

Potential Reconciliation Climate Policies: An Economic Impact Analysis Report

PRODUCED FOR THE NATURE CONSERVANCY (TNC)

Table of Contents

Table of Contents	i
Introduction	1
Executive Summary.....	3
Economic Impact Definitions	5
National Outputs.....	6
State Factsheets	11
Arizona.....	11
Nevada.....	16
New Hampshire.....	21
Pennsylvania.....	26
West Virginia	31
Appendix A: Detailed Policy Group Output Tables.....	36
Arizona.....	36
Nevada.....	37
New Hampshire.....	38
Pennsylvania.....	39
West Virginia	41
Appendix B: Modeling Methodology	43
Policies Modeled	43
Policy Group Modeling Assumptions	49
Occupational Group Definitions.....	59

Introduction

The Nature Conservancy (TNC) commissioned BW Research to conduct a study identifying the estimated economic impacts of the climate policies being discussed as part of reconciliation legislation. This analysis is an effort to understand how investments into activities that mitigate climate change and advance clean energy can support jobs, increase worker earnings, and generate tax revenues.

Senate discussions on a potential reconciliation framework have focused in part on a sweeping set of climate and clean energy investments passed by the House in November 2021. These provisions would significantly contribute to cutting emissions by 50% below 2005 levels by 2030 and would put the United States squarely on a pathway to meeting its commitments under the Paris Agreement.¹ In addition to pushing forward fast, far-reaching climate action, these investments will also result in significant job gains across many policy groups of the nation's economy, including construction, manufacturing, professional services, and agriculture and forestry.

As consumers face the worst inflation in decades and skyrocketing fuel prices, concerns have been raised over further government investments fueling inflationary trends; however, evidence suggests that investments into clean energy decrease energy costs, potentially countering some inflationary pressures. A recent report by RMI details how clean energy tax credits, the same measures included in the Power policy group analysis in this report, could help save Americans nearly \$5 billion in electricity costs by 2024.¹ Investments in these climate policies can combat climate change and ease the burden of inflation on consumers.

This research into our nation's climate and clean energy economy analyzes \$412 billion of the \$555 billion total climate investment passed by the House. In the current political dynamic, any final reconciliation framework will likely include a more limited set of climate policies. The selected investments captured in this analysis focus on renewable energy technologies, energy efficiency, alternative transportation, grid infrastructure, clean fuel and industrial processes, sustainable agriculture and forestry, local community and environmental justice.

The following report highlights the specific economic impacts of climate policy investments over the next 10 years through value added, earnings, tax revenues, and employment by industry, occupation, and impact type. In addition to national level outputs, the report also includes details on five states: Arizona, Nevada, New Hampshire, Pennsylvania, and West Virginia. Drilling down into a diverse set of states across different regions of the United States demonstrates the full range of potential

¹ <https://rmi.org/clean-energy-development-could-save-billions/>

benefits that could be felt at a more local level over the next 10 years if federal climate investments are made.

For more information on the methodology and assumptions used in this modeling effort, please refer to Appendix B: Modeling Methodology, beginning on page 43.

Executive Summary

This report analyzes the economic impacts of federal investments in climate policies, including clean energy tax credits, infrastructure investments, transportation and building electrification investments, and reforestation and conservation grants. These policies total over \$412 billion in federal investment and about \$422 billion in total investment over a ten-year period. Impacts are analyzed at the national level, and at the state level for Arizona, Nevada, New Hampshire, Pennsylvania, and West Virginia.

Impacts generated by these climate investments across the United States include:

- Nearly 676,000 jobs supported annually for 10 years (a total of 6,758,900 job-years), or 16.4 jobs per million dollars of federal investment.
- About \$58.1 billion in value added annually for 10 years – \$1.41 for every federal dollar invested.
- Nearly \$31.2 billion generated in employee compensation annually for 10 years.
- More than \$6.2 billion in annual local, state, and federal tax revenue for 10 years.

Impacts generated by the \$5.9 billion in federal climate investments in Arizona include:

- More than 8,900 jobs supported annually for 10 years (a total of 89,100 job-years), or 15.2 jobs per million dollars of federal investment.
- About \$844 million in value added annually for 10 years – \$1.44 for every federal dollar invested.
- Nearly \$444.8 million generated in employee compensation annually for 10 years.
- More than \$99.4 million in annual local, state, and federal tax revenue for 10 years.

Impacts generated by the \$4.1 billion in federal climate investments in Nevada include:

- Nearly 7,400 jobs supported annually for 10 years (a total of 73,800 job-years), or 17.8 jobs per million dollars of federal investment.
- More than \$544.5 million in value added annually for 10 years – \$1.32 for every federal dollar invested.
- About \$297.9 million generated in employee compensation annually for 10 years.
- Nearly \$67.1 million in annual local, state, and federal tax revenue for 10 years.

Impacts generated by the \$2.6 billion in federal climate investments in New Hampshire include:

- About 4,400 jobs supported annually for 10 years (a total of 43,900 job-years), or 16.7 jobs per million dollars of federal investment.
- Nearly \$350.7 million in value added annually for 10 years – \$1.34 for every federal dollar invested.
- About \$190.2 million generated in employee compensation annually for 10 years.
- Nearly \$40.9 million in annual local, state, and federal tax revenue for 10 years.

Impacts generated by the \$12.6 billion in federal climate investments in Pennsylvania include:

- Nearly 23,100 jobs supported annually for 10 years (a total of 230,700 job-years), or 18.3 jobs per million dollars of federal investment.
- More than \$1.9 billion in value added annually for 10 years – \$1.52 for every federal dollar invested.
- About \$1.1 billion generated in employee compensation annually for 10 years.
- Nearly \$178.2 million in annual local, state, and federal tax revenue for 10 years.

Impacts generated by the \$3.4 billion in federal climate investments in West Virginia include:

- More than 7,300 jobs supported annually for 10 years (a total of 73,500 job-years), or 21.4 jobs per million dollars of federal investment.
- About \$430.1 million in value added annually for 10 years – \$1.25 for every federal dollar invested.
- Nearly \$260.7 million generated in employee compensation annually for 10 years.
- About \$45.1 million in annual local, state, and federal tax revenue for 10 years.

Economic Impact Definitions

Employment and economic impacts for both phases are divided into direct, indirect, and induced effects across the local economy. This section provides an overview of the types of economic impacts discussed in the findings.

- **Direct effects** show the change in the economy associated with the initial job creation and or initial economic activity. For the purposes of this research, direct jobs range from construction workers involved in building and improving the manufacturing facility to sales, administrative and production employees in the O&M phase.
- **Indirect effects** include all the backward linkages or the supply chain responses resulting from the initial direct economic activity. An example of an indirect job added to the local economy would be a new worker at a lumber mill hired to handle the increased demand for construction lumber that results from the initial investment.
- **Induced effects** refer to the effects of increased household spending and are the result of direct and indirect workers spending their wages within the local economy. An example of an induced job would be a local restaurant hiring more staff because construction workers during the construction phase and salespeople during the operations phase have new disposable income and eat at this local restaurant.

Other terms used in this economic impact analysis are:

Employee Compensation The total value of monetary paychecks and benefits received by relevant parties.

Value Added Gross output less intermediate inputs. This is equivalent to Gross Domestic Product (GDP) for national outputs and Gross State Product (GSP) for state-level outputs. This is the net economic activity generated by the construction or operations of developments, less the cost of input materials to avoid double-counting economic activity.

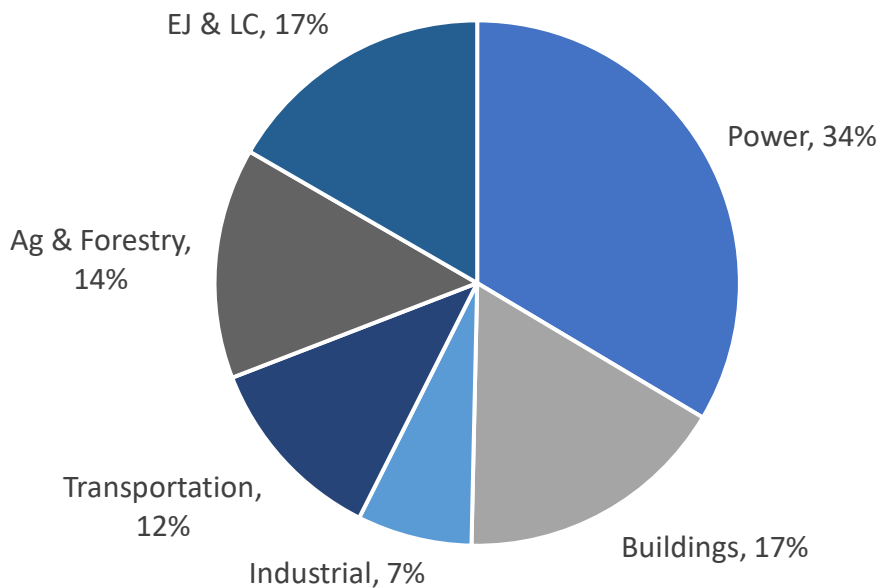
National Outputs

The climate policies included in the analysis invests about \$412.3 billion in federal funds across the six policy groups included in this analysis: Power, Buildings, Transportation, Industrial, Agriculture & Forestry, and Environmental Justice & Local Communities (EJ & LC). With the addition of leverage funds, the total investment into the United States economy across the ten-year study period comes to more than \$421.6 billion, or \$42 billion annually (Figure 1).

FIGURE 1. TOTAL INVESTMENT BY POLICY GROUP, NATIONAL

Policy Group	Federal Investment (\$billions)	Total Investment (\$billions)
Power	\$137.85	\$141.47
Buildings	\$70.17	\$70.81
Industrial	\$29.80	\$29.80
Transportation	\$45.60	\$49.42
Agriculture & Forestry	\$59.90	\$59.90
EJ & LC	\$68.92	\$70.24
Total Investment	\$412.25	\$421.64

FIGURE 2. TOTAL INVESTMENT DISTRIBUTION BY POLICY GROUP, NATIONAL



This \$42 billion annual investment is estimated to support nearly 676,000 jobs throughout the economy annually for ten years.² This is roughly equivalent to the number of jobs in the Telecommunications industry in 2021.³ Of these 676,000 annual jobs, 323,900 (48%) are a result of the direct investment, and 103,300 jobs (15%) are supported throughout the value chain. The remaining 248,700 jobs (37%) are induced jobs, or jobs supported through the additional economic impact generated by direct and indirect workers spending their paychecks in the local economy. Climate policies included in this analysis also generate more than \$58.1 billion in value added each year for 10 years, or \$581.1 billion total, which represents a 141% return on the original \$412 billion federal investment. This \$58.1 billion in value added is greater than the Gross Domestic Product (GDP) generated by the nation's Clothing and Clothing Accessories Stores industry.⁴ Additional impacts generated from the climate policies include \$31.2 billion in annual employee compensation, and \$6.2 billion in annual local, state, and federal tax revenue (Figure 3).

The Agriculture & Forestry policy group shows the strongest response to federal stimulus, with more than 201,200 jobs supported annually for 10 years as a result of \$6 billion invested annually. This is a result of the high job multipliers found in the Agriculture and Forestry industries, a result of lower labor costs and fewer intermediate purchases. The Power policy group follows, with 157,000 jobs supported annually for 10 years by the \$13.8 billion annual federal investment. The Power policy group contributes the most value to the economy, generating about \$16.6 billion in value added each year for 10 years. The Buildings policy group contributes 112,700 jobs annually to the economy as a result of the \$7.0 billion annual federal investment. Combined, these three policy groups represent 70% of annual jobs impacts generated from the climate provisions included in this analysis. The EJ & LC, Transportation, and Industrial policy groups represent the remaining 30%, with 89,300 jobs in EJ & LC, 72,300 jobs in Transportation, and 43,300 jobs in the Industrial policy group annually for 10 years (Figure 4).

FIGURE 3. ANNUAL IMPACTS BY IMPACT TYPE, NATIONAL, ALL POLICY GROUPS

	Jobs	Value Added	Employee Compensation	Taxes
Direct	323,895	\$23,052,031,023	\$14,097,253,742	Local \$2,007,705,067
Indirect	103,299	\$14,419,427,179	\$6,984,006,078	State \$1,871,877,590
Induced	248,697	\$20,634,333,371	\$10,099,817,677	Federal \$2,363,544,699
Total	675,891	\$58,105,791,573	\$31,181,077,497	Total \$6,243,127,356

² Outputs in this memo are reported in average annual job-years. The 676,000 annual jobs for ten years translates to about 6,758,900 total job-years.

³ Telecommunications (NAICS 517) employment is 675,385. Data as of 2021Q4, from JobsEQ.

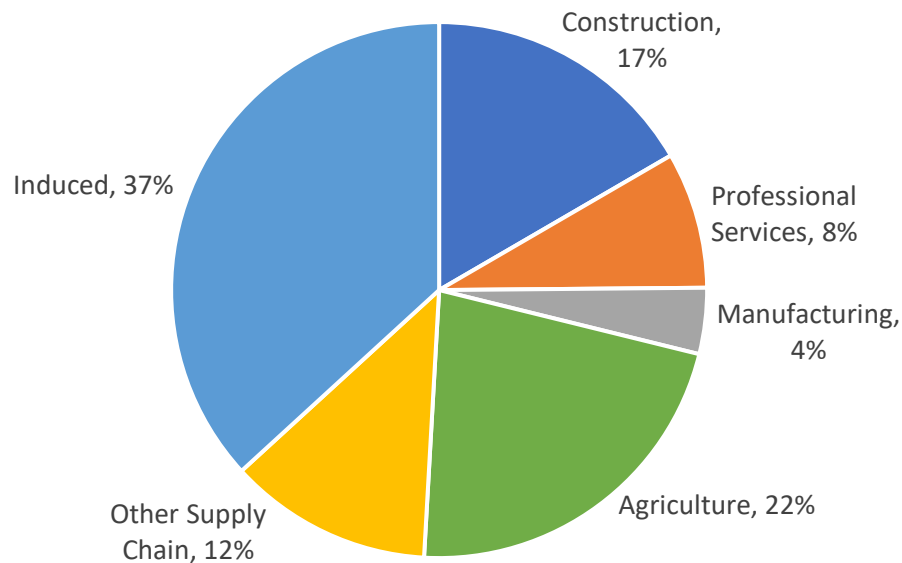
⁴ Clothing and Clothing Accessories Stores (NAICS 448) GDP is \$57.4 billion. Data as of 2020, from JobsEQ.

