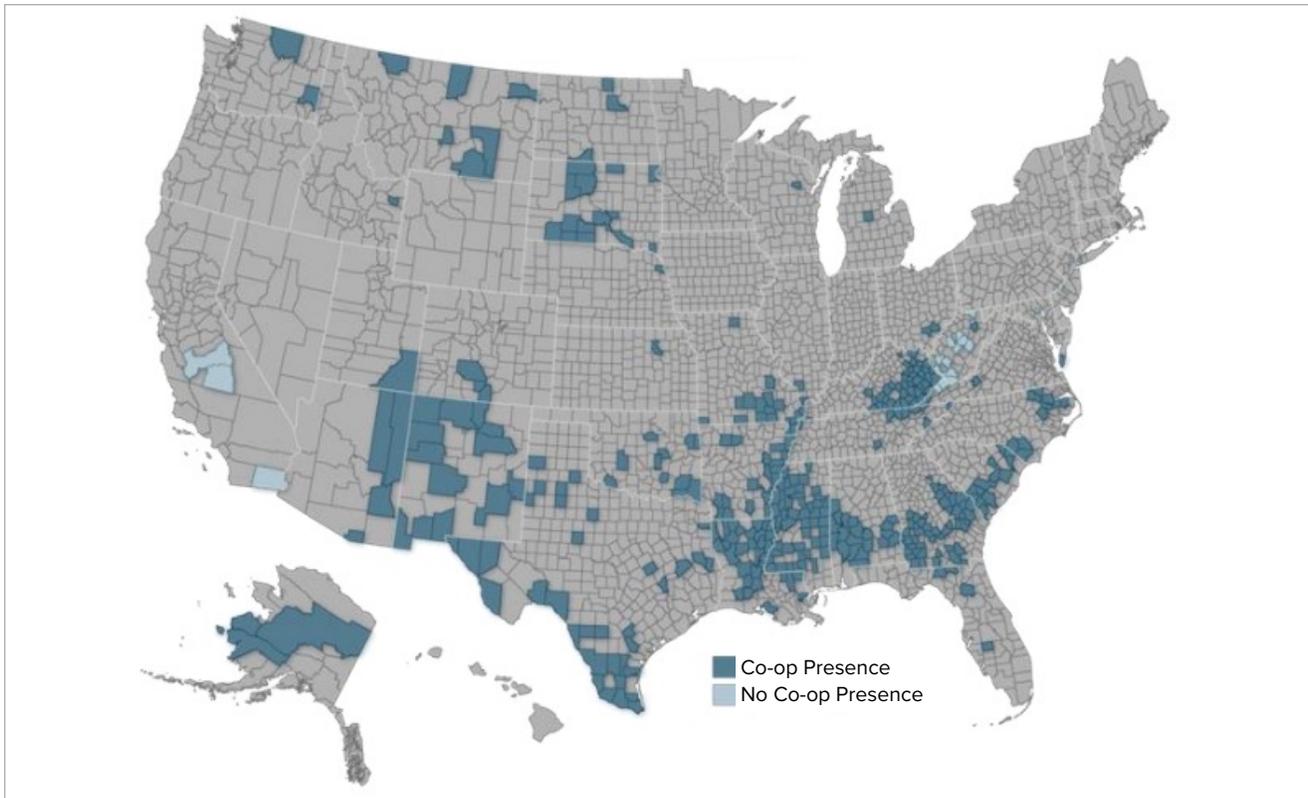


FIGURE 18: Overlay of Cooperative Service Areas and Persistent Poverty Counties | Source: NRECA

Geographically, persistent poverty counties are scattered across the country, with clusters concentrated in areas of the southeast and southwest. The economic importance of electric cooperatives in these regions is critical. Strategen’s analysis found that from 2018 to 2022, electric cooperatives were responsible for \$31 billion in direct, indirect, and induced GDP impacts per year in the 10 U.S. states with the highest proportion of persistent poverty counties, supporting more than 180,000 jobs in these areas on an annual basis. These findings underscore the imperative of investing in local communities, and the rippling impacts these investments can have for residents, counties, states, and the U.S. as a whole.

With a history of strong connection to the communities they serve, electric co-ops are well-suited to continue their critical role as engines of economic growth, as they make investments that improve the quality of life for their consumer-members. Further, there is a tremendous opportunity for co-ops to unlock additional economic benefits on both the large national scale and for local areas during a pivotal period when substantial investments will be made to upgrade and advance the electric system.

Appendix A | Model Setup

Within the IMPLAN model, input data must be assigned to an economic sector to determine the industry-specific multipliers to apply and translate inputs into direct, indirect, and induced impacts. As noted in the previous section, the data employed for this study include capital, operational, and maintenance expenditures, as well as capital credits retired and distributed to consumer-members. For each of these expenditure categories, data for years 2018 through 2022 were mapped to the appropriate economic sectors in the IMPLAN model. The following sub-sections describe how these data categories were translated for IMPLAN analysis.

Capital Expenditures

Co-ops' capital expenditures were modeled as industry output and assigned to the "construction of new power and communication structures" sector in IMPLAN. These expenditures were reported directly in the input data and were modeled separately for distribution and G&T co-ops to allow for reporting of results by type of electric cooperative. For capital investment projects, electric cooperatives typically rely on contractors rather than full-time co-op employees. Therefore, Strategen applied data from the IMPLAN model on regional labor productivity and labor costs to calculate the contractor employment and labor income necessary to complete these projects, based on co-ops' spending on capital improvements. Such activity was treated as a direct impact because these contractors are working on behalf of the cooperatives implementing co-op investments. As such, these employees and their labor income are labeled as Direct Contractors in the results.

Operational Expenditures

Operational expenditures were modeled separately for G&T and distribution co-ops and applied to the appropriate categories in IMPLAN consistent with the type of operating activity. Input data on co-op employees and total payroll were assumed to be associated with co-op operations and therefore assigned to OpEx. These were apportioned to specific industries for G&T and distribution co-ops, as explained below.

G&T Cooperatives

The input data provided for the G&T co-ops include total operational expenditures in addition to spending specifically on transmission and distribution (T&D) of power. Strategen assigned the T&D inputs for each year of the study period to the "electric power transmission and distribution" sector in IMPLAN, and the remaining OpEx (after subtracting T&D spending) were assigned to electric power generation. To allow for greater granularity and accuracy, there are multiple subsectors available in IMPLAN for modeling the impacts of electric power generation, based on the technology type, such as hydroelectric, fossil fuel, nuclear, solar, or wind. Although the input data for G&T co-ops do not report specific expenditures related to power generation, the data do include megawatt-hours (MWh) of electricity generation by technology type, allowing Strategen to apportion the remaining OpEx across these categories. That is, using the share of reported generation, data on G&T co-op OpEx were divided among the various "electric power generation" subsectors in IMPLAN. Spending that Strategen apportioned to fossil steam, combined cycle, and internal combustion generation was assigned to

the fossil fuel subsector, and spending on nuclear and hydroelectric power generation was likewise assigned to these technology-specific subsectors in IMPLAN. The input data also includes MWh of generation labeled only as “other,” and these shares of expenditures were assigned primarily to the wind and solar generation categories in IMPLAN, based on the appropriate share of wind and solar generation for each state reported by the U.S. Energy Administration.²¹

Reported employment and payroll for G&T co-ops were similarly assigned to the T&D sector and the various power generation subsectors, using the share of apportioned spending that Strategen allocated to each of these categories. This methodology allowed Strategen to make use of as much reported data as possible, to maximize the accuracy of results. When modeling the full economic impact, such input values are interpreted by the IMPLAN model as direct impacts, in order to closely align with real-world data. Absent these inputs, the IMPLAN model would otherwise estimate employment and payroll.

Distribution Cooperatives

For distribution cooperatives, the reported operational expenditure data were treated similarly to the T&D expenditures for G&T co-ops and modeled as industry output assigned to the “electric power transmission and distribution” industry in IMPLAN. Likewise, reported employment and payroll for distribution co-ops were entered as direct inputs into the T&D sector.

Maintenance Expenditures

Reported maintenance expenditures for distribution and G&T co-ops were entered into IMPLAN as industry output and applied to the “maintenance and repair construction of nonresidential structures” sector. However, co-op maintenance activities are typically performed by a combination of co-op employees and outside contractors working for external companies who maintain co-ops’ equipment, structures, and other energy systems. Based on discussions with NRECA and CFC, 30% of maintenance activities for G&T co-ops and 70% of maintenance activities for distribution co-ops were modeled as contracted services, with the remaining shares attributed to electric co-op employees.

Capital Credits

Capital credits were entered into IMPLAN as household income, which represents the income received by consumers for their participation in production, from government and business transfer payments, and from returns on capital (e.g., interest payments, dividends). The household income event type has nine specifications that represent different brackets of income levels, and each has its own associated spending patterns, because the highest-earning households are likely to spend their income on a different combination of goods and services than those purchased by the lowest-earning households.²² For this study, the amount of capital credits allocated to each of the household income category was determined based on their proportional spending on electricity, provided in IMPLAN’s database on electric power demand by income bracket. This methodology allows the IMPLAN model to accurately calculate the impact of capital credit payments to consumer-members in each region. Since the effects of increases in household income are estimated based only on where consumers spend their money, all impacts resulting from capital credit disbursements are treated as induced impacts in the results.

²¹ Energy Information Agency, “Electric Power Monthly: Net Summer Capacity Using Primarily Renewable Energy Sources and by State (Megawatts),” Accessed August 7, 2023.

²² The “household income” event type in IMPLAN has nine specifications as follows based on income levels: Households LT15k, Households 15-30K, Households 30-40K, Households 40-50K, Households 50-70K, Households 70-100K, Households 100-150K, Households 150-200K, Households GT200K.

Appendix B | Detailed Modeling Results

Table B-1: U.S. jobs supported by electric cooperatives, 2018-2022

Cooperative	Year	Spending Category	Direct	Indirect	Induced	Total
G&T	2018	CapEx	33,887	20,585	20,748	75,220
	2019	CapEx	28,954	17,705	18,198	64,857
	2020	CapEx	27,565	17,256	17,406	62,227
	2021	CapEx	34,175	20,973	21,384	76,531
	2022	CapEx	26,977	16,735	16,762	60,474
	Average	CapEx	30,311	18,651	18,900	67,862
	2018	OpEx	11,739	60,624	41,331	113,695
	2019	OpEx	11,717	57,315	39,497	108,529
	2020	OpEx	11,370	52,513	37,104	100,987
	2021	OpEx	11,287	75,330	51,287	137,904
	2022	OpEx	11,130	73,079	49,053	133,262
	Average	OpEx	11,449	63,772	43,654	118,875
	2018	Maintenance	7,136	9,450	6,266	22,852
	2019	Maintenance	7,067	9,373	6,206	22,646
	2020	Maintenance	6,028	8,061	5,335	19,424
	2021	Maintenance	6,131	8,220	5,428	19,778
	2022	Maintenance	6,093	8,253	5,425	19,772
	Average	Maintenance	6,491	8,671	5,732	20,894
	2018	Total Expenditures	52,762	90,659	68,345	211,767
	2019	Total Expenditures	47,738	84,393	63,901	196,032
2020	Total Expenditures	44,963	77,829	59,845	182,638	
2021	Total Expenditures	51,593	104,522	78,098	234,213	
2022	Total Expenditures	44,201	98,067	71,241	213,508	
Average	Total Expenditures	48,251	91,094	68,286	207,632	
Distribution	2018	CapEx	43,937	26,417	26,562	96,917
	2019	CapEx	43,375	26,176	26,183	95,735
	2020	CapEx	59,719	36,109	36,803	132,631
	2021	CapEx	51,176	31,990	31,948	115,114
	2022	CapEx	61,591	38,119	37,976	137,686
	Average	CapEx	51,960	31,762	31,894	115,616
	2018	OpEx	54,168	95,157	89,867	239,192
	2019	OpEx	54,794	94,682	91,610	241,086
	2020	OpEx	55,225	92,790	90,829	238,843
	2021	OpEx	56,058	100,406	96,766	253,231
	2022	OpEx	56,926	116,785	110,185	283,896
	Average	OpEx	55,434	99,964	95,851	251,249

Distribution	2018	Maintenance	11,416	15,277	10,065	36,758
	2019	Maintenance	11,726	15,676	10,338	37,739
	2020	Maintenance	11,910	15,897	10,488	38,295
	2021	Maintenance	12,409	16,593	10,940	39,942
	2022	Maintenance	13,666	18,377	12,099	44,142
	Average	Maintenance	12,225	16,364	10,786	39,375
	2018	Capital Credits	-	-	8,329	8,329
	2019	Capital Credits	-	-	9,008	9,008
	2020	Capital Credits	-	-	10,354	10,354
	2021	Capital Credits	-	-	8,582	8,582
	2022	Capital Credits	-	-	8,522	8,522
	Average	Capital Credits	-	-	8,959	8,959
	2018	Total Expenditures	109,522	136,851	134,823	381,196
	2019	Total Expenditures	109,895	136,534	137,139	383,568
	2020	Total Expenditures	126,854	144,795	148,474	420,124
2021	Total Expenditures	119,643	148,989	148,237	416,868	
2022	Total Expenditures	132,183	173,280	168,782	474,245	
Average	Total Expenditures	119,619	148,090	147,491	415,200	
All Co-ops	2018	CapEx	77,824	47,002	47,311	172,137
	2019	CapEx	72,329	43,882	44,381	160,592
	2020	CapEx	87,284	53,365	54,209	194,858
	2021	CapEx	85,350	52,963	53,332	191,645
	2022	CapEx	88,568	54,854	54,738	198,160
	Average	CapEx	82,271	50,413	50,794	183,478
	2018	OpEx	65,907	155,781	131,198	352,886
	2019	OpEx	66,511	151,997	131,107	349,615
	2020	OpEx	66,595	145,302	127,933	339,830
	2021	OpEx	67,345	175,736	148,053	391,134
	2022	OpEx	68,057	189,863	159,238	417,158
	Average	OpEx	66,883	163,736	139,506	370,125
	2018	Maintenance	18,552	24,727	16,331	59,611
	2019	Maintenance	18,793	25,049	16,544	60,385
	2020	Maintenance	17,938	23,957	15,823	57,719
2021	Maintenance	18,540	24,812	16,368	59,721	
2022	Maintenance	19,759	26,630	17,525	63,913	
Average	Maintenance	18,716	25,035	16,518	60,270	
2018	Capital Credits	-	-	8,329	8,329	
2019	Capital Credits	-	-	9,008	9,008	
2020	Capital Credits	-	-	10,354	10,354	
2021	Capital Credits	-	-	8,582	8,582	
2022	Capital Credits	-	-	8,522	8,522	
Average	Capital Credits	-	-	8,959	8,959	
2018	Total Expenditures	162,284	227,510	203,168	592,962	
2019	Total Expenditures	157,633	220,927	201,040	579,600	

All Co-ops	2020	Total Expenditures	171,817	222,625	208,319	602,761
	2021	Total Expenditures	171,236	253,511	226,334	651,082
	2022	Total Expenditures	176,384	271,347	240,022	687,754
	Average	Total Expenditures	167,871	239,184	215,777	622,832

Table B-2: Local jobs supported by electric cooperatives, 2018-2022

Cooperative	Year	Spending Category	Direct	Indirect	Induced	Total
G&T	2018	CapEx	33,887	11,838	14,225	59,949
	2019	CapEx	28,954	10,328	12,695	51,977
	2020	CapEx	27,565	10,075	12,138	49,778
	2021	CapEx	34,175	12,374	15,073	61,621
	2022	CapEx	26,977	9,761	11,680	48,419
	Average	CapEx	30,311	10,875	13,162	54,349
	2018	OpEx	11,739	34,110	21,018	66,866
	2019	OpEx	11,717	32,218	20,201	64,137
	2020	OpEx	11,370	29,377	19,231	59,978
	2021	OpEx	11,287	44,275	27,730	83,292
	2022	OpEx	11,130	41,585	25,052	77,767
	Average	OpEx	11,449	36,313	22,646	70,408
	2018	Maintenance	7,136	5,478	3,714	16,328
	2019	Maintenance	7,067	5,434	3,679	16,180
	2020	Maintenance	6,028	4,708	3,198	13,935
	2021	Maintenance	6,131	4,783	3,236	14,150
	2022	Maintenance	6,093	4,800	3,229	14,122
	Average	Maintenance	6,491	5,041	3,411	14,943
	2018	Total Expenditures	52,762	51,425	38,957	143,143
	2019	Total Expenditures	47,738	47,981	36,575	132,294
2020	Total Expenditures	44,963	44,160	34,567	123,691	
2021	Total Expenditures	51,593	61,431	46,039	159,063	
2022	Total Expenditures	44,201	56,146	39,961	140,308	
Average	Total Expenditures	48,251	52,229	39,220	139,700	
Distribution	2018	CapEx	43,937	14,971	18,068	76,977
	2019	CapEx	43,375	14,855	17,810	76,040
	2020	CapEx	59,719	20,184	24,958	104,861
	2021	CapEx	51,176	18,101	21,676	90,952
	2022	CapEx	61,591	21,683	25,835	109,109
	Average	CapEx	51,960	17,959	21,669	91,588
	2018	OpEx	54,168	47,395	47,296	148,859
	2019	OpEx	54,794	47,080	48,929	150,802
	2020	OpEx	55,225	46,230	49,020	150,475
	2021	OpEx	56,058	50,129	51,791	157,978
	2022	OpEx	56,926	58,301	58,123	173,350
	Average	OpEx	55,434	49,827	51,032	156,293

Distribution	2018	Maintenance	11,416	8,815	5,966	26,196
	2019	Maintenance	11,726	9,050	6,133	26,908
	2020	Maintenance	11,910	9,189	6,232	27,331
	2021	Maintenance	12,409	9,587	6,497	28,493
	2022	Maintenance	13,666	10,604	7,171	31,441
	Average	Maintenance	12,225	9,449	6,400	28,074
	2018	Capital Credits	-	-	7,512	7,512
	2019	Capital Credits	-	-	8,120	8,120
	2020	Capital Credits	-	-	9,346	9,346
	2021	Capital Credits	-	-	7,729	7,729
	2022	Capital Credits	-	-	7,663	7,663
	Average	Capital Credits	-	-	8,074	8,074
	2018	Total Expenditures	109,522	71,181	78,841	259,544
	2019	Total Expenditures	109,895	70,984	80,992	261,871
	2020	Total Expenditures	126,854	75,602	89,557	292,013
2021	Total Expenditures	119,643	77,818	87,692	285,152	
2022	Total Expenditures	132,183	90,589	98,791	321,563	
Average	Total Expenditures	119,619	77,235	87,175	284,029	
All Co-ops	2018	CapEx	77,824	26,809	32,293	136,926
	2019	CapEx	72,329	25,183	30,505	128,016
	2020	CapEx	87,284	30,259	37,096	154,639
	2021	CapEx	85,350	30,475	36,748	152,573
	2022	CapEx	88,568	31,445	37,515	157,528
	Average	CapEx	82,271	28,834	34,831	145,936
	2018	OpEx	65,907	81,505	68,314	215,726
	2019	OpEx	66,511	79,298	69,130	214,939
	2020	OpEx	66,595	75,607	68,251	210,453
	2021	OpEx	67,345	94,404	79,521	241,270
	2022	OpEx	68,057	99,886	83,175	251,117
	Average	OpEx	66,883	86,140	73,678	226,701
	2018	Maintenance	18,552	14,292	9,679	42,524
	2019	Maintenance	18,793	14,484	9,811	43,088
	2020	Maintenance	17,938	13,897	9,431	41,266
	2021	Maintenance	18,540	14,370	9,733	42,643
	2022	Maintenance	19,759	15,404	10,400	45,563
	Average	Maintenance	18,716	14,490	9,811	43,017
	2018	Capital Credits	-	-	7,512	7,512
	2019	Capital Credits	-	-	8,120	8,120
2020	Capital Credits	-	-	9,346	9,346	
2021	Capital Credits	-	-	7,729	7,729	
2022	Capital Credits	-	-	7,663	7,663	
Average	Capital Credits	-	-	8,074	8,074	
2018	Total Expenditures	162,284	122,606	117,797	402,687	
2019	Total Expenditures	157,633	118,965	117,567	394,164	