FIGURE 4. TOTAL ANNUAL IMPACTS PER POLICY GROUP, NATIONAL

Policy Group	Jobs	Value Added	Employee Compensation	Taxes
Power	156,995	\$16,578,143,111	\$7,862,997,126	\$2,833,333,729
Buildings	112,725	\$10,532,950,026	\$5,633,856,477	\$619,122,284
Transportation	72,337	\$7,852,158,521	\$4,151,782,268	\$856,581,886
Industrial	43,328	\$4,113,643,318	\$2,283,294,577	\$186,095,961
Agriculture & Forestry	201,193	\$10,157,837,551	\$6,583,074,329	\$635,246,229
EJ & LC	89,313	\$8,871,059,045	\$4,666,072,719	\$1,112,747,267
Total	675,891	\$58,105,791,573	\$31,181,077,497	\$6,243,127,356

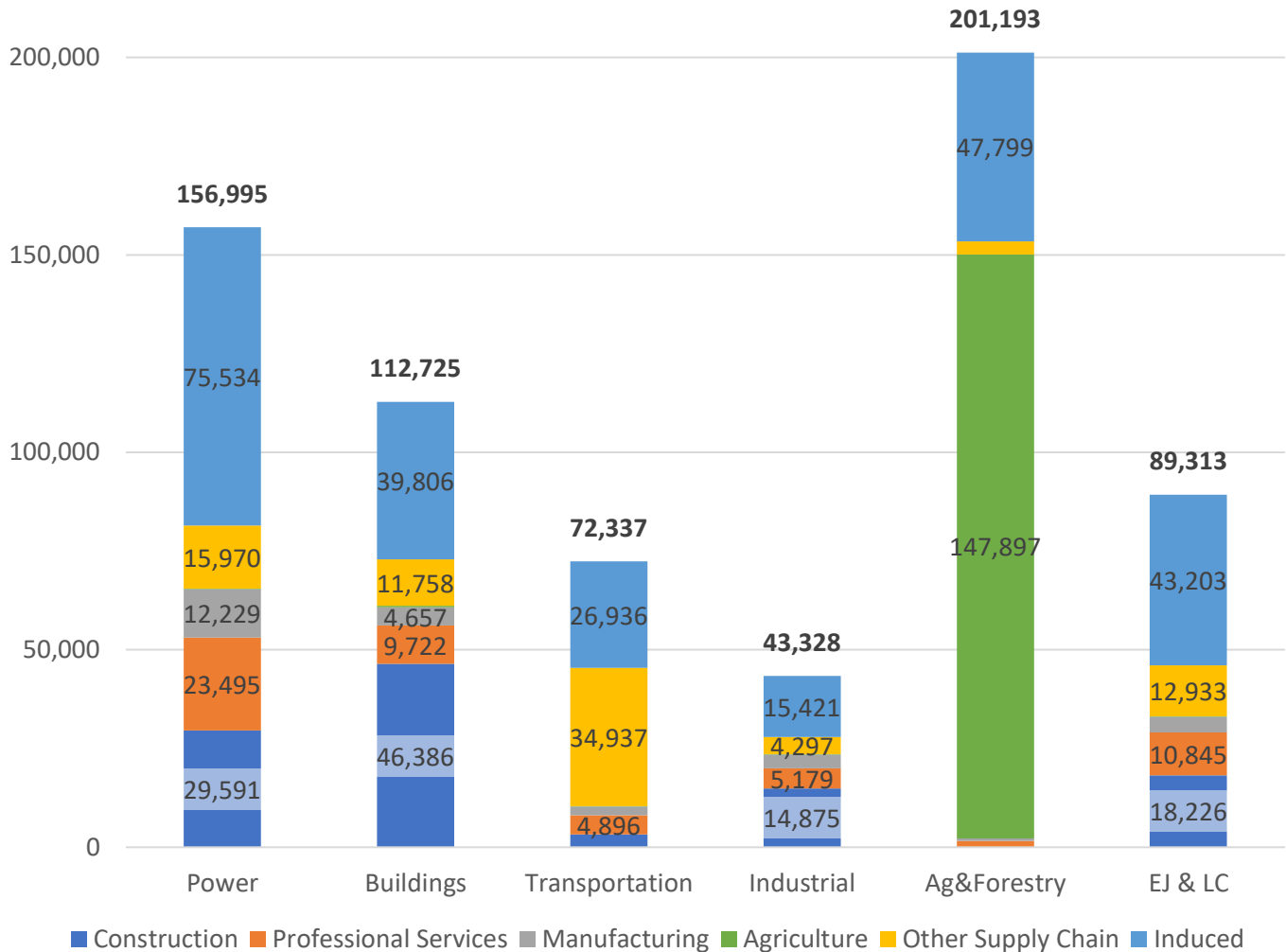
The 676,000 annual jobs are spread across 6 industry categories: construction, professional services, manufacturing, agriculture, other supply chain, and induced.⁵ The agriculture industry makes up about 22% of total employment impacts, due to the significant jobs impacts found in the Agriculture & Forestry policy group. Construction follows, representing 17% of total jobs impacts, while other supply chain industries make up 12%. The professional services category represents 8% and manufacturing makes up 4% of total jobs supported. Jobs found in induced industries, or throughout the general economy, represent the remaining 37% (Figure 5). The Buildings policy group accounts for more than 41% the construction jobs created by these policies. The Power policy group accounts for about 42% of professional services and 45% of manufacturing jobs supported from climate policies. The Transportation policy group accounts for about 42% of other supply chain jobs (Figure 6).

FIGURE 5. TOTAL JOBS BY INDUSTRY, NATIONAL



⁵ Other Supply Chain includes employment in the Retail and Wholesale Trade, Transportation, and Utilities industries.

FIGURE 6. INDUSTRY JOBS BY POLICY GROUP, NATIONAL



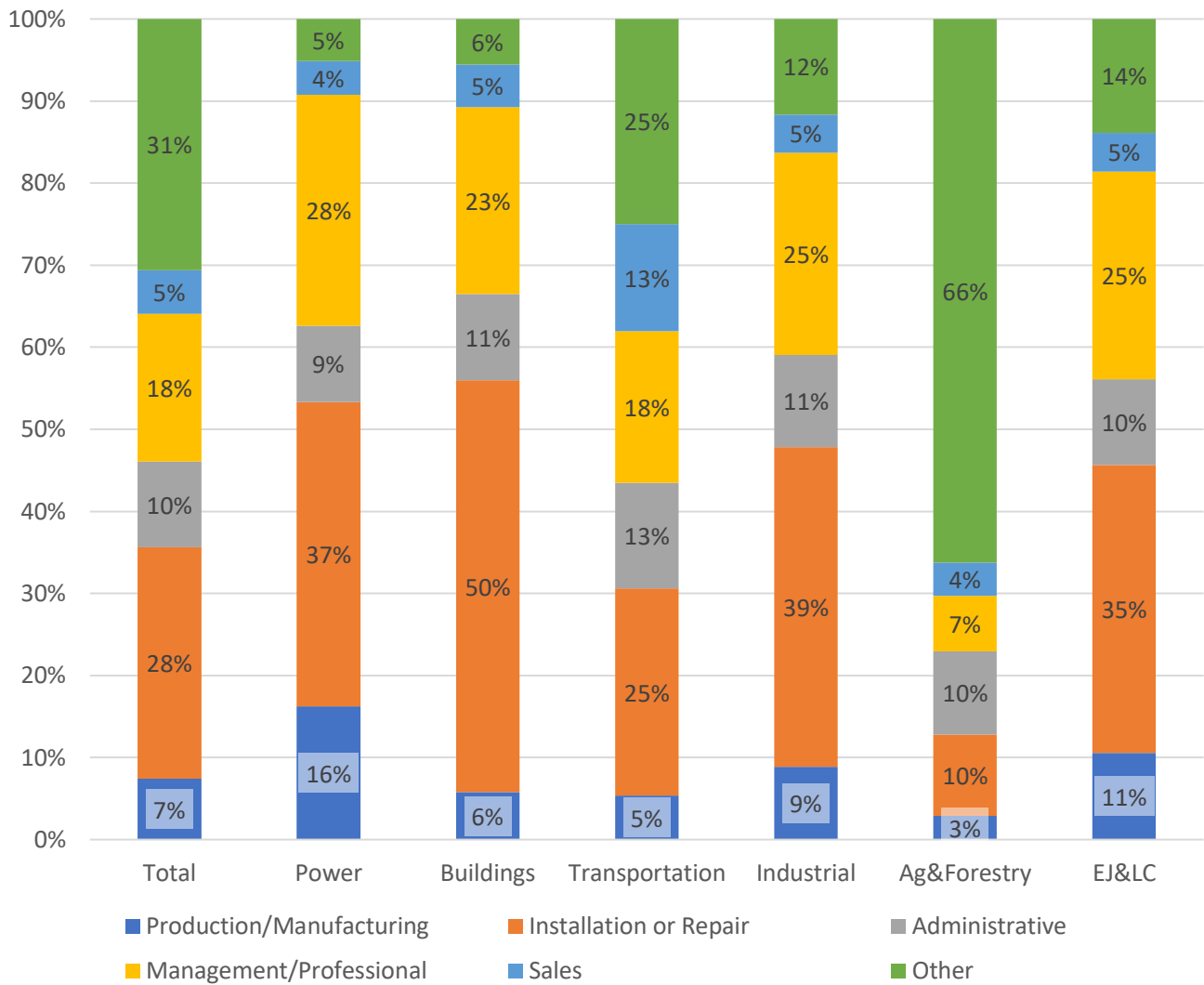
Among the direct and indirect jobs generated by the policies, or jobs created in the construction, professional services, manufacturing, agriculture, and other supply chain industries, job impacts are analyzed across 6 occupational categories: production/manufacturing, installation or repair, administrative, management/professional, sales, and other.⁶ These occupational groups are defined by Standard Occupational Codes (SOCs), more detail on these definitions can be found in the

⁶ The “other” occupational group includes employment in farming, fishing, and forestry occupations, transportation and material moving occupations, and community and social service occupations, among others.

Occupational Group **Definitions** section in Appendix B: Modeling Methodology. We omit induced impacts in the occupational analysis to best highlight jobs most directly related to the climate policies.

The other occupational group makes up about 31% of total employment impacts, due to the significant jobs impacts found in the Agriculture & Forestry policy group. Installation or repair follows, representing 28% of total jobs impacts, while management/professional represents 18%. Jobs found in administrative roles make up 10%, while production/ manufacturing and sales occupations make up 7% and 5%, respectively. The Buildings policy group has the largest share of installation or repair jobs of all policy groups, with about 50% of direct and indirect jobs falling under this category. The Power policy group has the largest share of both production/manufacturing and management/professional jobs across the modeled policy groups (Figure 7).

FIGURE 7. OCCUPATIONAL DISTRIBUTION BY POLICY GROUP AND TOTAL, NATIONAL



State Factsheets

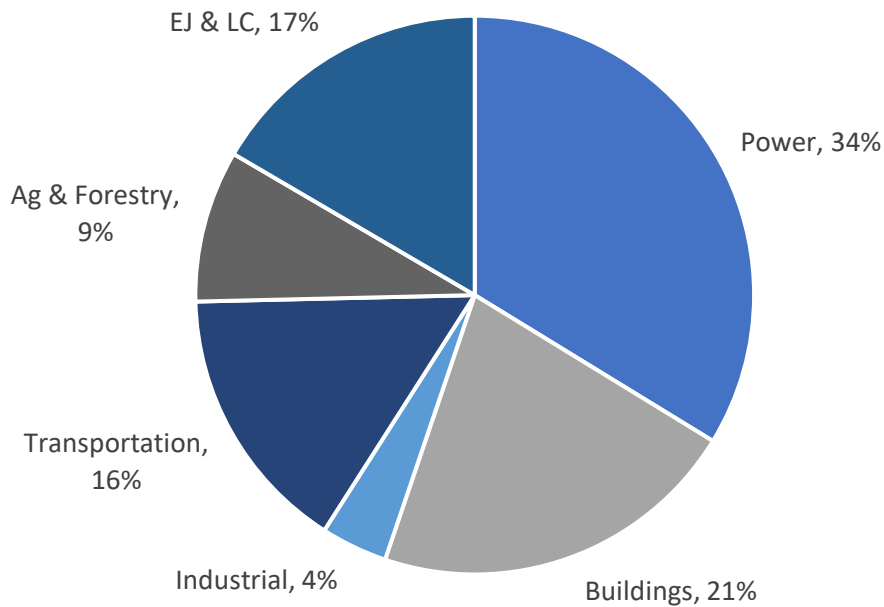
Arizona

The climate policies included in the analysis invests nearly \$5.9 billion in federal funds across the six policy groups in Arizona. With the addition of leverage funds, the total investment into the Arizona economy across the ten-year study period comes to more than \$6.1 billion, or \$611 million annually (Figure 8).

FIGURE 8. TOTAL INVESTMENT BY POLICY GROUP, ARIZONA

Policy Group	Federal Investment (\$millions)	Total Investment (\$millions)
Power	\$2,018	\$2,060
Buildings	\$1,308	\$1,310
Industrial	\$235	\$235
Transportation	\$764	\$951
Agriculture & Forestry	\$537	\$537
EJ & LC	\$1,007	\$1,012
Total Investment	\$5,868	\$6,105

FIGURE 9. TOTAL INVESTMENT DISTRIBUTION BY POLICY GROUP, ARIZONA



As a result of the climate policies included in this analysis, Arizona sees 8,900 annual jobs supported for 10 years, 5,300 (60%) of which are jobs sustained through direct climate investments and supply chain activities, while 3,600 (40%) jobs are induced through workers spending their earnings in the local economy. This total impact is greater than the number of jobs in Arizona’s Software Publishing industry.⁷ About \$843.7 million is generated in value added each year for 10 years from these policies, with \$444.8 million in employee compensation and \$99.4 million in local, state, and federal taxes annually for 10 years (Figure 10). The \$843.7 million in annual value added is greater than the Gross State Product (GSP) generated by Arizona’s Rail Transportation industry.⁸

Of these 8,900 annual jobs supported, the Power and Buildings policy groups both generate about 25% of the state’s employment impacts, with more than 2,200 jobs supported annually. The Agriculture & Forestry and Transportation policy groups follow, generating 17% and 15% of the state’s employment impacts, respectively. The remaining 18% of jobs are found in the Transportation, EJ & LC, and Industrial policy groups (Figure 11).

FIGURE 10. ANNUAL IMPACTS BY IMPACT TYPE, ARIZONA, ALL POLICY GROUPS

	Jobs	Value Added	Employee Compensation	Taxes
Direct	3,763	\$330,872,857	\$189,998,570	Local \$31,211,085
Indirect	1,542	\$212,520,661	\$105,713,038	State \$29,205,665
Induced	3,607	\$300,335,933	\$149,085,061	Federal \$39,024,141
Total	8,912	\$843,729,450	\$444,796,668	Total \$99,440,891

FIGURE 11. TOTAL ANNUAL IMPACTS PER POLICY GROUP, ARIZONA

Policy Group	Jobs	Value Added	Employee Compensation	Taxes
Power	2,268	\$249,179,405	\$117,950,118	\$42,118,681
Buildings	2,239	\$198,871,233	\$108,041,155	\$13,034,543
Transportation	1,293	\$140,225,337	\$71,751,536	\$18,611,058
Industrial	365	\$33,848,536	\$19,083,709	\$1,973,322
Agriculture & Forestry	1,552	\$98,692,939	\$64,830,238	\$6,410,789
EJ & LC	1,195	\$122,911,999	\$63,139,913	\$17,292,497
Total	8,912	\$843,729,450	\$444,796,668	\$99,440,891

⁷ Software Publishing (NAICS 5112) employment is 8,530. Data as of 2021Q4, from JobsEQ.

⁸ Rail Transportation (NAICS 482) GSP is \$761.3 million. Data as of 2020, from JobsEQ.

The 8,900 annual jobs are spread across 6 industry categories: construction, professional services, manufacturing, agriculture, other supply chain, and induced.⁹ Construction makes up nearly 2 in 10 (19%) jobs supported by the climate policies. The other supply chain category follows, representing 16% of total jobs impacts, while agriculture represents 12%. Professional services represents 10% and manufacturing makes up 3% jobs supported. Jobs found in induced industries, or throughout the general economy, represent the remaining 40% (

Figure 12). The Buildings policy group accounts for more than half (52%) of the construction jobs created by these policies. The Power policy group accounts for about 43% of professional services and 52% of manufacturing jobs supported from climate policies. The Transportation policy group accounts for about 45% of other supply chain jobs (

⁹ Other Supply Chain includes employment in the Retail and Wholesale Trade, Transportation, and Utilities industries.

Figure 13).

FIGURE 12. TOTAL JOBS BY INDUSTRY, ARIZONA

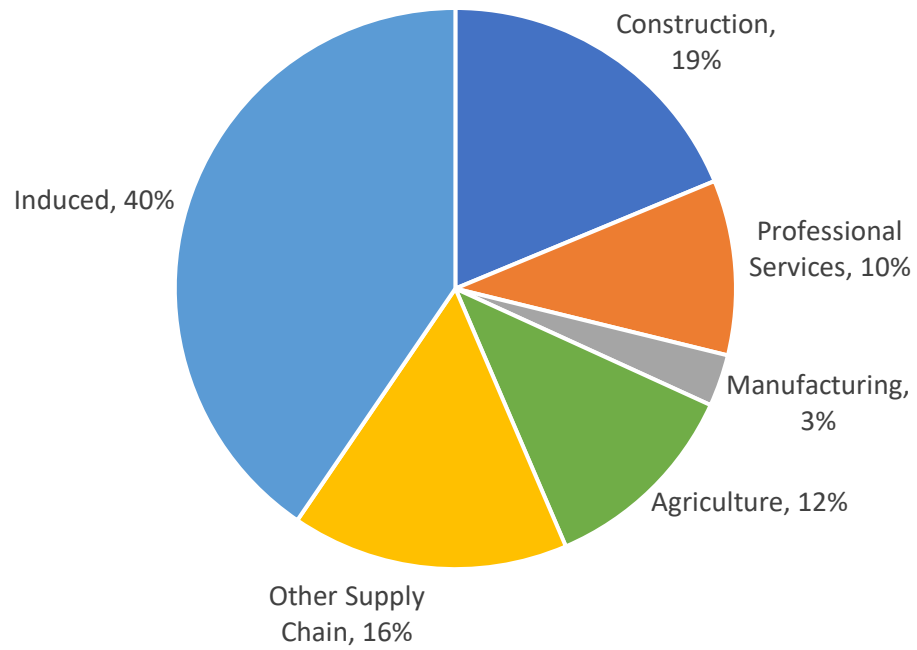
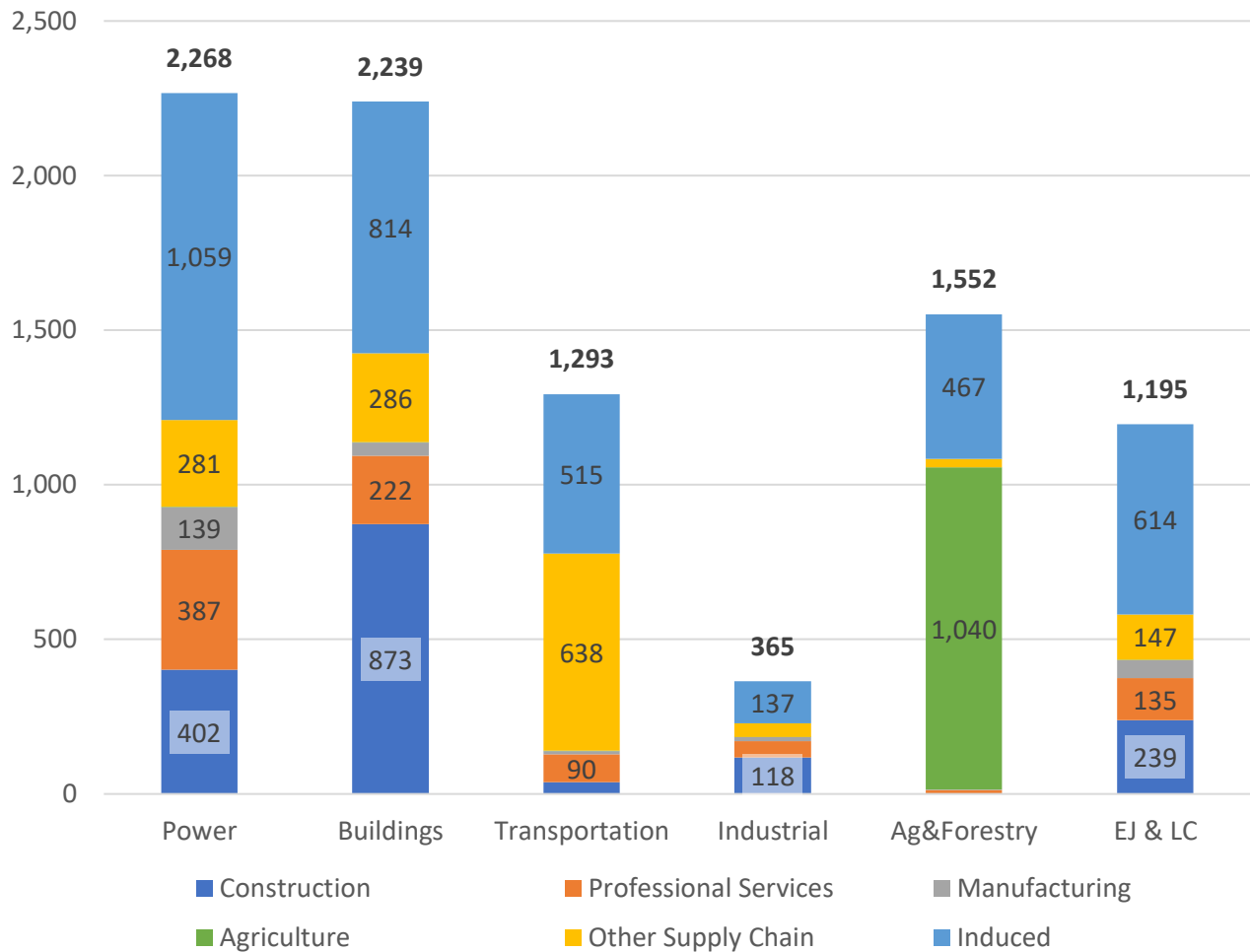


FIGURE 13. INDUSTRY JOBS BY POLICY GROUP, ARIZONA



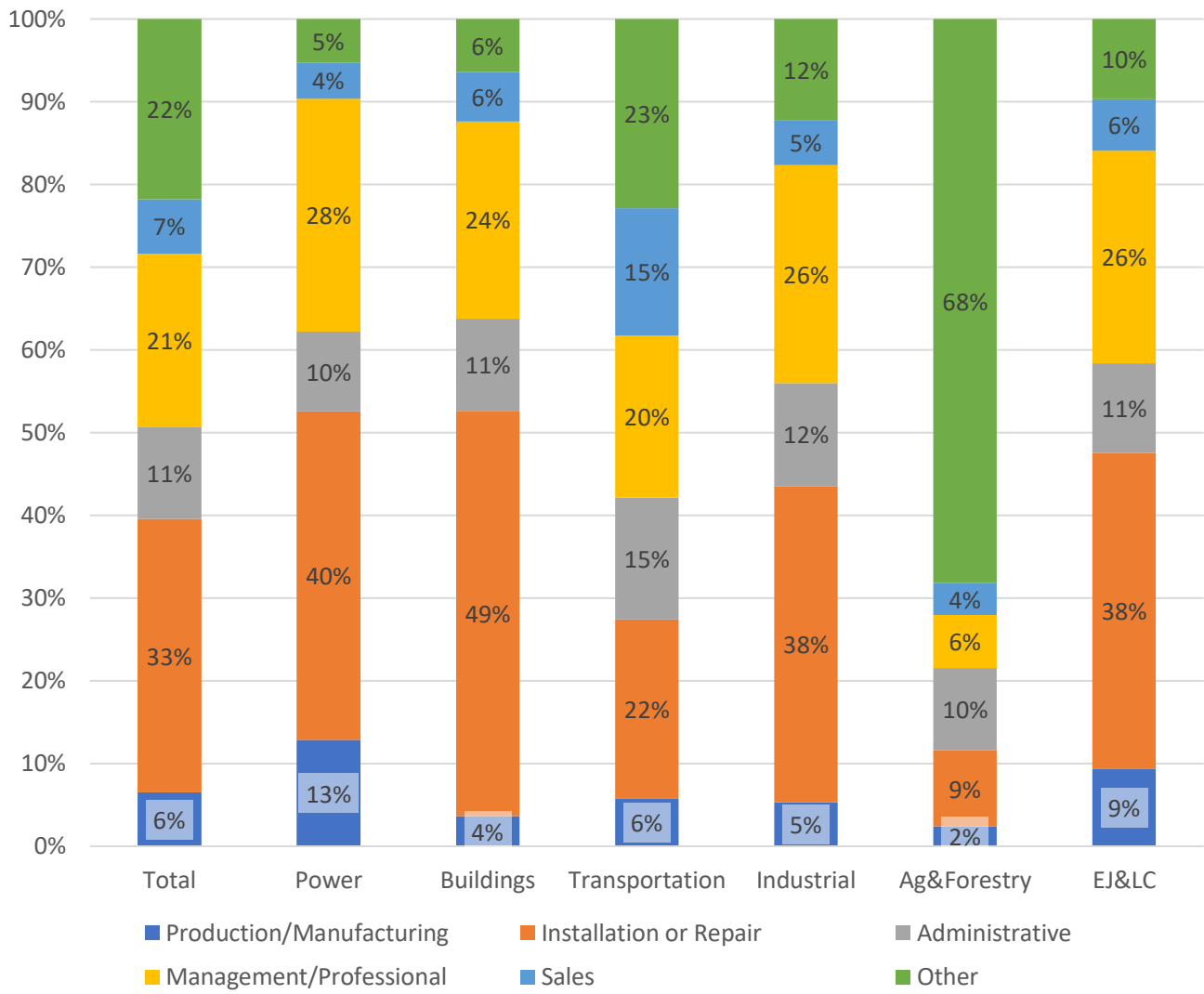
Among the direct and indirect jobs generated by the policies, or jobs created in the construction, professional services, manufacturing, agriculture, and other supply chain industries, job impacts are analyzed across 6 occupational categories: production/manufacturing, installation or repair, administrative, management/professional, sales, and other.¹⁰ These occupational groups are defined by Standard Occupational Codes (SOCs), more detail on these definitions can be found in the

¹⁰ The “other” occupational group includes employment in farming, fishing, and forestry occupations, transportation and material moving occupations, and community and social service occupations, among others.

Occupational Group **Definitions** section in Appendix B: Modeling Methodology. We omit induced impacts in the occupational analysis to best highlight jobs most directly related to the climate policies.

The installation or repair occupational group makes up about one-third (33%) of total employment impacts in Arizona, due to the significant jobs impacts found in the Power and Buildings policy groups. The other occupational group follows, representing 22% of total jobs impacts, while management/professional represents 21%. Jobs found in administrative roles make up 11%, while sales and production/manufacturing occupations make up 7% and 6%, respectively. The Buildings policy group has the largest share of installation or repair jobs of all policy groups, with 49% of direct and indirect jobs falling under this category. The Power policy group has the largest share of both production/manufacturing and management/profession jobs across the modeled policy groups (Figure 14).

FIGURE 14. OCCUPATIONAL DISTRIBUTION BY POLICY GROUP AND TOTAL, ARIZONA



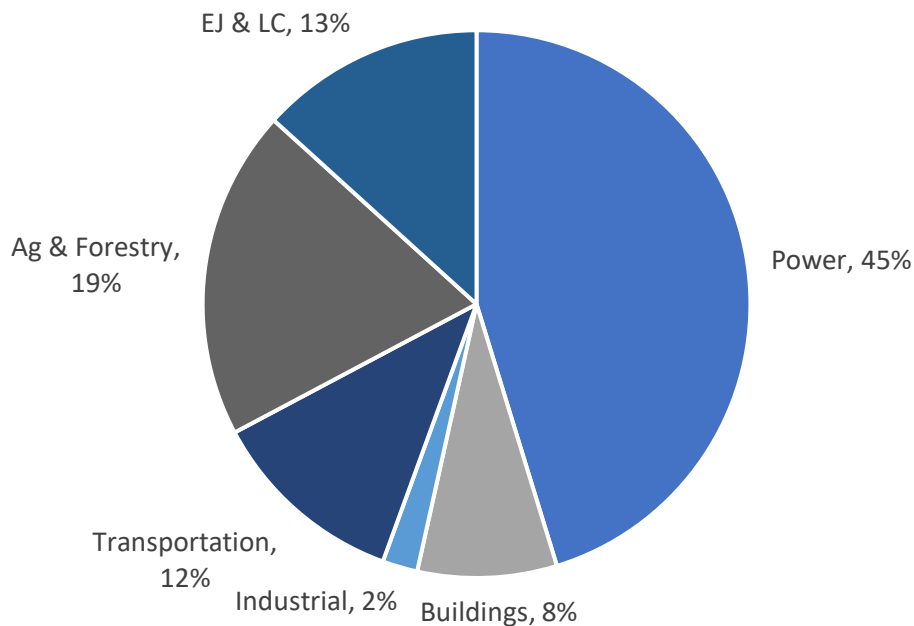
Nevada

The climate policies included in the analysis invests more than \$4.1 billion in federal funds across the six policy groups in Nevada. With the addition of leverage funds, the total investment into the Nevada economy across the ten-year study period comes to more than \$4.3 billion, or \$432 million annually (Figure 15).