All Co-ops	2020	Total Expenditures	171,817	119,762	124,124	415,704
	2021	Total Expenditures	171,236	139,249	133,730	444,215
	2022	Total Expenditures	176,384	146,735	138,752	461,871
	Average	Total Expenditures	167,871	129,463	126,394	423,728

Table B-3: U.S. Total Output supported by electric cooperatives, 2018-2022

Cooperative	Year	Spending Category	Direct	Indirect	Induced	Total
G&T	2018	CapEx	\$5,996,242,362	\$5,839,466,890	\$3,753,998,241	\$15,589,707,494
	2019	CapEx	\$5,089,910,212	\$4,989,898,715	\$3,284,595,469	\$13,364,404,395
	2020	CapEx	\$4,765,730,039	\$4,846,659,747	\$3,134,148,079	\$12,746,537,864
	2021	CapEx	\$5,916,739,345	\$5,914,075,658	\$3,861,977,165	\$15,692,792,167
	2022	CapEx	\$4,686,744,604	\$4,721,296,687	\$3,019,113,614	\$12,427,154,905
	Total	CapEx	\$26,455,366,561	\$26,311,397,696	\$17,053,832,568	\$69,820,596,825
	2018	OpEx	\$18,314,536,335	\$26,179,926,653	\$7,660,486,497	\$52,154,949,484
	2019	OpEx	\$17,375,543,780	\$24,850,360,604	\$7,316,644,173	\$49,542,548,557
	2020	OpEx	\$15,937,196,333	\$22,776,842,638	\$6,863,191,768	\$45,577,230,739
	2021	OpEx	\$23,108,012,628	\$32,503,350,695	\$9,498,803,257	\$65,110,166,580
	2022	OpEx	\$22,225,592,149	\$31,485,920,428	\$9,093,619,881	\$62,805,132,457
	Total	OpEx	\$96,960,881,225	\$137,796,401,017	\$40,432,745,575	\$275,190,027,817
	2018	Maintenance	\$1,754,057,457	\$2,603,184,267	\$1,144,513,850	\$5,501,755,575
	2019	Maintenance	\$1,731,736,376	\$2,579,716,890	\$1,133,475,439	\$5,444,928,706
	2020	Maintenance	\$1,472,440,897	\$2,218,151,810	\$974,259,684	\$4,664,852,391
2021	Maintenance	\$1,495,284,444	\$2,260,549,966	\$991,023,896	\$4,746,858,307	
2022	Maintenance	\$1,479,724,560	\$2,267,987,051	\$989,487,658	\$4,737,199,270	
Total	Maintenance	\$7,933,243,735	\$11,929,589,985	\$5,232,760,528	\$25,095,594,249	
2018	Total Expenditures	\$26,064,836,155	\$34,622,577,811	\$12,558,998,588	\$73,246,412,553	
2019	Total Expenditures	\$24,197,190,368	\$32,419,976,208	\$11,734,715,081	\$68,351,881,658	
2020	Total Expenditures	\$22,175,367,268	\$29,841,654,195	\$10,971,599,531	\$62,988,620,994	
2021	Total Expenditures	\$30,520,036,417	\$40,677,976,319	\$14,351,804,318	\$85,549,817,054	
2022	Total Expenditures	\$28,392,061,313	\$38,475,204,166	\$13,102,221,153	\$79,969,486,632	
Total	Total Expenditures	\$131,349,491,521	\$176,037,388,698	\$62,719,338,672	\$370,106,218,891	
Distribution	2018	CapEx	\$7,558,843,664	\$7,437,536,274	\$4,798,555,099	\$19,794,935,036
	2019	CapEx	\$7,421,347,448	\$7,388,399,233	\$4,728,547,194	\$19,538,293,875
	2020	CapEx	\$10,405,342,550	\$10,181,869,147	\$6,643,871,511	\$27,231,083,208
	2021	CapEx	\$8,749,585,009	\$8,988,398,914	\$5,758,468,283	\$23,496,452,206
	2022	CapEx	\$10,458,263,599	\$10,703,213,425	\$6,847,617,266	\$28,009,094,290
	Total	CapEx	\$44,593,382,270	\$44,699,416,992	\$28,777,059,353	\$118,069,858,615
	2018	OpEx	\$37,062,088,855	\$57,985,584,846	\$16,642,794,457	\$111,690,468,158
	2019	OpEx	\$37,106,114,988	\$57,726,584,516	\$16,949,066,168	\$111,781,765,672
	2020	OpEx	\$36,110,288,200	\$56,542,878,586	\$16,788,300,702	\$109,441,467,487
	2021	OpEx	\$39,175,649,996	\$61,217,067,688	\$17,901,839,448	\$118,294,557,132
	2022	OpEx	\$45,698,738,010	\$71,300,301,629	\$20,415,073,255	\$137,414,112,894

	Total	OpEx	\$195,152,880,049	\$304,772,417,264	\$88,697,074,031	\$588,622,371,343
	2018	Maintenance	\$2,808,130,536	\$4,227,779,732	\$1,840,827,157	\$8,876,737,424
	2019	Maintenance	\$2,881,544,642	\$4,336,552,365	\$1,890,562,367	\$9,108,659,373
	2020	Maintenance	\$2,927,468,005	\$4,398,689,210	\$1,918,621,378	\$9,244,778,593
	2021	Maintenance	\$3,048,348,311	\$4,590,781,358	\$2,001,179,793	\$9,640,309,462
	2022	Maintenance	\$3,356,105,569	\$5,084,761,018	\$2,212,652,993	\$10,653,519,580
	Total	Maintenance	\$15,021,597,063	\$22,638,563,683	\$9,863,843,688	\$47,524,004,434
Distribution	2018	Capital Credits	\$0	\$0	\$1,464,075,995	\$1,464,075,995
	2019	Capital Credits	\$0	\$0	\$1,584,048,478	\$1,584,048,478
	2020	Capital Credits	\$0	\$0	\$1,828,280,703	\$1,828,280,703
	2021	Capital Credits	\$0	\$0	\$1,503,677,751	\$1,503,677,751
	2022	Capital Credits	\$0	\$0	\$1,493,675,795	\$1,493,675,795
	Total	Capital Credits	\$0	\$0	\$7,873,758,723	\$7,873,758,723
	2018	Total Expenditures	\$47,429,063,055	\$69,650,900,851	\$24,746,252,708	\$141,826,216,614
	2019	Total Expenditures	\$47,409,007,078	\$69,451,536,113	\$25,152,224,207	\$142,012,767,398
	2020	Total Expenditures	\$49,443,098,754	\$71,123,436,943	\$27,179,074,294	\$147,745,609,992
	2021	Total Expenditures	\$50,973,583,316	\$74,796,247,960	\$27,165,165,275	\$152,934,996,552
2022	Total Expenditures	\$59,513,107,178	\$87,088,276,072	\$30,969,019,310	\$177,570,402,560	
	Total	Total Expenditures	\$254,767,859,381	\$372,110,397,939	\$135,211,735,795	\$762,089,993,115
	2018	CapEx	\$13,555,086,026	\$13,277,003,164	\$8,552,553,340	\$35,384,642,530
	2019	CapEx	\$12,511,257,660	\$12,378,297,947	\$8,013,142,663	\$32,902,698,270
	2020	CapEx	\$15,171,072,588	\$15,028,528,894	\$9,778,019,590	\$39,977,621,072
	2021	CapEx	\$14,666,324,354	\$14,902,474,572	\$9,620,445,448	\$39,189,244,374
	2022	CapEx	\$15,145,008,203	\$15,424,510,111	\$9,866,730,881	\$40,436,249,194
	Total	CapEx	\$71,048,748,831	\$71,010,814,688	\$45,830,891,922	\$187,890,455,440
	2018	OpEx	\$55,376,625,190	\$84,165,511,499	\$24,303,280,954	\$163,845,417,643
	2019	OpEx	\$54,481,658,768	\$82,576,945,120	\$24,265,710,341	\$161,324,314,229
	2020	OpEx	\$52,047,484,533	\$79,319,721,223	\$23,651,492,470	\$155,018,698,226
	2021	OpEx	\$62,283,662,624	\$93,720,418,383	\$27,400,642,705	\$183,404,723,712
	2022	OpEx	\$67,924,330,159	\$102,786,222,057	\$29,508,693,136	\$200,219,245,352
	Total	OpEx	\$292,113,761,274	\$442,568,818,282	\$129,129,819,606	\$863,812,399,161
All Co-ops	2018	Maintenance	\$4,562,187,993	\$6,830,963,999	\$2,985,341,007	\$14,378,492,999
	2019	Maintenance	\$4,613,281,018	\$6,916,269,255	\$3,024,037,806	\$14,553,588,079
	2020	Maintenance	\$4,399,908,901	\$6,616,841,021	\$2,892,881,063	\$13,909,630,985
	2021	Maintenance	\$4,543,632,756	\$6,851,331,324	\$2,992,203,689	\$14,387,167,769
	2022	Maintenance	\$4,835,830,129	\$7,352,748,070	\$3,202,140,651	\$15,390,718,850
	Total	Maintenance	\$22,954,840,798	\$34,568,153,668	\$15,096,604,216	\$72,619,598,682
	2018	Capital Credits	\$0	\$0	\$1,464,075,995	\$1,464,075,995
	2019	Capital Credits	\$0	\$0	\$1,584,048,478	\$1,584,048,478
	2020	Capital Credits	\$0	\$0	\$1,828,280,703	\$1,828,280,703
	2021	Capital Credits	\$0	\$0	\$1,503,677,751	\$1,503,677,751
2022	Capital Credits	\$0	\$0	\$1,493,675,795	\$1,493,675,795	
	Total	Capital Credits	\$0	\$0	\$7,873,758,723	\$7,873,758,723
	2018	Total Expenditures	\$73,493,899,210	\$104,273,478,662	\$37,305,251,296	\$215,072,629,167

All Co-ops	2019	Total Expenditures	\$71,606,197,446	\$101,871,512,321	\$36,886,939,289	\$210,364,649,056
	2020	Total Expenditures	\$71,618,466,022	\$100,965,091,138	\$38,150,673,826	\$210,734,230,986
	2021	Total Expenditures	\$81,493,619,733	\$115,474,224,279	\$41,516,969,593	\$238,484,813,606
	2022	Total Expenditures	\$87,905,168,491	\$125,563,480,237	\$44,071,240,463	\$257,539,889,192
	Total	Total Expenditures	\$386,117,350,903	\$548,147,786,637	\$197,931,074,467	\$1,132,196,212,007

Table B-4: U.S. Total Output supported by electric cooperatives, 2018-2022

Cooperative	Year	Spending Category	Direct	Indirect	Induced	Total	
All Co-ops	2018	CapEx	\$5,996,242,362	\$3,030,621,458	\$2,449,494,865	\$11,476,358,685	
	2019	CapEx	\$5,089,910,212	\$2,637,893,399	\$2,181,644,093	\$9,909,447,704	
	2020	CapEx	\$4,765,730,039	\$2,540,234,777	\$2,078,948,268	\$9,384,913,084	
	2021	CapEx	\$5,916,739,345	\$3,147,593,330	\$2,600,028,605	\$11,664,361,280	
	2022	CapEx	\$4,686,744,604	\$2,472,514,152	\$2,001,189,189	\$9,160,447,945	
	Total	CapEx	\$26,455,366,561	\$13,828,857,117	\$11,311,305,021	\$51,595,528,699	
	2018	OpEx	\$18,315,098,421	\$14,957,303,666	\$3,598,310,817	\$36,870,712,904	
	2019	OpEx	\$17,375,543,780	\$14,197,219,942	\$3,457,571,896	\$35,030,335,618	
	2020	OpEx	\$15,937,196,333	\$12,849,466,511	\$3,289,116,817	\$32,075,779,662	
	2021	OpEx	\$23,108,012,628	\$19,230,744,334	\$4,798,417,803	\$47,137,174,765	
	2022	OpEx	\$22,225,592,149	\$17,942,059,668	\$4,295,674,299	\$44,463,326,116	
	Total	OpEx	\$96,961,443,311	\$79,176,794,122	\$19,439,091,632	\$195,577,329,065	
	G&T	2018	Maintenance	\$1,754,057,457	\$1,342,375,381	\$632,501,944	\$3,728,934,782
		2019	Maintenance	\$1,731,736,376	\$1,329,809,963	\$626,444,296	\$3,687,990,635
		2020	Maintenance	\$1,472,440,897	\$1,152,308,958	\$545,835,892	\$3,170,585,746
2021		Maintenance	\$1,495,284,444	\$1,168,601,846	\$551,501,750	\$3,215,388,040	
2022		Maintenance	\$1,479,724,560	\$1,169,441,285	\$548,892,581	\$3,198,058,426	
Total		Maintenance	\$7,933,243,735	\$6,162,537,431	\$2,905,176,464	\$17,000,957,630	
2018		Total Expenditures	\$26,065,398,241	\$19,330,300,504	\$6,680,307,626	\$52,076,006,372	
2019		Total Expenditures	\$24,197,190,368	\$18,164,923,303	\$6,265,660,285	\$48,627,773,957	
2020		Total Expenditures	\$22,175,367,268	\$16,542,010,246	\$5,913,900,978	\$44,631,278,492	
2021		Total Expenditures	\$30,520,036,417	\$23,546,939,510	\$7,949,948,159	\$62,016,924,086	
2022		Total Expenditures	\$28,392,061,313	\$21,584,015,105	\$6,845,756,069	\$56,821,832,487	
Total		Total Expenditures	\$131,350,053,607	\$99,168,188,669	\$33,655,573,117	\$264,173,815,394	
Distribution		2018	CapEx	\$7,558,843,664	\$3,813,884,019	\$3,100,756,796	\$14,473,484,479
		2019	CapEx	\$7,421,347,448	\$3,800,323,721	\$3,055,382,151	\$14,277,053,321
		2020	CapEx	\$10,405,342,550	\$5,150,453,712	\$4,278,684,643	\$19,834,480,905
	2021	CapEx	\$8,749,585,009	\$4,598,396,887	\$3,705,981,495	\$17,053,963,391	
	2022	CapEx	\$10,458,263,599	\$5,489,041,521	\$4,422,864,783	\$20,370,169,902	
	Total	CapEx	\$44,593,382,270	\$22,852,099,861	\$18,563,669,868	\$86,009,151,998	
	2018	OpEx	\$37,062,088,855	\$31,027,319,876	\$8,110,121,205	\$76,199,529,937	
	2019	OpEx	\$37,106,114,988	\$30,862,742,519	\$8,392,965,729	\$76,361,823,235	
	2020	OpEx	\$36,110,288,200	\$30,250,843,805	\$8,408,794,544	\$74,769,926,548	
	2021	OpEx	\$39,175,649,996	\$32,822,506,762	\$8,888,272,775	\$80,886,429,533	
	2022	OpEx	\$45,698,738,010	\$38,186,626,075	\$9,984,272,315	\$93,869,636,401	

	Total	OpEx	\$195,152,880,049	\$163,150,039,038	\$43,784,426,568	\$402,087,345,655
	2018	Maintenance	\$2,808,130,536	\$2,165,718,622	\$1,020,511,845	\$5,994,361,003
	2019	Maintenance	\$2,881,544,642	\$2,222,447,990	\$1,049,375,301	\$6,153,367,933
	2020	Maintenance	\$2,927,468,005	\$2,258,649,832	\$1,067,255,910	\$6,253,373,747
	2021	Maintenance	\$3,048,348,311	\$2,355,464,291	\$1,112,414,324	\$6,516,226,927
	2022	Maintenance	\$3,356,105,569	\$2,604,070,199	\$1,226,752,398	\$7,186,928,166
	Total	Maintenance	\$15,021,597,063	\$11,606,350,935	\$5,476,309,778	\$32,104,257,776
Distribution	2018	Capital Credits	\$0	\$0	\$1,300,345,445	\$1,300,345,445
	2019	Capital Credits	\$0	\$0	\$1,406,246,955	\$1,406,246,955
	2020	Capital Credits	\$0	\$0	\$1,626,507,143	\$1,626,507,143
	2021	Capital Credits	\$0	\$0	\$1,332,580,381	\$1,332,580,381
	2022	Capital Credits	\$0	\$0	\$1,321,643,114	\$1,321,643,114
	Total	Capital Credits	\$0	\$0	\$6,987,323,039	\$6,987,323,039
	2018	Total Expenditures	\$47,429,063,055	\$37,006,922,517	\$13,531,735,292	\$97,967,720,864
	2019	Total Expenditures	\$47,409,007,078	\$36,885,514,230	\$13,903,970,137	\$98,198,491,444
	2020	Total Expenditures	\$49,443,098,754	\$37,659,947,350	\$15,381,242,239	\$102,484,288,343
	2021	Total Expenditures	\$50,973,583,316	\$39,776,367,941	\$15,039,248,975	\$105,789,200,232
2022	Total Expenditures	\$59,513,107,178	\$46,279,737,796	\$16,955,532,610	\$122,748,377,583	
Total	Total Expenditures	\$254,767,859,381	\$197,608,489,833	\$74,811,729,252	\$527,188,078,467	
	2018	CapEx	\$13,555,086,026	\$6,844,505,477	\$5,550,251,661	\$25,949,843,164
	2019	CapEx	\$12,511,257,660	\$6,438,217,120	\$5,237,026,245	\$24,186,501,024
	2020	CapEx	\$15,171,072,588	\$7,690,688,490	\$6,357,632,911	\$29,219,393,989
	2021	CapEx	\$14,666,324,354	\$7,745,990,218	\$6,306,010,100	\$28,718,324,672
	2022	CapEx	\$15,145,008,203	\$7,961,555,673	\$6,424,053,972	\$29,530,617,847
	Total	CapEx	\$71,048,748,831	\$36,680,956,977	\$29,874,974,889	\$137,604,680,697
	2018	OpEx	\$55,377,187,277	\$45,984,623,542	\$11,708,432,022	\$113,070,242,841
	2019	OpEx	\$54,481,658,768	\$45,059,962,461	\$11,850,537,625	\$111,392,158,854
	2020	OpEx	\$52,047,484,533	\$43,100,310,316	\$11,697,911,361	\$106,845,706,210
	2021	OpEx	\$62,283,662,624	\$52,053,251,097	\$13,686,690,578	\$128,023,604,298
	2022	OpEx	\$67,924,330,159	\$56,128,685,743	\$14,279,946,615	\$138,332,962,517
	Total	OpEx	\$292,114,323,360	\$242,326,833,159	\$63,223,518,201	\$597,664,674,720
All Co-ops	2018	Maintenance	\$4,562,187,993	\$3,508,094,002	\$1,653,013,790	\$9,723,295,785
	2019	Maintenance	\$4,613,281,018	\$3,552,257,953	\$1,675,819,597	\$9,841,358,568
	2020	Maintenance	\$4,399,908,901	\$3,410,958,790	\$1,613,091,802	\$9,423,959,493
	2021	Maintenance	\$4,543,632,756	\$3,524,066,137	\$1,663,916,074	\$9,731,614,967
	2022	Maintenance	\$4,835,830,129	\$3,773,511,484	\$1,775,644,978	\$10,384,986,592
	Total	Maintenance	\$22,954,840,798	\$17,768,888,366	\$8,381,486,241	\$49,105,215,405
	2018	Capital Credits	\$0	\$0	\$1,300,345,445	\$1,300,345,445
	2019	Capital Credits	\$0	\$0	\$1,406,246,955	\$1,406,246,955
	2020	Capital Credits	\$0	\$0	\$1,626,507,143	\$1,626,507,143
	2021	Capital Credits	\$0	\$0	\$1,332,580,381	\$1,332,580,381
2022	Capital Credits	\$0	\$0	\$1,321,643,114	\$1,321,643,114	
Total	Capital Credits	\$0	\$0	\$1,397,464,608	\$1,397,464,608	

All Co-ops	2018	Total Expenditures	\$73,494,461,296	\$56,337,223,021	\$20,212,042,918	\$150,043,727,236
	2019	Total Expenditures	\$71,606,197,446	\$55,050,437,534	\$20,169,630,422	\$146,826,265,401
	2020	Total Expenditures	\$71,618,466,022	\$54,201,957,596	\$21,295,143,217	\$147,115,566,835
	2021	Total Expenditures	\$81,493,619,733	\$63,323,307,452	\$22,989,197,134	\$167,806,124,319
	2022	Total Expenditures	\$87,905,168,491	\$67,863,752,900	\$23,801,288,679	\$179,570,210,070
	Total	Total Expenditures	\$386,117,912,989	\$296,776,678,503	\$108,467,302,369	\$791,361,893,861