FIGURE 15. TOTAL INVESTMENT BY POLICY GROUP, NEVADA

Policy Group	Federal Investment (\$millions)	Total Investment (\$millions)
Power	\$1,879	\$1,956
Buildings	\$353	\$356
Industrial	\$90	\$90
Transportation	\$404	\$505
Agriculture & Forestry	\$843	\$843
EJ & LC	\$568	\$574
Total Investment	\$4,137	\$4,323

FIGURE 16. TOTAL INVESTMENT DISTRIBUTION BY POLICY GROUP, NEVADA



As a result of the climate policies included in this analysis, Nevada sees 7,400 annual jobs supported for 10 years, 5,300 (72%) of which are jobs sustained through direct climate investments and supply chain activities, while 2,100 (28%) jobs are induced through workers spending their earnings in the local economy. This total impact is greater than the number of jobs in Nevada’s Home Health Care Service industry.¹¹ More than \$544.5 million is generated in value added each year for 10 years from these policies, with \$297.9 million in employee compensation and \$67.1 million in local, state, and federal taxes annually for 10 years (Figure 17). The \$544.5 million in annual value added is nearly equivalent to the State Product (GSP) generated by Nevada’s Postal Service.¹²

Of these 7,400 annual jobs supported, the Agriculture & Forestry policy group generates 46% of the state’s employment impacts, with more than 3,400 jobs supported annually. The Power policy group follows, generating 29% of the state’s employment impacts, or 2,100 jobs. The remaining 25% of jobs are found in the EJ & LC, Buildings, Transportation, and Industrial policy groups (Figure 18).

FIGURE 17. ANNUAL IMPACTS BY IMPACT TYPE, NEVADA, ALL POLICY GROUPS

	Jobs	Value Added	Employee Compensation	Taxes
Direct	4,402	\$245,699,391	\$162,035,205	Local \$19,963,454
Indirect	904	\$121,238,052	\$57,191,822	State \$19,090,944
Induced	2,072	\$177,563,582	\$78,626,747	Federal \$28,026,506
Total	7,377	\$544,501,025	\$297,853,774	Total \$67,080,904

FIGURE 18. TOTAL ANNUAL IMPACTS PER POLICY GROUP, NEVADA

Policy Group	Jobs	Value Added	Employee Compensation	Taxes
Power	2,146	\$222,188,665	\$108,270,271	\$30,891,180
Buildings	500	\$47,100,889	\$26,062,924	\$3,720,661
Transportation	513	\$65,835,435	\$29,396,265	\$10,003,182
Industrial	121	\$11,618,159	\$6,492,392	\$926,479
Agriculture & Forestry	3,403	\$124,804,830	\$90,955,609	\$10,866,234
EJ & LC	695	\$72,953,047	\$36,676,313	\$10,673,169
Total	7,377	\$544,501,025	\$297,853,774	\$67,080,904

¹¹ Home Health Care Services (NAICS 6216) employment is 7,288. Data as of 2021Q4, from JobsEQ.

¹² Postal Service (NAICS 491) GSP is \$550.2 million. Data as of 2020, from JobsEQ.

The 7,400 annual jobs are spread across 6 industry categories: construction, professional services, manufacturing, agriculture, other supply chain, and induced.¹³ The agriculture industry makes up about 38% of total employment impacts, due to the significant jobs impacts found in the Agriculture & Forestry policy group. Construction follows, representing 12% of total jobs impacts, while other supply chain jobs represent 10%. Professional services represents 8% of jobs supported and manufacturing makes up 3%. Jobs found in induced industries, or throughout the general economy, represent the remaining 28% (

Figure 19). The Power policy group accounts for half (50%) of the construction jobs, two-thirds (65%) of professional services jobs, and three-quarters (75%) of manufacturing jobs supported from climate policies. The Transportation policy group accounts for more than one-third (35%) of other supply chain jobs (

¹³ Other Supply Chain includes employment in the Retail and Wholesale Trade, Transportation, and Utilities industries.

Figure 20).

FIGURE 19. TOTAL JOBS BY INDUSTRY, NEVADA

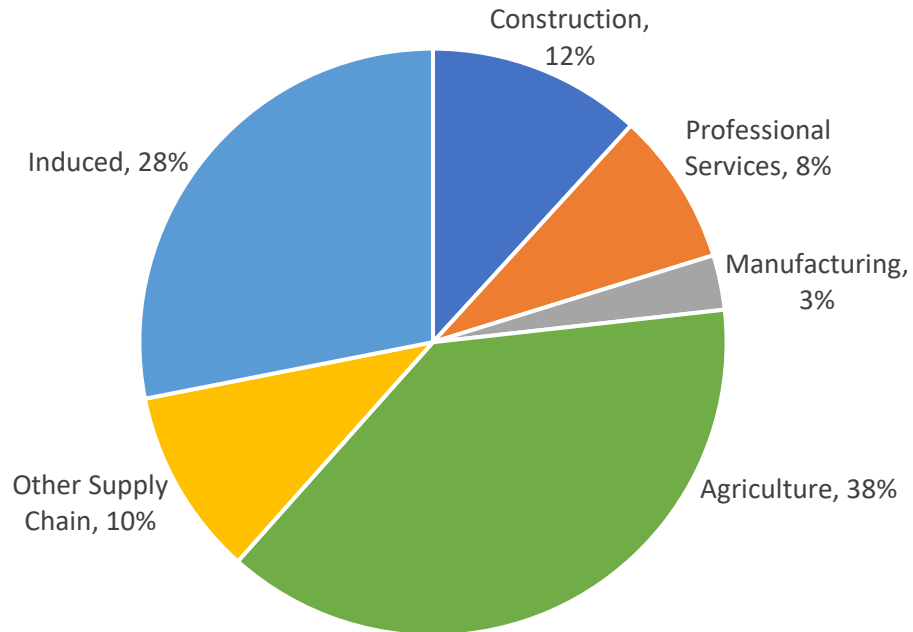
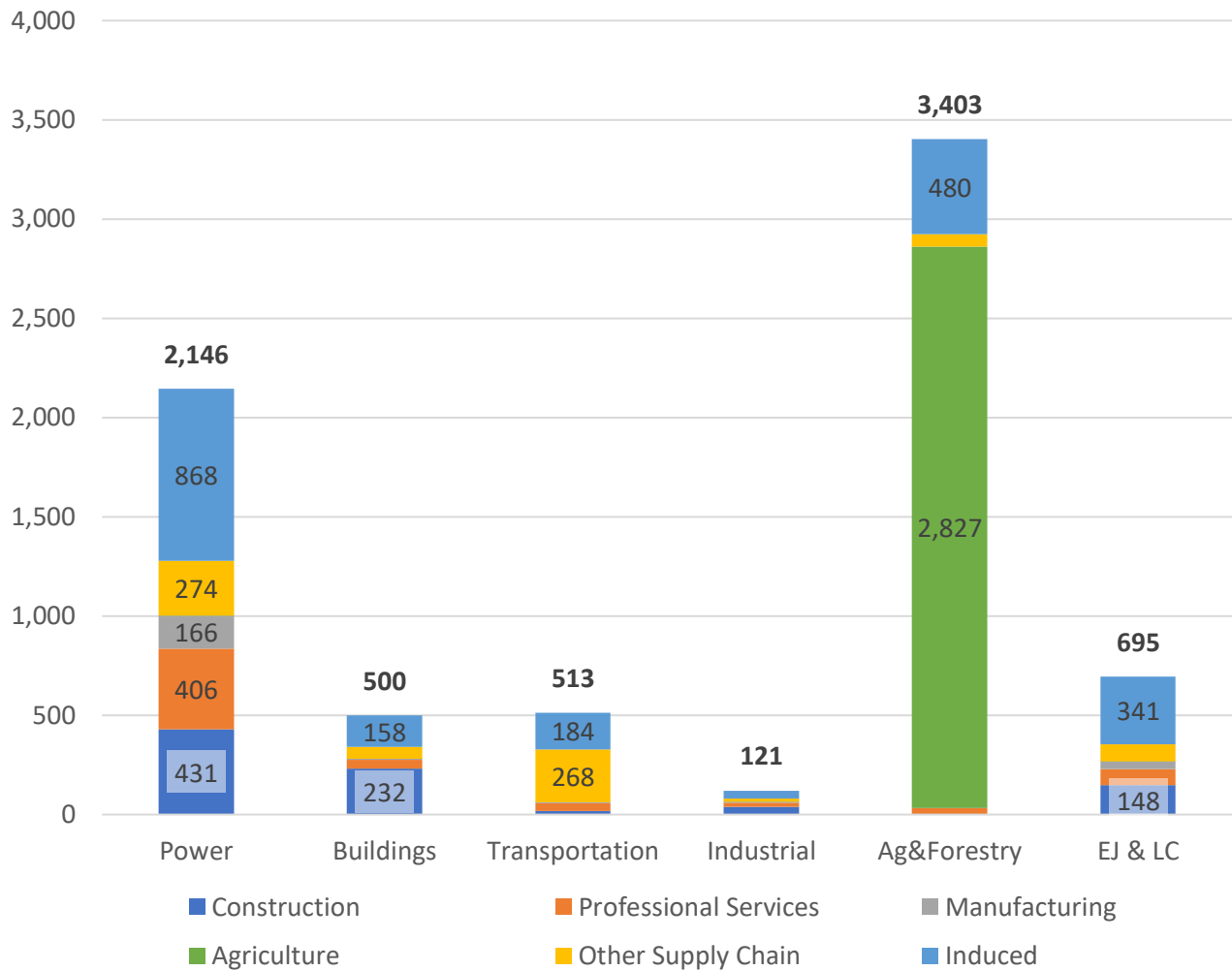


FIGURE 20. INDUSTRY JOBS BY POLICY GROUP, NEVADA



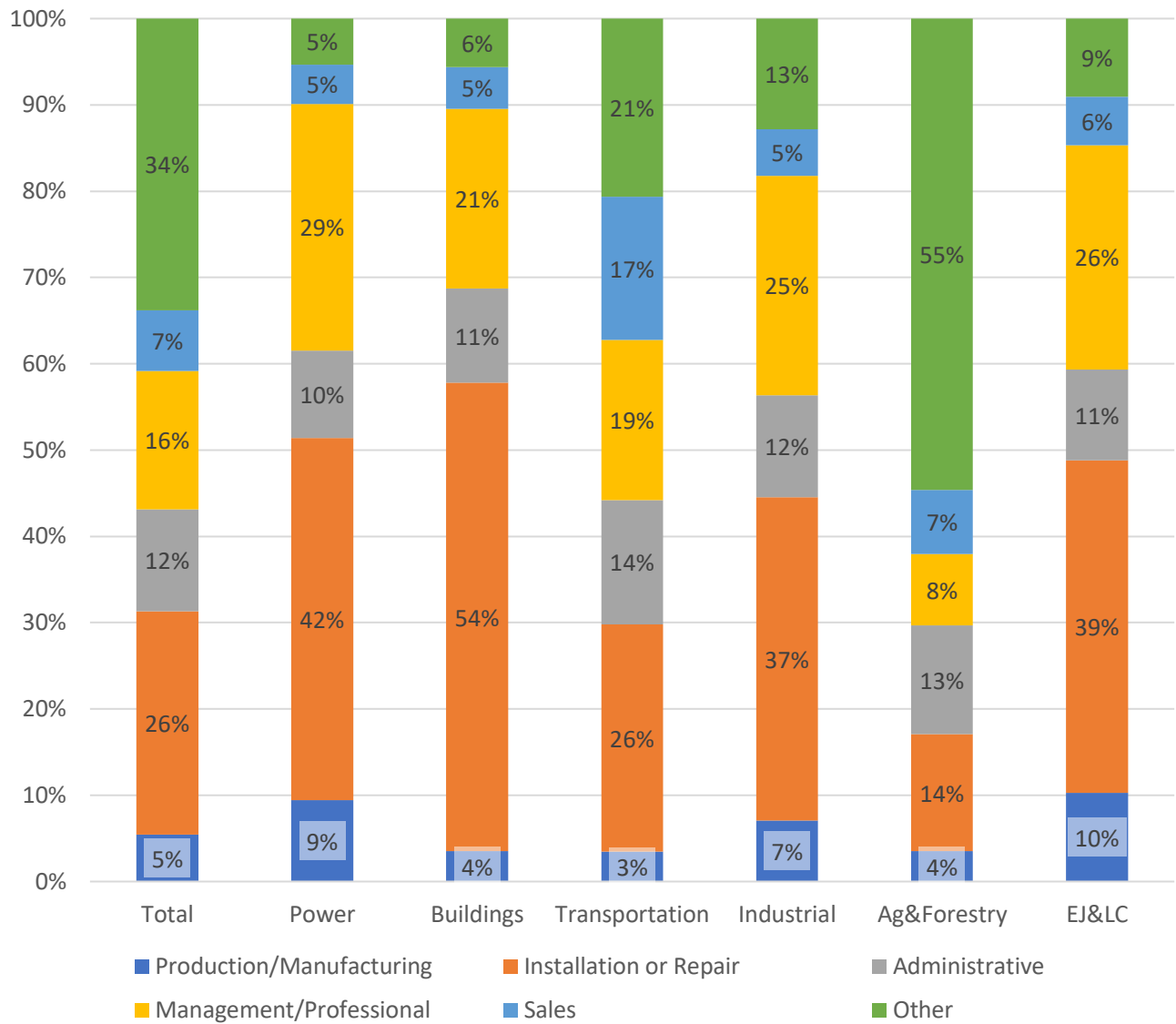
Among the direct and indirect jobs generated by the policies, or jobs created in the construction, professional services, manufacturing, agriculture, and other supply chain industries, job impacts are analyzed across 6 occupational categories: production/manufacturing, installation or repair, administrative, management/professional, sales, and other.¹⁴ These occupational groups are defined by Standard Occupational Codes (SOCs), more detail on these definitions can be found in the

¹⁴ The “other” occupational group includes employment in farming, fishing, and forestry occupations, transportation and material moving occupations, and community and social service occupations, among others.