Table B-5: U.S. GDP supported by electric cooperatives, 2018-2022

Cooperative	Year	Spending Category	Direct	Indirect	Induced	Total
G&T	2018	CapEx	\$3,523,672,345	\$2,825,566,494	\$2,160,055,573	\$8,509,294,411
	2019	CapEx	\$2,977,184,281	\$2,409,176,985	\$1,880,209,585	\$7,266,570,850
	2020	CapEx	\$2,754,376,074	\$2,336,703,598	\$1,794,998,406	\$6,886,078,078
	2021	CapEx	\$3,423,128,819	\$2,857,707,835	\$2,215,893,091	\$8,496,729,745
	2022	CapEx	\$2,718,307,689	\$2,278,877,114	\$1,732,827,960	\$6,730,012,763
	Total	CapEx	\$15,396,669,208	\$12,708,032,025	\$9,783,984,614	\$37,888,685,847
	2018	OpEx	\$6,907,019,895	\$12,976,219,898	\$4,383,737,916	\$24,266,977,709
	2019	OpEx	\$6,614,857,233	\$12,313,877,425	\$4,186,579,084	\$23,115,313,742
	2020	OpEx	\$6,303,383,308	\$11,303,169,030	\$3,927,323,055	\$21,533,875,394
	2021	OpEx	\$8,519,164,734	\$16,195,095,280	\$5,437,598,995	\$30,151,859,010
	2022	OpEx	\$8,317,849,513	\$15,631,325,977	\$5,206,848,767	\$29,156,024,257
Total	OpEx	\$36,662,274,684	\$68,419,687,609	\$23,142,087,818	\$128,224,050,111	
G&T	2018	Maintenance	\$659,743,833	\$1,247,019,347	\$654,026,775	\$2,560,789,956
	2019	Maintenance	\$648,008,908	\$1,235,721,212	\$647,519,379	\$2,531,249,500
	2020	Maintenance	\$548,053,231	\$1,062,857,368	\$556,878,286	\$2,167,788,884
	2021	Maintenance	\$555,063,817	\$1,082,423,420	\$566,169,271	\$2,203,656,508
	2022	Maintenance	\$545,367,836	\$1,085,847,891	\$565,185,677	\$2,196,401,404
	Total	Maintenance	\$2,956,237,626	\$5,713,869,237	\$2,989,779,389	\$11,659,886,251
	2018	Total Expenditures	\$11,090,436,073	\$17,048,805,738	\$7,197,820,264	\$35,337,062,075
	2019	Total Expenditures	\$10,240,050,422	\$15,958,775,622	\$6,714,308,048	\$32,913,134,092
	2020	Total Expenditures	\$9,605,812,613	\$14,702,729,996	\$6,279,199,747	\$30,587,742,356
	2021	Total Expenditures	\$12,497,357,371	\$20,135,226,535	\$8,219,661,357	\$40,852,245,262
	2022	Total Expenditures	\$11,581,525,038	\$18,996,050,982	\$7,504,862,404	\$38,082,438,423
Total	Total Expenditures	\$55,015,181,517	\$86,841,588,872	\$35,915,851,820	\$177,772,622,209	
Distribution	2018	CapEx	\$4,352,923,195	\$3,581,585,400	\$2,750,199,419	\$10,684,708,013
	2019	CapEx	\$4,256,479,039	\$3,556,356,175	\$2,710,342,571	\$10,523,177,784
	2020	CapEx	\$6,047,987,109	\$4,903,048,229	\$3,823,989,940	\$14,775,025,278
	2021	CapEx	\$5,015,626,223	\$4,327,407,219	\$3,297,534,273	\$12,640,567,714
	2022	CapEx	\$5,964,315,617	\$5,154,193,436	\$3,921,682,615	\$15,040,191,668
	Total	CapEx	\$25,637,331,183	\$21,522,590,458	\$16,503,748,818	\$63,663,670,458
	2018	OpEx	\$16,202,884,261	\$28,098,619,400	\$9,564,309,871	\$53,865,813,532
	2019	OpEx	\$16,642,035,666	\$27,965,920,241	\$9,737,559,357	\$54,345,515,264
	2020	OpEx	\$16,436,095,472	\$27,401,087,759	\$9,646,862,119	\$53,484,045,350
	2021	OpEx	\$17,491,980,990	\$29,664,051,285	\$10,286,534,898	\$57,442,567,173

Distribution	2022	OpEx	\$19,928,787,520	\$34,594,996,776	\$11,733,011,669	\$66,256,795,964
	Total	OpEx	\$86,701,783,908	\$147,724,675,461	\$50,968,277,913	\$285,394,737,282
	2018	Maintenance	\$1,057,451,011	\$2,028,986,785	\$1,057,662,335	\$4,144,100,131
	2019	Maintenance	\$1,083,424,164	\$2,081,253,294	\$1,086,106,720	\$4,250,784,179
	2020	Maintenance	\$1,101,097,344	\$2,111,335,657	\$1,102,321,979	\$4,314,754,980
	2021	Maintenance	\$1,145,408,917	\$2,203,563,916	\$1,149,700,534	\$4,498,673,367
	2022	Maintenance	\$1,260,497,358	\$2,440,283,354	\$1,271,231,353	\$4,972,012,065
	Total	Maintenance	\$5,647,878,794	\$10,865,423,006	\$5,667,022,922	\$22,180,324,721
	2018	Capital Credits	\$0	\$0	\$837,236,195	\$837,236,195
	2019	Capital Credits	\$0	\$0	\$905,843,760	\$905,843,760
	2020	Capital Credits	\$0	\$0	\$1,045,020,512	\$1,045,020,512
	2021	Capital Credits	\$0	\$0	\$861,382,145	\$861,382,145
	2022	Capital Credits	\$0	\$0	\$854,668,303	\$854,668,303
	Total	Capital Credits	\$0	\$0	\$4,504,150,915	\$4,504,150,915
	2018	Total Expenditures	\$21,613,258,466	\$33,709,191,584	\$14,209,407,820	\$69,531,857,871
	2019	Total Expenditures	\$21,981,938,869	\$33,603,529,710	\$14,439,852,408	\$70,025,320,987
	2020	Total Expenditures	\$23,585,179,925	\$34,415,471,645	\$15,618,194,550	\$73,618,846,120
	2021	Total Expenditures	\$23,653,016,130	\$36,195,022,420	\$15,595,151,849	\$75,443,190,399
	2022	Total Expenditures	\$27,153,600,495	\$42,189,473,565	\$17,780,593,940	\$87,123,668,000
	Total	Total Expenditures	\$117,986,993,884	\$180,112,688,925	\$77,643,200,567	\$375,742,883,376
All Co-ops	2018	CapEx	\$7,876,595,539	\$6,407,151,893	\$4,910,254,992	\$19,194,002,424
	2019	CapEx	\$7,233,663,319	\$5,965,533,160	\$4,590,552,155	\$17,789,748,634
	2020	CapEx	\$8,802,363,183	\$7,239,751,827	\$5,618,988,346	\$21,661,103,357
	2021	CapEx	\$8,438,755,042	\$7,185,115,053	\$5,513,427,363	\$21,137,297,459
	2022	CapEx	\$8,682,623,306	\$7,433,070,550	\$5,654,510,575	\$21,770,204,431
	Total	CapEx	\$41,034,000,390	\$34,230,622,483	\$26,287,733,431	\$101,552,356,305
	2018	OpEx	\$23,109,904,156	\$41,074,839,297	\$13,948,047,788	\$78,132,791,241
	2019	OpEx	\$23,256,892,898	\$40,279,797,666	\$13,924,138,442	\$77,460,829,006
	2020	OpEx	\$22,739,478,780	\$38,704,256,790	\$13,574,185,174	\$75,017,920,744
	2021	OpEx	\$26,011,145,724	\$45,859,146,565	\$15,724,133,893	\$87,594,426,182
	2022	OpEx	\$28,246,637,033	\$50,226,322,752	\$16,939,860,435	\$95,412,820,221
	Total	OpEx	\$123,364,058,591	\$216,144,363,070	\$74,110,365,731	\$413,618,787,393
	2018	Maintenance	\$1,717,194,844	\$3,276,006,131	\$1,711,689,111	\$6,704,890,087
	2019	Maintenance	\$1,731,433,073	\$3,316,974,507	\$1,733,626,099	\$6,782,033,678
	2020	Maintenance	\$1,649,150,575	\$3,174,193,024	\$1,659,200,265	\$6,482,543,864
	2021	Maintenance	\$1,700,472,734	\$3,285,987,336	\$1,715,869,805	\$6,702,329,875
	2022	Maintenance	\$1,805,865,194	\$3,526,131,244	\$1,836,417,030	\$7,168,413,468
	Total	Maintenance	\$8,604,116,419	\$16,579,292,243	\$8,656,802,310	\$33,840,210,973
	2018	Capital Credits	\$0	\$0	\$837,236,195	\$837,236,195
	2019	Capital Credits	\$0	\$0	\$905,843,760	\$905,843,760
2020	Capital Credits	\$0	\$0	\$1,045,020,512	\$1,045,020,512	
2021	Capital Credits	\$0	\$0	\$861,382,145	\$861,382,145	
2022	Capital Credits	\$0	\$0	\$854,668,303	\$854,668,303	
Total	Capital Credits	\$0	\$0	\$4,504,150,915	\$4,504,150,915	
2018	Total Expenditures	\$32,703,694,540	\$50,757,997,322	\$21,407,228,085	\$104,868,919,946	

All Co-ops	2019	Total Expenditures	\$32,221,989,290	\$49,562,305,332	\$21,154,160,456	\$102,938,455,078
	2020	Total Expenditures	\$33,190,992,538	\$49,118,201,641	\$21,897,394,297	\$104,206,588,476
	2021	Total Expenditures	\$36,150,373,500	\$56,330,248,955	\$23,814,813,206	\$116,295,435,661
	2022	Total Expenditures	\$38,735,125,533	\$61,185,524,547	\$25,285,456,343	\$125,206,106,423
	Total	Total Expenditures	\$173,002,175,401	\$266,954,277,797	\$113,559,052,387	\$553,515,505,585

Table B-6: Local Value Added supported by electric cooperatives, 2018-2022

Cooperative	Year	Spending Category	Direct	Indirect	Induced	Total
G&T	2018	CapEx	\$3,523,672,345	\$1,505,312,292	\$1,404,135,991	\$6,433,120,628
	2019	CapEx	\$2,977,184,281	\$1,299,519,815	\$1,241,628,780	\$5,518,332,876
	2020	CapEx	\$2,754,376,074	\$1,251,052,095	\$1,183,735,197	\$5,189,163,365
	2021	CapEx	\$3,423,128,819	\$1,556,908,139	\$1,484,265,068	\$6,464,302,026
	2022	CapEx	\$2,718,307,689	\$1,222,279,343	\$1,142,836,003	\$5,083,423,035
	Total	CapEx	\$15,396,669,208	\$6,835,071,684	\$6,456,601,039	\$28,688,341,931
	2018	OpEx	\$6,907,135,825	\$7,030,849,233	\$2,033,194,573	\$15,971,179,631
	2019	OpEx	\$6,614,857,233	\$6,671,710,993	\$1,953,491,728	\$15,240,059,953
	2020	OpEx	\$6,303,383,308	\$6,051,677,633	\$1,858,844,362	\$14,213,905,304
	2021	OpEx	\$8,519,164,734	\$9,173,257,553	\$2,713,930,918	\$20,406,353,205
	2022	OpEx	\$8,317,849,513	\$8,481,051,623	\$2,429,358,798	\$19,228,259,934
	Total	OpEx	\$36,662,390,614	\$37,408,547,035	\$10,988,820,378	\$85,059,758,027
	2018	Maintenance	\$659,743,833	\$652,121,932	\$357,771,797	\$1,669,637,563
	2019	Maintenance	\$648,008,908	\$646,048,632	\$354,157,692	\$1,648,215,232
	2020	Maintenance	\$548,053,231	\$560,276,442	\$308,921,204	\$1,417,250,876
	2021	Maintenance	\$555,063,817	\$567,084,518	\$311,806,608	\$1,433,954,944
	2022	Maintenance	\$545,367,836	\$567,803,025	\$310,226,904	\$1,423,397,764
	Total	Maintenance	\$2,956,237,626	\$2,993,334,548	\$1,642,884,206	\$7,592,456,380
	2018	Total Expenditures	\$11,090,552,003	\$9,188,283,457	\$3,795,102,361	\$24,073,937,822
	2019	Total Expenditures	\$10,240,050,422	\$8,617,279,440	\$3,549,278,200	\$22,406,608,062
2020	Total Expenditures	\$9,605,812,613	\$7,863,006,170	\$3,351,500,763	\$20,820,319,545	
2021	Total Expenditures	\$12,497,357,371	\$11,297,250,210	\$4,510,002,594	\$28,304,610,175	
2022	Total Expenditures	\$11,581,525,038	\$10,271,133,991	\$3,882,421,704	\$25,735,080,734	
Total	Total Expenditures	\$55,015,297,447	\$47,236,953,268	\$19,088,305,622	\$121,340,556,337	
Distribution	2018	CapEx	\$4,352,923,195	\$1,858,659,741	\$1,765,549,854	\$7,977,132,789
	2019	CapEx	\$4,256,479,039	\$1,849,100,825	\$1,739,238,924	\$7,844,818,787
	2020	CapEx	\$6,047,987,109	\$2,507,827,813	\$2,450,682,213	\$11,006,497,135
	2021	CapEx	\$5,015,626,223	\$2,236,715,044	\$2,107,315,361	\$9,359,656,629
	2022	CapEx	\$5,964,315,617	\$2,676,255,091	\$2,515,500,780	\$11,156,071,488
	Total	CapEx	\$25,637,331,183	\$11,128,558,514	\$10,578,287,132	\$47,344,176,828
	2018	OpEx	\$16,202,884,261	\$14,307,454,574	\$4,619,562,753	\$35,129,901,588
	2019	OpEx	\$16,642,035,666	\$14,226,200,867	\$4,780,723,682	\$35,648,960,215
	2020	OpEx	\$16,436,095,472	\$13,951,225,109	\$4,790,052,167	\$35,177,372,748
	2021	OpEx	\$17,491,980,990	\$15,140,179,014	\$5,062,523,385	\$37,694,683,389
2022	OpEx	\$19,928,787,520	\$17,660,455,718	\$5,687,637,880	\$43,276,881,117	

Distribution	Total	OpEx	\$86,701,783,908	\$75,285,515,282	\$24,940,499,867	\$186,927,799,057
	2018	Maintenance	\$1,057,451,011	\$1,055,311,206	\$582,106,219	\$2,694,868,435
	2019	Maintenance	\$1,083,424,164	\$1,082,953,422	\$598,430,762	\$2,764,808,349
	2020	Maintenance	\$1,101,097,344	\$1,100,744,034	\$608,709,071	\$2,810,550,449
	2021	Maintenance	\$1,145,408,917	\$1,148,059,501	\$634,407,168	\$2,927,875,586
	2022	Maintenance	\$1,260,497,358	\$1,268,879,234	\$699,632,538	\$3,229,009,130
	Total	Maintenance	\$5,647,878,794	\$5,655,947,397	\$3,123,285,759	\$14,427,111,949
	2018	Capital Credits	\$0	\$0	\$741,442,583	\$741,442,583
	2019	Capital Credits	\$0	\$0	\$801,800,581	\$801,800,581
	2020	Capital Credits	\$0	\$0	\$927,004,863	\$927,004,863
	2021	Capital Credits	\$0	\$0	\$761,283,962	\$761,283,962
	2022	Capital Credits	\$0	\$0	\$754,046,558	\$754,046,558
	Total	Capital Credits	\$0	\$0	\$3,985,578,547	\$3,985,578,547
	2018	Total Expenditures	\$21,613,258,466	\$17,221,425,520	\$7,708,661,408	\$46,543,345,395
	2019	Total Expenditures	\$21,981,938,869	\$17,158,255,115	\$7,920,193,949	\$47,060,387,932
2020	Total Expenditures	\$23,585,179,925	\$17,559,796,956	\$8,776,448,315	\$49,921,425,195	
2021	Total Expenditures	\$23,653,016,130	\$18,524,953,559	\$8,565,529,877	\$50,743,499,566	
2022	Total Expenditures	\$27,153,600,495	\$21,605,590,043	\$9,656,817,756	\$58,416,008,293	
Total	Total Expenditures	\$117,986,993,884	\$92,070,021,193	\$42,627,651,304	\$252,684,666,381	
All Co-ops	2018	CapEx	\$7,876,595,539	\$3,363,972,033	\$3,169,685,845	\$14,410,253,417
	2019	CapEx	\$7,233,663,319	\$3,148,620,641	\$2,980,867,704	\$13,363,151,664
	2020	CapEx	\$8,802,363,183	\$3,758,879,907	\$3,634,417,410	\$16,195,660,500
	2021	CapEx	\$8,438,755,042	\$3,793,623,183	\$3,591,580,429	\$15,823,958,655
	2022	CapEx	\$8,682,623,306	\$3,898,534,435	\$3,658,336,783	\$16,239,494,524
	Total	CapEx	\$41,034,000,390	\$17,963,630,199	\$17,034,888,170	\$76,032,518,759
	2018	OpEx	\$23,110,020,086	\$21,338,303,806	\$6,652,757,326	\$51,101,081,218
	2019	OpEx	\$23,256,892,898	\$20,897,911,860	\$6,734,215,410	\$50,889,020,169
	2020	OpEx	\$22,739,478,780	\$20,002,902,743	\$6,648,896,529	\$49,391,278,052
	2021	OpEx	\$26,011,145,724	\$24,313,436,567	\$7,776,454,303	\$58,101,036,594
	2022	OpEx	\$28,246,637,033	\$26,141,507,341	\$8,116,996,677	\$62,505,141,051
	Total	OpEx	\$123,364,174,522	\$112,694,062,317	\$35,929,320,245	\$271,987,557,084
	2018	Maintenance	\$1,717,194,844	\$1,707,433,138	\$939,878,016	\$4,364,505,998
	2019	Maintenance	\$1,731,433,073	\$1,729,002,054	\$952,588,454	\$4,413,023,581
	2020	Maintenance	\$1,649,150,575	\$1,661,020,475	\$917,630,275	\$4,227,801,325
2021	Maintenance	\$1,700,472,734	\$1,715,144,019	\$946,213,777	\$4,361,830,530	
2022	Maintenance	\$1,805,865,194	\$1,836,682,258	\$1,009,859,442	\$4,652,406,894	
Total	Maintenance	\$8,604,116,419	\$8,649,281,945	\$4,766,169,964	\$22,019,568,329	
2018	Capital Credits	\$0	\$0	\$741,442,583	\$741,442,583	
2019	Capital Credits	\$0	\$0	\$801,800,581	\$801,800,581	
2020	Capital Credits	\$0	\$0	\$927,004,863	\$927,004,863	
2021	Capital Credits	\$0	\$0	\$761,283,962	\$761,283,962	
2022	Capital Credits	\$0	\$0	\$754,046,558	\$754,046,558	
Total	Capital Credits	\$0	\$0	\$3,985,578,547	\$3,985,578,547	
2018	Total Expenditures	\$32,703,810,470	\$26,409,708,977	\$11,503,763,770	\$70,617,283,217	
2019	Total Expenditures	\$32,221,989,290	\$25,775,534,555	\$11,469,472,148	\$69,466,995,994	

All Co-ops	2020	Total Expenditures	\$33,190,992,538	\$25,422,803,125	\$12,127,949,077	\$70,741,744,740
	2021	Total Expenditures	\$36,150,373,500	\$29,822,203,769	\$13,075,532,471	\$79,048,109,741
	2022	Total Expenditures	\$38,735,125,533	\$31,876,724,034	\$13,539,239,460	\$84,151,089,027
	Total	Total Expenditures	\$173,002,291,331	\$139,306,974,460	\$61,715,956,927	\$374,025,222,718