Occupational Group **Definitions** section in Appendix B: Modeling Methodology. We omit induced impacts in the occupational analysis to best highlight jobs most directly related to the climate policies.

The other occupational group makes up about 34% of total employment impacts in Nevada, due to the significant jobs impacts found in the Agriculture & Forestry policy group. Installation or repair follows, representing 26% of total jobs impacts, while management/professional represents 16%. Jobs found in administrative roles make up 12%, while sales and production/manufacturing occupations make up 7% and 5%, respectively. The Buildings policy group has the largest share of installation or repair jobs of all policy groups, with more than half (54%) of direct and indirect jobs falling under this category, while the Power policy group has the largest share of management/profession jobs across the modeled policy groups (Figure 21Figure 7).

FIGURE 21. OCCUPATIONAL DISTRIBUTION BY POLICY GROUP AND TOTAL, NEVADA



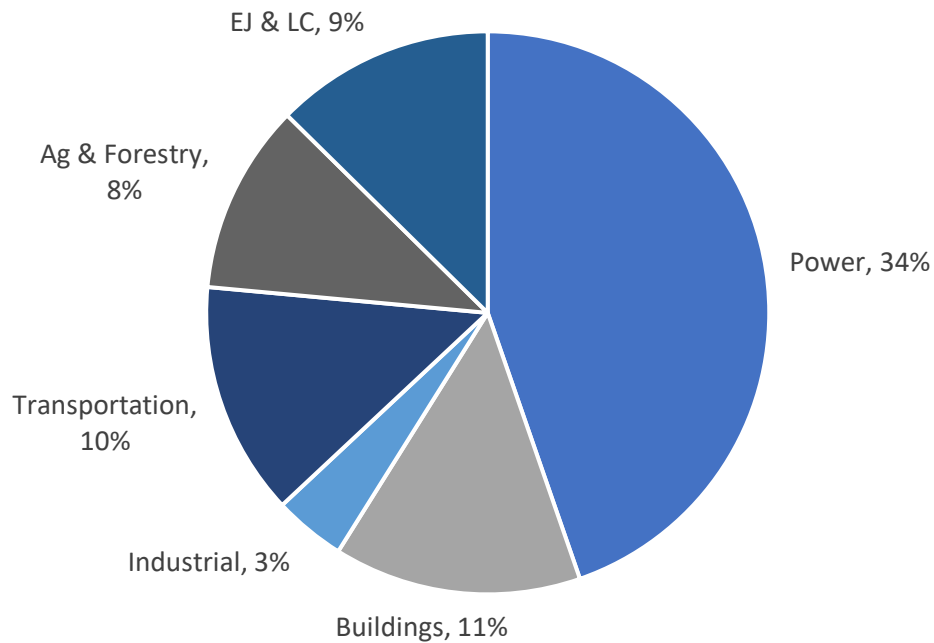
New Hampshire

The climate policies included in the analysis invests more than \$2.6 billion in federal funds across the six policy groups in New Hampshire. With the addition of leverage funds, the total investment into the New Hampshire economy across the ten-year study period comes to more than \$2.7 billion, or \$274 million annually (Figure 22).

FIGURE 22. TOTAL INVESTMENT BY POLICY GROUP, NEW HAMPSHIRE

Policy Group	Federal Investment (\$millions)	Total Investment (\$millions)
Power	\$1,201	\$1,225
Buildings	\$378	\$390
Industrial	\$113	\$113
Transportation	\$294	\$368
Agriculture & Forestry	\$299	\$299
EJ & LC	\$340	\$346
Total Investment	\$2,626	\$2,742

FIGURE 23. TOTAL INVESTMENT DISTRIBUTION BY POLICY GROUP, NEW HAMPSHIRE



As a result of the climate policies included in this analysis, New Hampshire sees 4,400 annual jobs supported for 10 years, 2,600 (59%) of which are jobs sustained through direct climate investments and supply chain activities, while 1,800 (41%) jobs are induced through workers spending their earnings in the local economy. This total impact is more than the number of jobs in New Hampshire’s Legal Services industry.¹⁵ More than \$350.7 million is generated in value added each year for 10 years from these policies, with \$190.2 million in employee compensation and \$40.9 million in local, state, and federal taxes annually for 10 years (Figure 24). The \$350.7 million in annual value added is greater than the Gross State Product (GSP) generated by New Hampshire’s Outpatient Care Centers industry.¹⁶

Of these 4,400 annual jobs supported, the Power policy group generates 33% of the state’s employment impacts, with about 1,500 jobs supported annually. The Agriculture & Forestry and Buildings policy groups follow, generating 21% and 17% of the state’s employment impacts, respectively. The remaining 29% of jobs are found in the Transportation, EJ & LC, and Industrial policy groups (Figure 25).

FIGURE 24. ANNUAL IMPACTS BY IMPACT TYPE, NEW HAMPSHIRE, ALL POLICY GROUPS

	Jobs	Value Added	Employee Compensation	Taxes
Direct	1,870	\$114,528,995	\$73,621,389	Local \$14,679,140
Indirect	721	\$91,254,125	\$45,059,927	State \$13,036,710
Induced	1,795	\$144,885,511	\$71,505,700	Federal \$13,229,992
Total	4,386	\$350,668,631	\$190,187,016	Total \$40,945,842

FIGURE 25. TOTAL ANNUAL IMPACTS PER POLICY GROUP, NEW HAMPSHIRE

Policy Group	Jobs	Value Added	Employee Compensation	Taxes
Power	1,454	\$117,154,900	\$60,574,826	\$24,234,699
Buildings	733	\$59,746,941	\$33,219,924	\$3,453,735
Transportation	564	\$51,999,717	\$34,729,927	\$1,720,144
Industrial	165	\$16,950,020	\$8,974,050	\$898,710
Agriculture & Forestry	921	\$56,872,762	\$26,254,784	\$3,061,321
EJ & LC	549	\$47,944,290	\$26,433,505	\$7,577,233
Total	4,386	\$350,668,631	\$190,187,016	\$40,945,842

¹⁵ Legal Services (NAICS 5411) employment is 4,368. Data as of 2021Q4, from JobsEQ.

¹⁶ Outpatient Care Centers (NAICS 6214) GSP is \$342.7 million. Data as of 2020, from JobsEQ.

The 4,400 annual jobs are spread across 6 industry categories: construction, professional services, manufacturing, agriculture, other supply chain, and induced.¹⁷ Construction makes up about 19% of total employment impacts, and agriculture follows, representing 15%. Other supply chain jobs make up 14% of jobs supported, while professional services represents 9% and manufacturing makes up 3%. Jobs found in induced industries, or throughout the general economy, represent the remaining 41% (Figure 26). The Power policy group accounts for 40% of the construction jobs, while the Buildings policy group makes up 37%. The Power policy group also represents more than half of professional services jobs (52%) and manufacturing jobs (59%) supported from climate policies. The Transportation policy group accounts for 44% of other supply chain jobs (

¹⁷ Other Supply Chain includes employment in the Retail and Wholesale Trade, Transportation, and Utilities industries.

Figure 27).

FIGURE 26. TOTAL JOBS BY INDUSTRY, NEW HAMPSHIRE

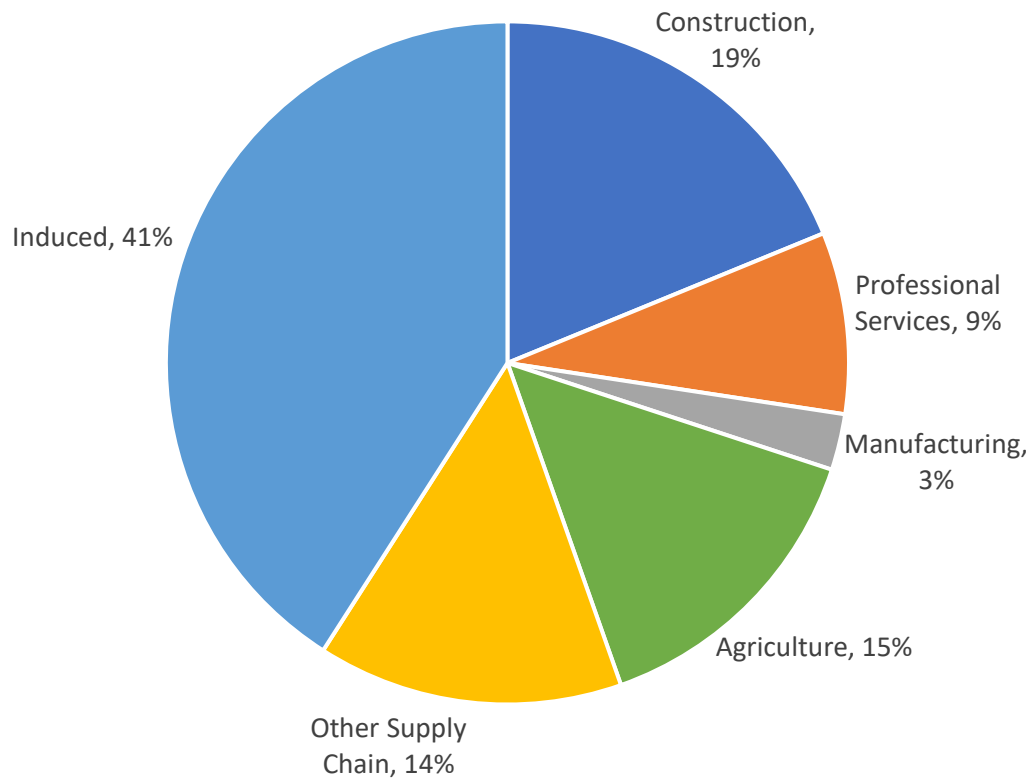
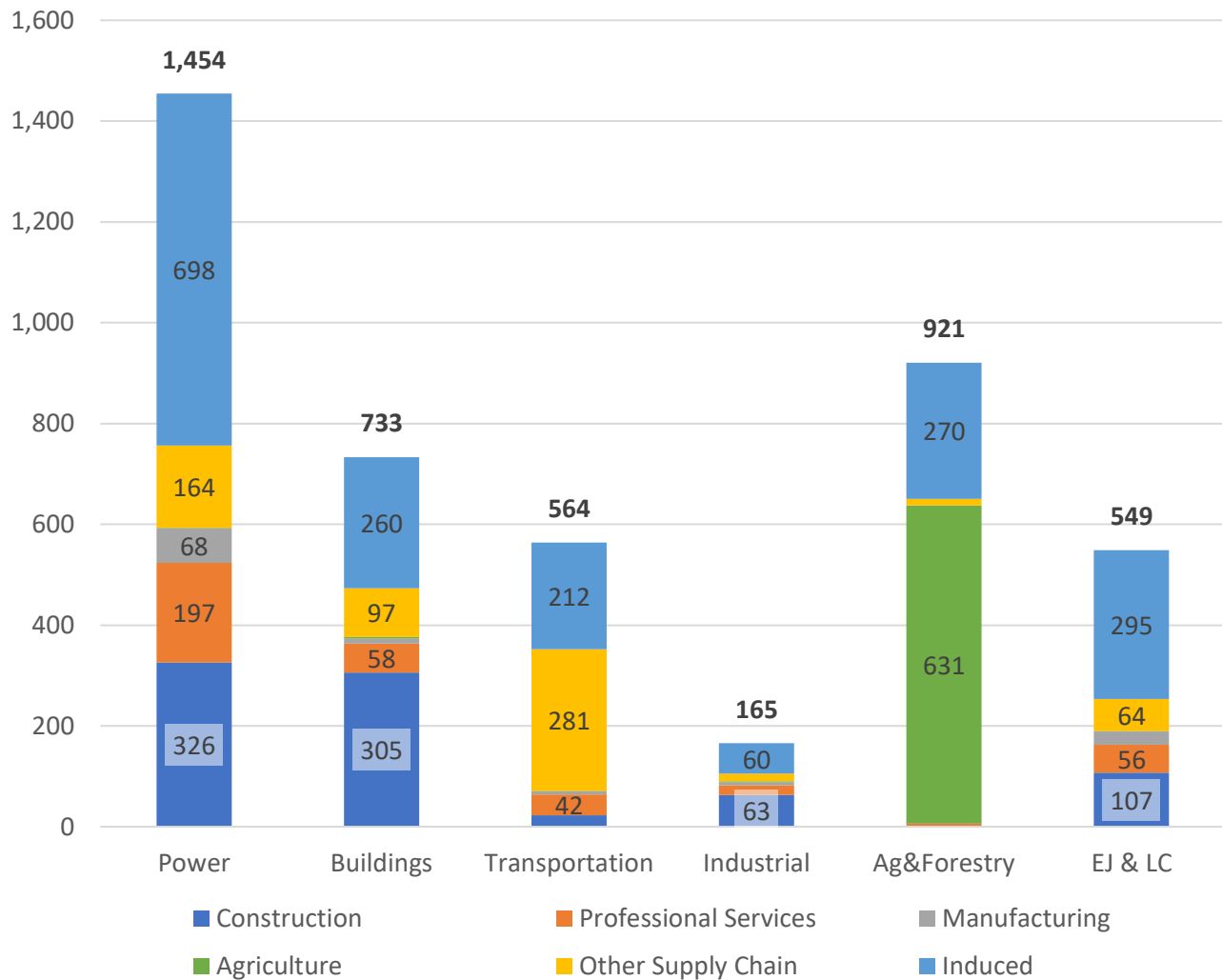


FIGURE 27. INDUSTRY JOBS BY POLICY GROUP, NEW HAMPSHIRE



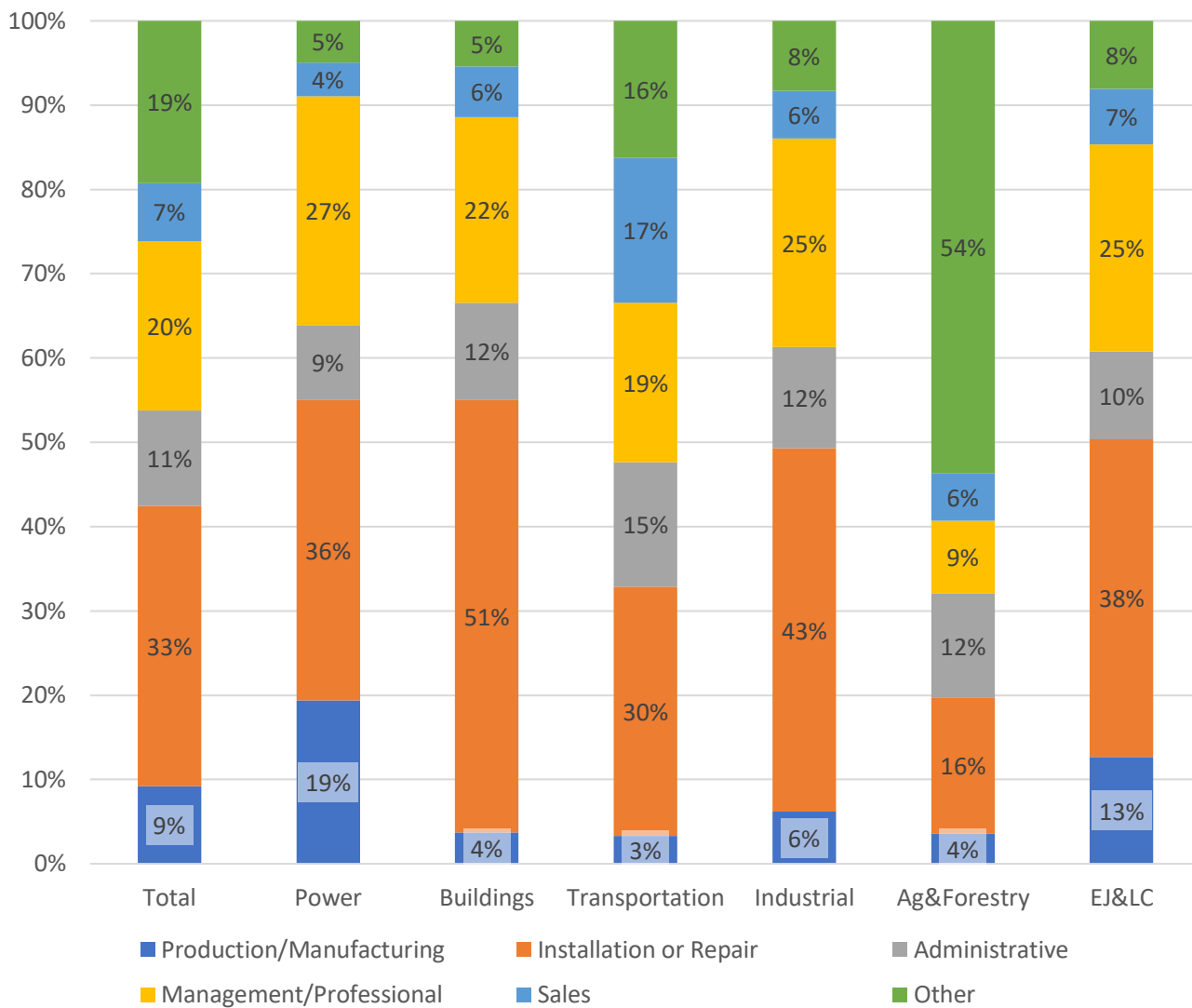
Among the direct and indirect jobs generated by the policies, or jobs created in the construction, professional services, manufacturing, agriculture, and other supply chain industries, job impacts are analyzed across 6 occupational categories: production/manufacturing, installation or repair, administrative, management/professional, sales, and other.¹⁸ These occupational groups are defined by Standard Occupational Codes (SOCs), more detail on these definitions can be found in the

¹⁸ The “other” occupational group includes employment in farming, fishing, and forestry occupations, transportation and material moving occupations, and community and social service occupations, among others.

Occupational Group **Definitions** section in Appendix B: Modeling Methodology. We omit induced impacts in the occupational analysis to best highlight jobs most directly related to the climate policies.

Installation or repair makes up the largest share of occupational impacts, with one-third (33%) of total employment impacts in New Hampshire. The management/professional and other occupational groups represent 20% and 19%, respectively. Jobs found in administrative roles make up 11%, while jobs in production/manufacturing make up 9%. Sales occupations make up the remaining 7%. The Buildings policy group has the largest share of installation or repair jobs of all policy groups, with more than half (51%) of direct and indirect jobs falling under this category. The Power policy group has the largest share of both production/manufacturing and management/profession jobs across the modeled policy groups (Figure 28).

FIGURE 28. OCCUPATIONAL DISTRIBUTION BY POLICY GROUP AND TOTAL, NEW HAMPSHIRE



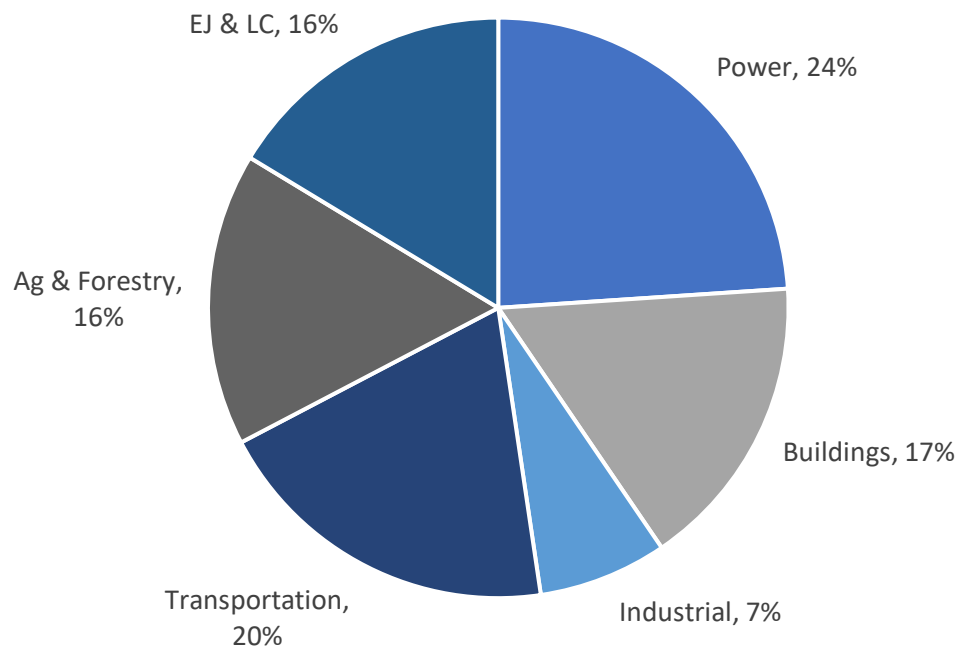
Pennsylvania

The climate policies included in the analysis invests about \$12.6 billion in federal funds across the six policy groups in Pennsylvania. With the addition of leverage funds, the total investment into the Pennsylvania economy across the ten-year study period comes to nearly \$13.2 billion, or \$1.3 billion annually (Figure 29).

FIGURE 29. TOTAL INVESTMENT BY POLICY GROUP, PENNSYLVANIA

Policy Group	Federal Investment (\$millions)	Total Investment (\$millions)
Power	\$3,046	\$3,150
Buildings	\$2,163	\$2,175
Industrial	\$944	\$944
Transportation	\$2,185	\$2,588
Agriculture & Forestry	\$2,149	\$2,149
EJ & LC	\$2,101	\$2,150
Total Investment	\$12,587	\$13,155

FIGURE 30. TOTAL INVESTMENT DISTRIBUTION BY POLICY GROUP, PENNSYLVANIA



As a result of the climate policies included in this analysis, Pennsylvania sees 23,100 annual jobs supported for 10 years, 14,300 (62%) of which are jobs sustained through direct climate investments and supply chain activities, while 8,800 (38%) jobs are induced through workers spending their earnings in the local economy. This total impact is greater than the number of jobs in Pennsylvania's Paper Manufacturing industry.¹⁹ More than \$1.9 billion is generated in value added each year for 10 years from these policies, with \$1.1 billion in employee compensation and \$178.2 million in local, state, and federal taxes annually for 10 years (Figure 31). The \$1.9 billion in annual value added is greater than the Gross State Product (GSP) generated by Pennsylvania's Spectator Sports industry.²⁰

Of these 23,100 annual jobs supported, the Agriculture & Forestry policy group generates 35% of the state's employment impacts, with about 8,200 jobs supported annually. The Transportation, Power, and Buildings policy groups follow, generating 16%, 15%, and 15% of the state's employment impacts, respectively. The remaining 18% of jobs are found in the EJ & LC and Industrial policy groups (Figure 32).

FIGURE 31. ANNUAL IMPACTS BY IMPACT TYPE, PENNSYLVANIA, ALL POLICY GROUPS

	Jobs	Value Added	Employee Compensation	Taxes
Direct	11,098	\$706,118,086	\$435,954,979	Local \$51,255,979
Indirect	3,210	\$430,590,498	\$210,319,422	State \$50,150,450
Induced	8,763	\$773,127,143	\$407,001,363	Federal \$76,773,686
Total	23,071	\$1,909,835,727	\$1,053,275,765	Total \$178,180,115

FIGURE 32. TOTAL ANNUAL IMPACTS PER POLICY GROUP, PENNSYLVANIA

Policy Group	Jobs	Value Added	Employee Compensation	Taxes
Power	3,488	\$364,807,121	\$175,027,594	\$62,758,448
Buildings	3,478	\$331,575,347	\$177,981,313	\$17,662,120
Transportation	3,691	\$382,231,931	\$212,939,309	\$35,053,869
Industrial	1,571	\$142,975,466	\$79,126,171	\$6,065,972
Agriculture & Forestry	8,165	\$422,944,939	\$263,979,133	\$25,624,448
EJ & LC	2,678	\$265,300,923	\$144,222,244	\$31,015,259
Total	23,071	\$1,909,835,727	\$1,053,275,765	\$178,180,115

¹⁹ Paper Manufacturing (NAICS 322) employment is 21,022. Data as of 2021Q4, from JobsEQ.

²⁰ Spectator Sports (NAICS 7112) GSP is \$1.76 billion. Data as of 2020, from JobsEQ.

The 23,100 annual jobs are spread across 5 industry categories: construction, professional services, manufacturing, other supply chain, and induced.²¹ The Agriculture industry makes up about one-quarter (25%) of total employment impacts, due to the significant jobs impacts found in the Agriculture & Forestry policy group. Other supply chain follows, representing 14% of total jobs impacts, while construction jobs represent 13%. Professional services represents 7% of jobs supported and manufacturing makes up 2%. Jobs found in induced industries, or throughout the general economy, represent the remaining 38% (

Figure 33). The Buildings policy group accounts for 45% the construction jobs created by these policies. The Power policy group accounts for about 34% of professional services and 42% of manufacturing jobs supported from climate policies. The Transportation policy group accounts for more than half (56%) of other supply chain jobs (

²¹ Other Supply Chain includes employment in the Retail and Wholesale Trade, Transportation, and Utilities industries.

Figure 34).

FIGURE 33. TOTAL JOBS BY INDUSTRY, PENNSYLVANIA

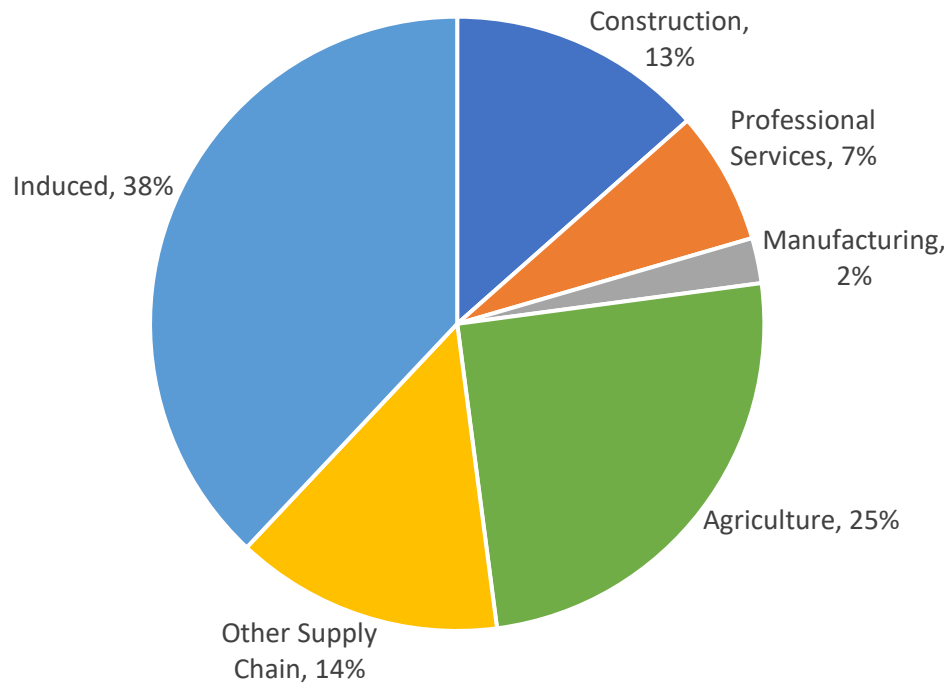
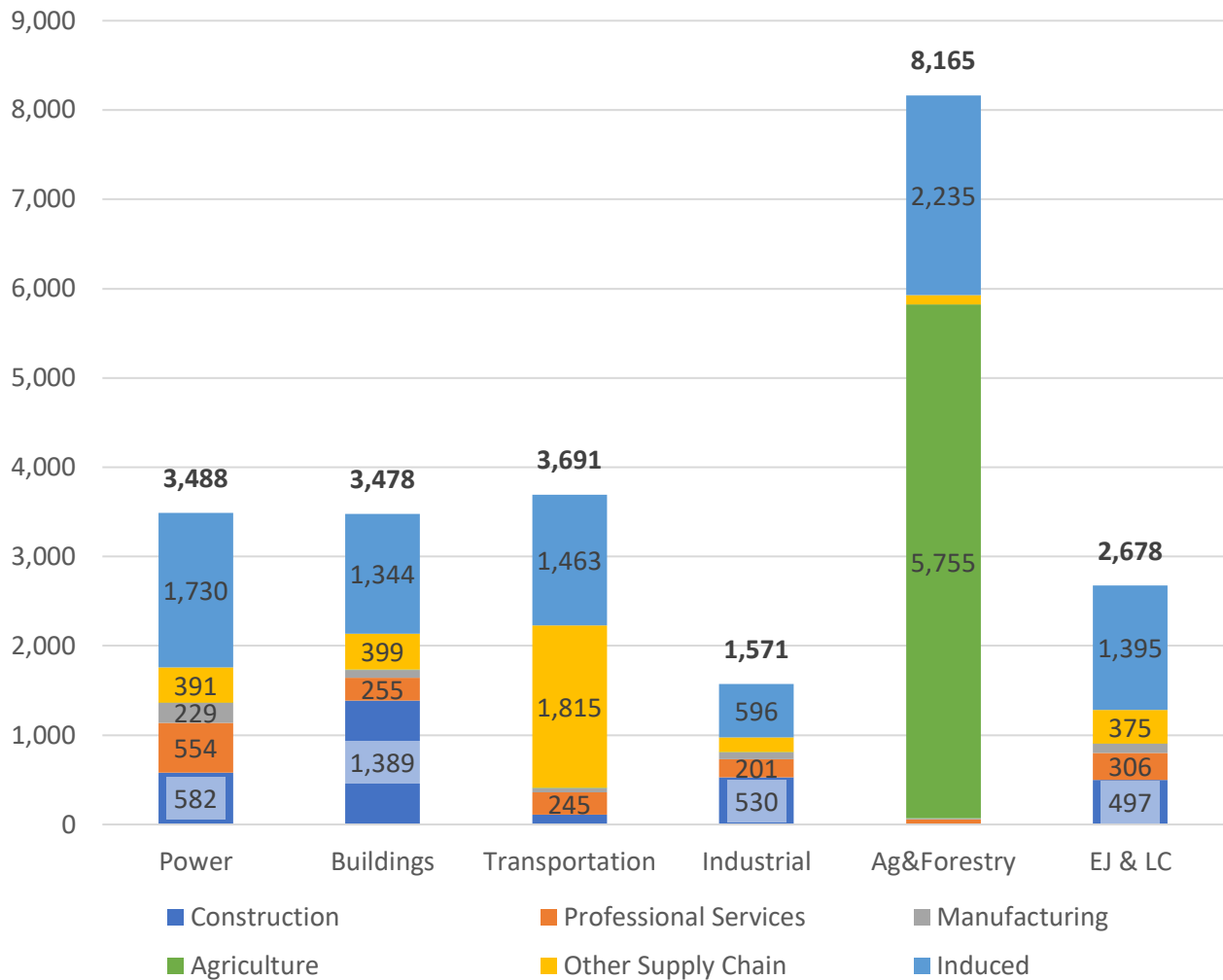