Table B-7: U.S. Labor Income supported by electric cooperatives, 2018-2022

Cooperative	Year	Spending Category	Direct	Indirect	Induced	Total
G&T	2018	CapEx	\$2,278,121,088	\$1,655,359,600	\$1,190,629,474	\$5,124,110,162
	2019	CapEx	\$1,965,264,011	\$1,415,979,840	\$1,043,399,549	\$4,424,643,400
	2020	CapEx	\$1,817,639,332	\$1,372,046,244	\$992,214,957	\$4,181,900,533
	2021	CapEx	\$2,280,343,692	\$1,677,185,249	\$1,225,178,196	\$5,182,707,136
	2022	CapEx	\$1,769,352,794	\$1,335,890,515	\$955,565,638	\$4,060,808,947
	Total	CapEx	\$10,110,720,917	\$7,456,461,448	\$5,406,987,814	\$22,974,170,179
	2018	OpEx	\$1,404,494,164	\$6,239,836,440	\$2,450,338,711	\$10,094,669,315
	2019	OpEx	\$1,400,496,006	\$5,910,632,855	\$2,339,611,518	\$9,650,740,378
	2020	OpEx	\$1,470,473,484	\$5,421,357,492	\$2,192,491,217	\$9,084,322,193
	2021	OpEx	\$1,627,770,049	\$7,866,739,147	\$3,039,036,386	\$12,533,545,582
	2022	OpEx	\$1,538,213,341	\$7,523,245,912	\$2,906,756,840	\$11,968,216,094
	Total	OpEx	\$7,441,447,043	\$32,961,811,846	\$12,928,234,672	\$53,331,493,561
	2018	Maintenance	\$458,505,073	\$709,139,000	\$364,405,785	\$1,532,049,858
	2019	Maintenance	\$452,428,356	\$702,571,021	\$360,583,891	\$1,515,583,267
	2020	Maintenance	\$384,405,860	\$603,980,571	\$309,736,929	\$1,298,123,360
	2021	Maintenance	\$391,314,386	\$615,461,183	\$315,035,519	\$1,321,811,088
	2022	Maintenance	\$384,401,947	\$616,833,017	\$314,118,032	\$1,315,352,997
	Total	Maintenance	\$2,071,055,622	\$3,247,984,792	\$1,663,880,156	\$6,982,920,570
2018	Total Expenditures	\$4,141,120,325	\$8,604,335,040	\$4,005,373,971	\$16,750,829,335	
2019	Total Expenditures	\$3,818,188,373	\$8,029,183,716	\$3,743,594,958	\$15,590,967,046	
2020	Total Expenditures	\$3,672,518,676	\$7,397,384,307	\$3,494,443,103	\$14,564,346,086	
2021	Total Expenditures	\$4,299,428,126	\$10,159,385,579	\$4,579,250,100	\$19,038,063,805	
2022	Total Expenditures	\$3,691,968,083	\$9,475,969,444	\$4,176,440,510	\$17,344,378,037	
Total	Total Expenditures	\$19,623,223,582	\$43,666,258,086	\$19,999,102,641	\$83,288,584,310	
Distribution	2018	CapEx	\$2,992,163,943	\$2,105,188,659	\$1,521,886,799	\$6,619,239,400
	2019	CapEx	\$2,952,236,537	\$2,090,204,651	\$1,500,043,173	\$6,542,484,362
	2020	CapEx	\$4,247,723,119	\$2,891,930,876	\$2,127,887,403	\$9,267,541,398
	2021	CapEx	\$3,483,793,089	\$2,541,383,235	\$1,823,767,105	\$7,848,943,429
	2022	CapEx	\$4,141,502,248	\$3,027,406,192	\$2,166,465,916	\$9,335,374,356
	Total	CapEx	\$17,817,418,936	\$12,656,113,612	\$9,140,050,396	\$39,613,582,945
	2018	OpEx	\$5,051,216,394	\$11,876,991,091	\$5,320,520,552	\$22,248,728,037
	2019	OpEx	\$5,479,880,993	\$11,818,494,393	\$5,416,080,682	\$22,714,456,069
	2020	OpEx	\$5,582,867,026	\$11,585,120,580	\$5,364,701,877	\$22,532,689,483
	2021	OpEx	\$5,731,652,392	\$12,536,050,957	\$5,722,524,650	\$23,990,227,999
	2022	OpEx	\$6,136,362,590	\$14,605,158,838	\$6,528,500,298	\$27,270,021,726
	Total	OpEx	\$27,981,979,394	\$62,421,815,860	\$28,352,328,058	\$118,756,123,312

Distribution	2018	Maintenance	\$750,292,528	\$1,151,778,701	\$586,627,645	\$2,488,698,874
	2019	Maintenance	\$771,284,961	\$1,181,698,900	\$602,506,764	\$2,555,490,624
	2020	Maintenance	\$783,578,306	\$1,198,781,094	\$611,520,352	\$2,593,879,753
	2021	Maintenance	\$815,964,124	\$1,251,021,640	\$637,717,464	\$2,704,703,228
	2022	Maintenance	\$898,456,608	\$1,385,131,392	\$705,031,152	\$2,988,619,152
	Total	Maintenance	\$4,019,576,526	\$6,168,411,727	\$3,143,403,377	\$13,331,391,631
	2018	Capital Credits	\$0	\$0	\$457,424,592	\$457,424,592
	2019	Capital Credits	\$0	\$0	\$494,757,381	\$494,757,381
	2020	Capital Credits	\$0	\$0	\$572,907,086	\$572,907,086
	2021	Capital Credits	\$0	\$0	\$469,631,380	\$469,631,380
	2022	Capital Credits	\$0	\$0	\$466,489,406	\$466,489,406
	Total	Capital Credits	\$0	\$0	\$2,461,209,845	\$2,461,209,845
	2018	Total Expenditures	\$8,793,672,865	\$15,133,958,451	\$7,886,459,588	\$31,814,090,903
	2019	Total Expenditures	\$9,203,402,491	\$15,090,397,944	\$8,013,388,000	\$32,307,188,436
	2020	Total Expenditures	\$10,614,168,451	\$15,675,832,550	\$8,677,016,718	\$34,967,017,719
2021	Total Expenditures	\$10,031,409,604	\$16,328,455,832	\$8,653,640,599	\$35,013,506,035	
2022	Total Expenditures	\$11,176,321,446	\$19,017,696,422	\$9,866,486,772	\$40,060,504,640	
Total	Total Expenditures	\$49,818,974,857	\$81,246,341,200	\$43,096,991,677	\$174,162,307,733	
All Co-ops	2018	CapEx	\$5,270,285,031	\$3,760,548,259	\$2,712,516,273	\$11,743,349,563
	2019	CapEx	\$4,917,500,549	\$3,506,184,491	\$2,543,442,723	\$10,967,127,762
	2020	CapEx	\$6,065,362,451	\$4,263,977,120	\$3,120,102,360	\$13,449,441,931
	2021	CapEx	\$5,764,136,780	\$4,218,568,484	\$3,048,945,301	\$13,031,650,565
	2022	CapEx	\$5,910,855,043	\$4,363,296,706	\$3,122,031,554	\$13,396,183,303
	Total	CapEx	\$27,928,139,853	\$20,112,575,060	\$14,547,038,210	\$62,587,753,123
	2018	OpEx	\$6,455,710,558	\$18,116,827,530	\$7,770,859,263	\$32,343,397,352
	2019	OpEx	\$6,880,376,999	\$17,729,127,248	\$7,755,692,200	\$32,365,196,447
	2020	OpEx	\$7,053,340,510	\$17,006,478,072	\$7,557,193,094	\$31,617,011,675
	2021	OpEx	\$7,359,422,440	\$20,402,790,104	\$8,761,561,036	\$36,523,773,580
	2022	OpEx	\$7,674,575,931	\$22,128,404,751	\$9,435,257,138	\$39,238,237,819
	Total	OpEx	\$35,423,426,438	\$95,383,627,705	\$41,280,562,730	\$172,087,616,873
	2018	Maintenance	\$1,208,797,601	\$1,860,917,701	\$951,033,430	\$4,020,748,732
	2019	Maintenance	\$1,223,713,317	\$1,884,269,921	\$963,090,654	\$4,071,073,892
	2020	Maintenance	\$1,167,984,166	\$1,802,761,665	\$921,257,281	\$3,892,003,113
2021	Maintenance	\$1,207,278,509	\$1,866,482,823	\$952,752,983	\$4,026,514,316	
2022	Maintenance	\$1,282,858,555	\$2,001,964,409	\$1,019,149,185	\$4,303,972,149	
Total	Maintenance	\$6,090,632,148	\$9,416,396,519	\$4,807,283,533	\$20,314,312,201	
2018	Capital Credits	\$0	\$0	\$457,424,592	\$457,424,592	
2019	Capital Credits	\$0	\$0	\$494,757,381	\$494,757,381	
2020	Capital Credits	\$0	\$0	\$572,907,086	\$572,907,086	
2021	Capital Credits	\$0	\$0	\$469,631,380	\$469,631,380	
2022	Capital Credits	\$0	\$0	\$466,489,406	\$466,489,406	
Total	Capital Credits	\$0	\$0	\$2,461,209,845	\$2,461,209,845	
2018	Total Expenditures	\$12,934,793,190	\$23,738,293,491	\$11,891,833,558	\$48,564,920,239	
2019	Total Expenditures	\$13,021,590,864	\$23,119,581,660	\$11,756,982,958	\$47,898,155,482	
2020	Total Expenditures	\$14,286,687,127	\$23,073,216,858	\$12,171,459,820	\$49,531,363,805	

All Co-ops	2021	Total Expenditures	\$14,330,837,730	\$26,487,841,411	\$13,232,890,700	\$54,051,569,841
	2022	Total Expenditures	\$14,868,289,529	\$28,493,665,866	\$14,042,927,282	\$57,404,882,677
	Total	Total Expenditures	\$69,442,198,439	\$124,912,599,285	\$63,096,094,318	\$257,450,892,043