FIGURE 34. INDUSTRY JOBS BY POLICY GROUP, PENNSYLVANIA



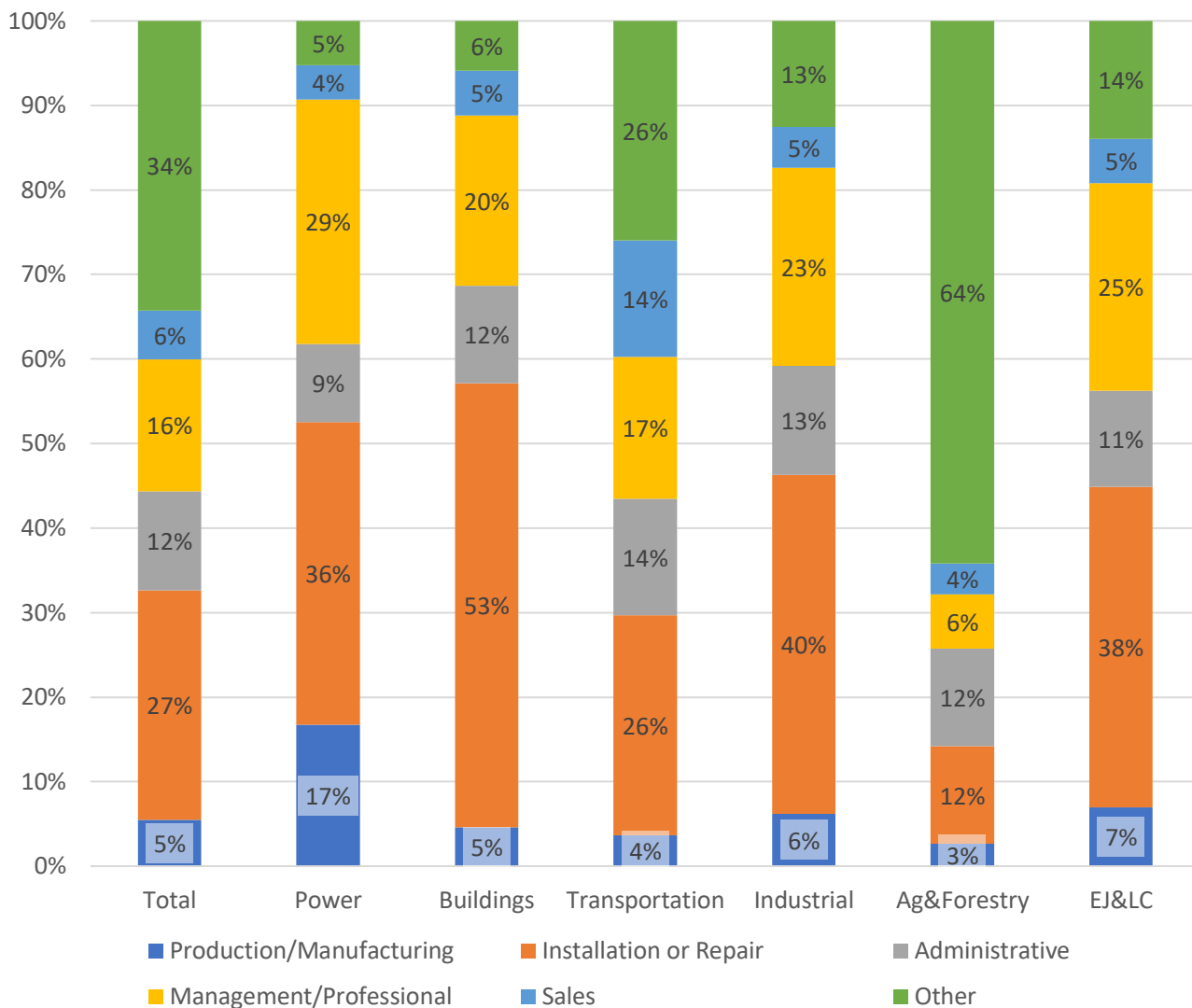
Among the direct and indirect jobs generated by the policies, or jobs created in the construction, professional services, manufacturing, agriculture, and other supply chain industries, job impacts are analyzed across 6 occupational categories: production/manufacturing, installation or repair, administrative, management/professional, sales, and other.²² These occupational groups are defined by Standard Occupational Codes (SOCs), more detail on these definitions can be found in the

²² The “other” occupational group includes employment in farming, fishing, and forestry occupations, transportation and material moving occupations, and community and social service occupations, among others.

Occupational Group **Definitions** section in Appendix B: Modeling Methodology. We omit induced impacts in the occupational analysis to best highlight jobs most directly related to the climate policies.

The other occupational group makes up about 34% of total employment impacts in Pennsylvania, due to the significant jobs impacts found in the Agriculture & Forestry policy group. Installation or repair follows, representing 27% of total jobs impacts, while management/professional represents 16%. Jobs found in administrative roles make up 12%, while sales and production/manufacturing occupations make up 6% and 5%, respectively. The Buildings policy group has the largest share of installation or repair jobs of all policy groups, with more than half (53%) of direct and indirect jobs falling under this category. The Power policy group has the largest share of both production/manufacturing and management/profession jobs across the modeled policy groups (Figure 35Figure 7).

FIGURE 35. OCCUPATIONAL DISTRIBUTION BY POLICY GROUP AND TOTAL, PENNSYLVANIA



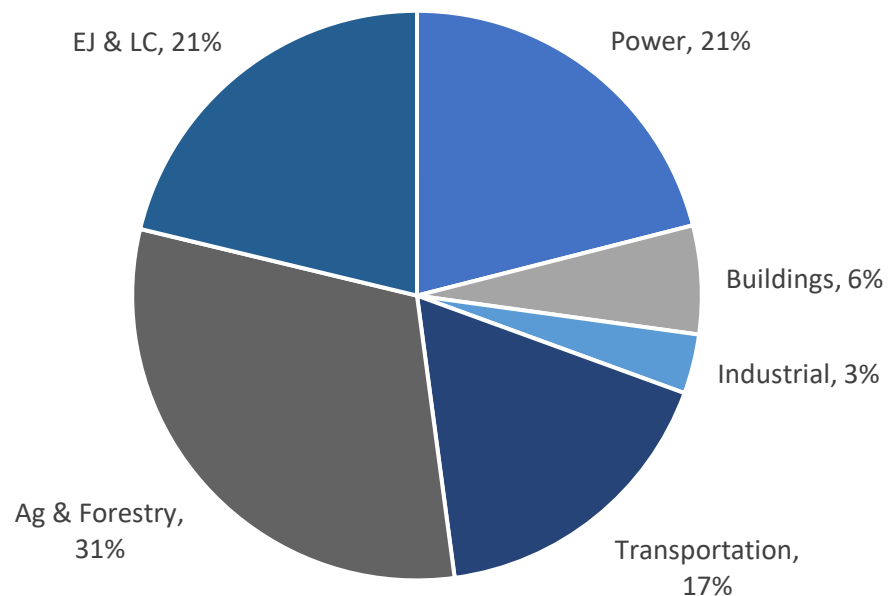
West Virginia

The climate policies included in the analysis invests more than \$3.4 billion in federal funds across the six policy groups in West Virginia. With the addition of leverage funds, the total investment into the West Virginia economy across the ten-year study period comes to more than \$3.6 billion, or \$364 million annually (Figure 36).

FIGURE 36. TOTAL INVESTMENT BY POLICY GROUP, WEST VIRGINIA

Policy Group	Federal Investment (\$millions)	Total Investment (\$millions)
Power	\$703	\$766
Buildings	\$218	\$224
Industrial	\$123	\$123
Transportation	\$534	\$631
Agriculture & Forestry	\$1,125	\$1,125
EJ & LC	\$739	\$774
Total Investment	\$3,442	\$3,643

FIGURE 37. TOTAL INVESTMENT DISTRIBUTION BY POLICY GROUP, WEST VIRGINIA



As a result of the climate policies included in this analysis, West Virginia sees 7,300 annual jobs supported for 10 years, 5,400 (73%) of which are jobs sustained through direct climate investments and supply chain activities, while 2,000 (27%) jobs are induced through workers spending their earnings in the local economy. This total impact is roughly equivalent to the number of people employed by religious organizations in West Virginia.²³ Nearly \$430.1 million is generated in value added each year for 10 years from these policies, with \$260.7 million in employee compensation and \$45.1 million in local, state, and federal taxes annually for 10 years (Figure 38). The \$430.1 million in annual value added is nearly equivalent to the Gross State Product (GSP) generated by West Virginia's Rail Transportation industry.²⁴

Of these 7,300 annual jobs supported, the Agriculture & Forestry policy group generates 59% of the state's employment impacts, with more than 4,300 jobs supported annually. The EJ & LC and Power policy groups follow, generating 14% and 11% of the state's employment impacts, respectively. The remaining 16% of jobs are found in the Transportation, Buildings, and Industrial policy groups (Figure 39).

FIGURE 38. ANNUAL IMPACTS BY IMPACT TYPE, WEST VIRGINIA, ALL POLICY GROUPS

	Jobs	Value Added	Employee Compensation	Taxes
Direct	4,577	\$204,991,760	\$146,285,897	Local \$10,422,114
Indirect	800	\$71,908,999	\$35,699,162	State \$11,225,247
Induced	1,970	\$153,235,699	\$78,674,966	Federal \$23,427,191
Total	7,348	\$430,136,458	\$260,660,025	Total \$45,074,552

FIGURE 39. TOTAL ANNUAL IMPACTS PER POLICY GROUP, WEST VIRGINIA

Policy group	Jobs	Value Added	Employee Compensation	Taxes
Power	824	\$72,621,318	\$38,007,739	\$11,014,390
Buildings	314	\$25,881,696	\$14,511,537	\$1,679,145
Transportation	647	\$66,526,219	\$32,469,578	\$9,913,060
Industrial	198	\$15,340,335	\$8,798,363	\$698,143
Agriculture & Forestry	4,332	\$163,917,651	\$117,870,565	\$12,301,449
EJ & LC	1,033	\$85,849,238	\$49,002,244	\$9,468,365
Total	7,348	\$430,136,458	\$260,660,025	\$45,074,552

²³ Religious Organizations (NAICS 8131) employment is 7,305. Data as of 2021Q4, from JobsEQ.

²⁴ Rail Transportation (NAICS 482) GSP is \$433.9 million. Data as of 2020, from JobsEQ.

The 7,300 annual jobs are spread across 6 industry categories: construction, professional services, manufacturing, agriculture, other supply chain, and induced.²⁵ The agriculture industry makes up 47% of total employment impacts, due to the significant jobs impacts found in the Agriculture & Forestry policy group. Other supply chain and construction follow, representing 11% and 9% of total jobs impacts, respectively. Professional services represents 6% and manufacturing makes up 1%. Jobs found in induced industries, or throughout the general economy, represent the remaining 27% (

Figure 40). The EJ & LC policy group accounts for 36% of the construction jobs, while Power and Buildings policy groups combined account for 46% of construction jobs. The Power policy group accounts for more than half (54%) of manufacturing jobs and 40% of professional services jobs supported from climate policies. The Transportation policy group accounts for 47% of other supply chain jobs (

²⁵ Other Supply Chain includes employment in the Retail and Wholesale Trade, Transportation, and Utilities industries.

Figure 41).