Table B-8: Local Labor Income supported by electric cooperatives, 2018-2022

Cooperative	Year	Spending Category	Direct	Indirect	Induced	Total
G&T	2018	CapEx	\$2,278,121,088	\$872,174,826	\$762,202,492	\$3,912,498,406
	2019	CapEx	\$1,965,264,011	\$754,530,061	\$681,012,729	\$3,400,806,802
	2020	CapEx	\$1,817,639,332	\$726,366,071	\$645,326,339	\$3,189,331,742
	2021	CapEx	\$2,280,343,692	\$904,797,139	\$810,174,152	\$3,995,314,983
	2022	CapEx	\$1,769,352,794	\$708,305,210	\$620,768,846	\$3,098,426,850
	Total	CapEx	\$10,110,720,917	\$3,966,173,307	\$3,519,484,559	\$17,596,378,783
	2018	OpEx	\$1,404,494,164	\$3,265,464,091	\$1,116,624,414	\$5,786,582,669
	2019	OpEx	\$1,400,496,006	\$3,091,931,727	\$1,072,703,876	\$5,565,131,608
	2020	OpEx	\$1,470,473,484	\$2,805,798,543	\$1,018,902,719	\$5,295,174,746
	2021	OpEx	\$1,627,770,049	\$4,382,886,432	\$1,494,506,216	\$7,505,162,696
	2022	OpEx	\$1,538,213,341	\$3,964,706,910	\$1,330,944,934	\$6,833,865,185
	Total	OpEx	\$7,441,447,043	\$17,510,787,703	\$6,033,682,159	\$30,985,916,905
G&T	2018	Maintenance	\$458,505,073	\$361,331,986	\$196,240,558	\$1,016,077,618
	2019	Maintenance	\$452,428,356	\$357,904,001	\$194,078,185	\$1,004,410,542
	2020	Maintenance	\$384,405,860	\$310,382,454	\$168,997,355	\$863,785,669
	2021	Maintenance	\$391,314,386	\$314,410,084	\$170,667,618	\$876,392,088
	2022	Maintenance	\$384,401,947	\$314,186,097	\$169,388,154	\$867,976,199
	Total	Maintenance	\$2,071,055,622	\$1,658,214,622	\$899,371,871	\$4,628,642,115
	2018	Total Expenditures	\$4,141,120,325	\$4,498,970,903	\$2,075,067,465	\$10,715,158,693
	2019	Total Expenditures	\$3,818,188,373	\$4,204,365,789	\$1,947,794,790	\$9,970,348,952
	2020	Total Expenditures	\$3,672,518,676	\$3,842,547,068	\$1,833,226,414	\$9,348,292,158
	2021	Total Expenditures	\$4,299,428,126	\$5,602,093,655	\$2,475,347,986	\$12,376,869,767
	2022	Total Expenditures	\$3,691,968,083	\$4,987,198,217	\$2,121,101,934	\$10,800,268,234
	Total	Total Expenditures	\$19,623,223,582	\$23,135,175,632	\$10,452,538,589	\$53,210,937,803
Distribution	2018	CapEx	\$2,992,163,943	\$1,078,346,451	\$963,525,021	\$5,034,035,415
	2019	CapEx	\$2,952,236,537	\$1,072,717,051	\$949,266,016	\$4,974,219,604
	2020	CapEx	\$4,247,723,119	\$1,463,421,561	\$1,348,615,913	\$7,059,760,593
	2021	CapEx	\$3,483,793,089	\$1,294,632,772	\$1,148,728,328	\$5,927,154,189
	2022	CapEx	\$4,141,502,248	\$1,551,173,132	\$1,369,059,207	\$7,061,734,587
	Total	CapEx	\$17,817,418,936	\$6,460,290,967	\$5,779,194,485	\$30,056,904,389
	2018	OpEx	\$5,051,216,394	\$5,667,823,019	\$2,516,919,798	\$13,235,959,211
	2019	OpEx	\$5,479,880,993	\$5,633,730,092	\$2,605,645,362	\$13,719,256,447
	2020	OpEx	\$5,582,867,026	\$5,531,159,891	\$2,610,947,138	\$13,724,974,054
	2021	OpEx	\$5,731,652,392	\$6,001,463,631	\$2,760,699,579	\$14,493,815,602
	2022	OpEx	\$6,136,362,590	\$6,996,323,183	\$3,101,422,050	\$16,234,107,823
	Total	OpEx	\$27,981,979,394	\$29,830,499,816	\$13,595,633,927	\$71,408,113,138

Distribution	2018	Maintenance	\$750,292,528	\$584,566,238	\$316,785,465	\$1,651,644,231	
	2019	Maintenance	\$771,284,961	\$600,127,062	\$325,789,490	\$1,697,201,513	
	2020	Maintenance	\$783,578,306	\$610,058,309	\$331,446,380	\$1,725,082,995	
	2021	Maintenance	\$815,964,124	\$636,225,850	\$345,352,707	\$1,797,542,680	
	2022	Maintenance	\$898,456,608	\$702,841,406	\$380,705,654	\$1,982,003,668	
	Total	Maintenance	\$4,019,576,526	\$3,133,818,864	\$1,700,079,696	\$8,853,475,086	
	2018	Capital Credits	\$0	\$0	\$403,094,884	\$403,094,884	
	2019	Capital Credits	\$0	\$0	\$435,760,063	\$435,760,063	
	2020	Capital Credits	\$0	\$0	\$506,001,739	\$506,001,739	
	2021	Capital Credits	\$0	\$0	\$412,852,314	\$412,852,314	
	2022	Capital Credits	\$0	\$0	\$409,428,685	\$409,428,685	
	Total	Capital Credits	\$0	\$0	\$2,167,137,684	\$2,167,137,684	
	2018	Total Expenditures	\$8,793,672,865	\$7,330,735,708	\$4,200,325,168	\$20,324,733,741	
	2019	Total Expenditures	\$9,203,402,491	\$7,306,574,204	\$4,316,460,932	\$20,826,437,627	
	2020	Total Expenditures	\$10,614,168,451	\$7,604,639,761	\$4,797,011,170	\$23,015,819,381	
	2021	Total Expenditures	\$10,031,409,604	\$7,932,322,253	\$4,667,632,928	\$22,631,364,785	
	2022	Total Expenditures	\$11,176,321,446	\$9,250,337,722	\$5,260,615,595	\$25,687,274,763	
	Total	Total Expenditures	\$49,818,974,857	\$39,424,609,648	\$23,242,045,793	\$112,485,630,297	
	All Co-ops	2018	CapEx	\$5,270,285,031	\$1,950,521,277	\$1,725,727,513	\$8,946,533,821
		2019	CapEx	\$4,917,500,549	\$1,827,247,112	\$1,630,278,746	\$8,375,026,406
2020		CapEx	\$6,065,362,451	\$2,189,787,632	\$1,993,942,252	\$10,249,092,335	
2021		CapEx	\$5,764,136,780	\$2,199,429,911	\$1,958,902,481	\$9,922,469,172	
2022		CapEx	\$5,910,855,043	\$2,259,478,342	\$1,989,828,053	\$10,160,161,437	
Total		CapEx	\$27,928,139,853	\$10,426,464,274	\$9,298,679,044	\$47,653,283,172	
2018		OpEx	\$6,455,710,558	\$8,933,287,110	\$3,633,544,212	\$19,022,541,880	
2019		OpEx	\$6,880,376,999	\$8,725,661,819	\$3,678,349,238	\$19,284,388,056	
2020		OpEx	\$7,053,340,510	\$8,336,958,434	\$3,629,849,857	\$19,020,148,801	
2021		OpEx	\$7,359,422,440	\$10,384,350,063	\$4,255,205,794	\$21,998,978,298	
2022		OpEx	\$7,674,575,931	\$10,961,030,093	\$4,432,366,984	\$23,067,973,008	
Total		OpEx	\$35,423,426,438	\$47,341,287,519	\$19,629,316,086	\$102,394,030,043	
2018		Maintenance	\$1,208,797,601	\$945,898,225	\$513,026,023	\$2,667,721,849	
2019		Maintenance	\$1,223,713,317	\$958,031,063	\$519,867,675	\$2,701,612,054	
2020		Maintenance	\$1,167,984,166	\$920,440,762	\$500,443,736	\$2,588,868,664	
2021		Maintenance	\$1,207,278,509	\$950,635,933	\$516,020,325	\$2,673,934,768	
2022		Maintenance	\$1,282,858,555	\$1,017,027,503	\$550,093,808	\$2,849,979,866	
Total		Maintenance	\$6,090,632,148	\$4,792,033,487	\$2,599,451,567	\$13,482,117,202	
2018		Capital Credits	\$0	\$0	\$403,094,884	\$403,094,884	
2019		Capital Credits	\$0	\$0	\$435,760,063	\$435,760,063	
2020	Capital Credits	\$0	\$0	\$506,001,739	\$506,001,739		
2021	Capital Credits	\$0	\$0	\$412,852,314	\$412,852,314		
2022	Capital Credits	\$0	\$0	\$409,428,685	\$409,428,685		
Total	Capital Credits	\$0	\$0	\$2,167,137,684	\$2,167,137,684		
2018	Total Expenditures	\$12,934,793,190	\$11,829,706,612	\$6,275,392,633	\$31,039,892,434		
2019	Total Expenditures	\$13,021,590,864	\$11,510,939,994	\$6,264,255,721	\$30,796,786,579		
2020	Total Expenditures	\$14,286,687,127	\$11,447,186,828	\$6,630,237,584	\$32,364,111,539		

All Co-op	2021	Total Expenditures	\$14,330,837,730	\$13,534,415,907	\$7,142,980,914	\$35,008,234,551
	2022	Total Expenditures	\$14,868,289,529	\$14,237,535,939	\$7,381,717,530	\$36,487,542,997
	Total	Total Expenditures	\$69,442,198,439	\$62,559,785,280	\$33,694,584,381	\$165,696,568,100



Your trusted partner to navigate the energy transformation.

Strategen advises and empowers leading organizations — utilities, government agencies, NGOs, and industry clients — to design innovative, practical solutions that capture the promise of a clean energy future, strengthen resilience and adaptability, and are equitable, collaborative, and impactful.

Headquartered in Northern California, Strategen's mission-driven experts leverage a global perspective and market-leading capabilities to deliver novel, high-impact, stakeholder-aligned approaches across the policy, regulatory, and market design spheres that sustainably accelerate the deployment of low-carbon energy systems.

Strategen's expertise spans corporate strategy, emerging technology acceleration, clean energy system planning, regulatory innovation, and multi-stakeholder engagements and convenings. We take an integrated, multidisciplinary approach, informed by our core values of intellectual honesty, humility, sustainability, diversity, and inclusion.

www.strategen.com

© October 2023, Strategen. All rights reserved.