FIGURE 40. TOTAL JOBS BY INDUSTRY, WEST VIRGINIA

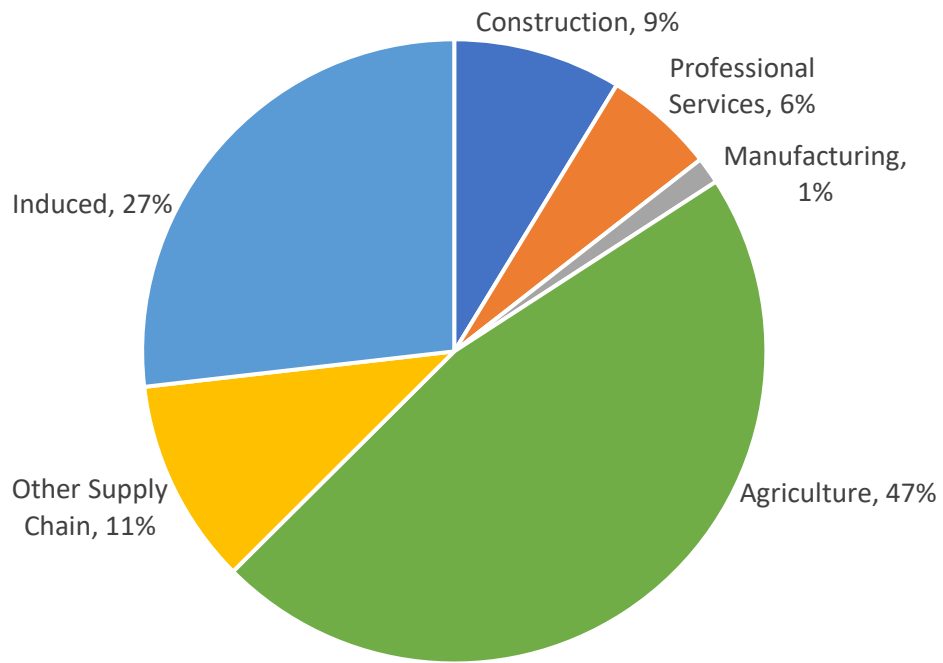
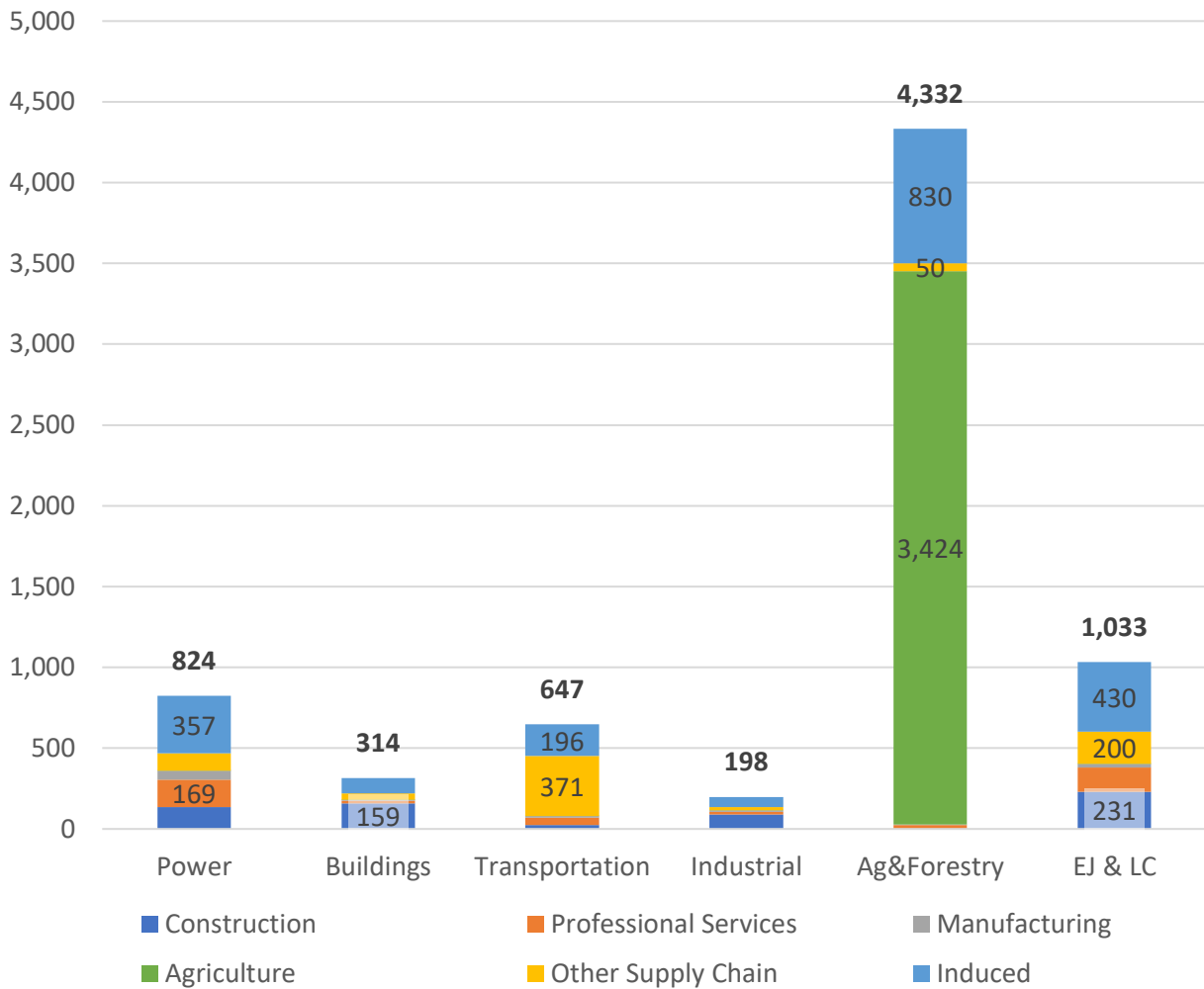


FIGURE 41. INDUSTRY JOBS BY POLICY GROUP, WEST VIRGINIA



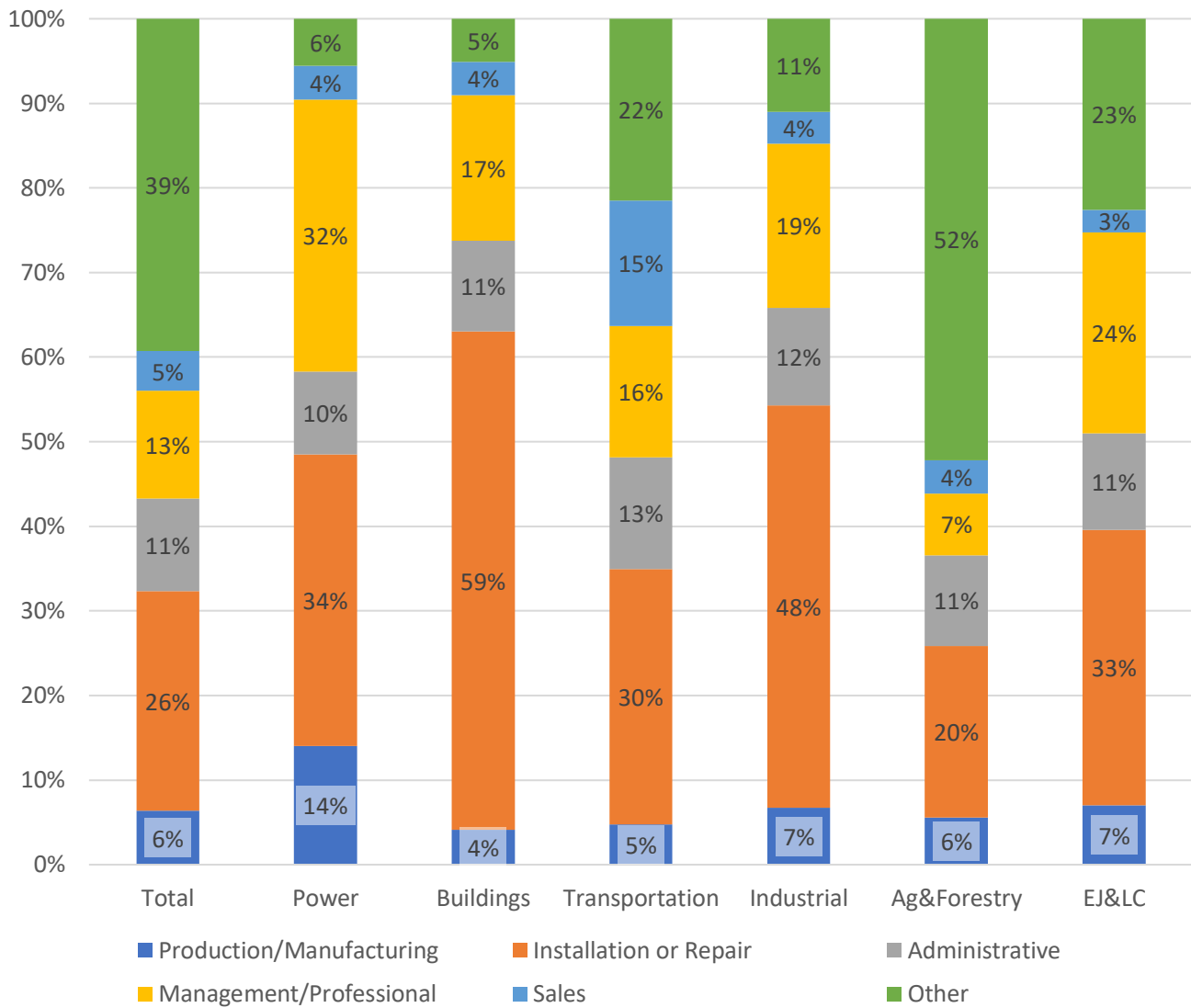
Among the direct and indirect jobs generated by the policies, or jobs created in the construction, professional services, manufacturing, agriculture, and other supply chain industries, job impacts are analyzed across 6 occupational categories: production/manufacturing, installation or repair, administrative, management/professional, sales, and other.²⁶ These occupational groups are defined by Standard Occupational Codes (SOCs), more detail on these definitions can be found in the

²⁶ The “other” occupational group includes employment in farming, fishing, and forestry occupations, transportation and material moving occupations, and community and social service occupations, among others.

Occupational Group **Definitions** section in Appendix B: Modeling Methodology. We omit induced impacts in the occupational analysis to best highlight jobs most directly related to the climate policies.

The other occupational group makes up about 39% of total employment impacts in West Virginia, due to the significant jobs impacts found in the Agriculture & Forestry policy group. Installation or repair follows, representing 26% of total jobs impacts. Management/professional represents 13%, while jobs found in administrative roles make up 11%. Jobs in production/manufacturing and sales occupations make up the remaining 6% and 5%, respectively. The Buildings policy group has the largest share of installation or repair jobs of all policy groups, with more than half (59%) of direct and indirect jobs falling under this category. The Power policy group has the largest share of both production/manufacturing and management/profession jobs across the modeled policy groups (Figure 42).

FIGURE 42. OCCUPATIONAL DISTRIBUTION BY POLICY GROUP AND TOTAL, WEST VIRGINIA



Appendix A: Detailed Policy Group Output Tables

Arizona

POWER ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	812	\$96,360,737	\$46,105,054	Local	\$18,622,312
Indirect	397	\$89,534,207	\$40,970,553	State	\$15,329,620
Induced	1,059	\$63,284,461	\$30,874,512	Federal	\$8,166,750
Total	2,268	\$249,179,405	\$117,950,118	Total	\$42,118,681

BUILDINGS ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	945	\$75,123,862	\$45,161,752	Local	\$2,345,848
Indirect	479	\$47,792,382	\$25,487,488	State	\$2,862,548
Induced	814	\$75,954,989	\$37,391,914	Federal	\$7,826,147
Total	2,239	\$198,871,233	\$108,041,155	Total	\$13,034,543

TRANSPORTATION ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	490	\$63,526,242	\$32,876,694	Local	\$3,364,529
Indirect	288	\$27,805,012	\$14,880,700	State	\$4,109,448
Induced	515	\$48,894,083	\$23,994,141	Federal	\$11,137,081
Total	1,293	\$140,225,337	\$71,751,536	Total	\$18,611,058

INDUSTRIAL ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	148	\$11,819,975	\$7,883,800	Local	\$484,180
Indirect	80	\$9,368,720	\$4,952,949	State	\$502,902
Induced	137	\$12,659,842	\$6,246,960	Federal	\$986,240
Total	365	\$33,848,536	\$19,083,709	Total	\$1,973,322

AGRICULTURE & FORESTRY ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes

Direct	986	\$43,322,912	\$36,633,624	Local	\$1,065,558
Indirect	98	\$8,510,573	\$4,967,900	State	\$1,341,137
Induced	467	\$46,859,454	\$23,228,713	Federal	\$4,004,094
Total	1,552	\$98,692,939	\$64,830,238	Total	\$6,410,789

EJ & LC ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	381	\$40,719,128	\$21,337,646	Local	\$5,328,657
Indirect	200	\$29,509,767	\$14,453,447	State	\$5,060,010
Induced	614	\$52,683,104	\$27,348,820	Federal	\$6,903,830
Total	1,195	\$122,911,999	\$63,139,913	Total	\$17,292,497

Nevada

POWER ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	860	\$98,760,316	\$53,323,557	Local	\$12,231,811
Indirect	417	\$65,941,335	\$30,130,567	State	\$10,467,010
Induced	868	\$57,487,014	\$24,816,147	Federal	\$8,192,359
Total	2,146	\$222,188,665	\$108,270,271	Total	\$30,891,180

BUILDINGS ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	244	\$20,909,186	\$14,013,974	Local	\$656,174
Indirect	97	\$10,188,118	\$5,108,359	State	\$808,129
Induced	158	\$16,003,586	\$6,940,591	Federal	\$2,256,357
Total	500	\$47,100,889	\$26,062,924	Total	\$3,720,661

TRANSPORTATION ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	212	\$35,082,399	\$15,457,302	Local	\$1,808,658
Indirect	117	\$11,791,466	\$5,735,055	State	\$2,208,949
Induced	184	\$18,961,570	\$8,203,908	Federal	\$5,985,575
Total	513	\$65,835,435	\$29,396,265	Total	\$10,003,182

INDUSTRIAL ANNUAL IMPACTS					
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	Jobs	Value Added	Employee Compensation	Taxes
Direct	55	\$4,786,664	\$3,330,249	Local \$249,160
Indirect	26	\$3,064,392	\$1,525,746	State \$248,405
Induced	40	\$3,767,103	\$1,636,397	Federal \$428,914
Total	121	\$11,618,159	\$6,492,392	Total \$926,479

AGRICULTURE & FORESTRY ANNUAL IMPACTS				
	Jobs	Value Added	Employee Compensation	Taxes
Direct	2,791	\$58,450,534	\$60,976,095	Local \$1,784,504
Indirect	132	\$14,084,029	\$7,164,910	State \$2,258,007
Induced	480	\$52,270,268	\$22,814,604	Federal \$6,823,722
Total	3,403	\$124,804,830	\$90,955,609	Total \$10,866,234

EJ & LC ANNUAL IMPACTS				
	Jobs	Value Added	Employee Compensation	Taxes
Direct	239	\$27,710,293	\$14,934,028	Local \$3,233,148
Indirect	115	\$16,168,711	\$7,527,186	State \$3,100,443
Induced	341	\$29,074,043	\$14,215,100	Federal \$4,339,578
Total	695	\$72,953,047	\$36,676,313	Total \$10,673,169

New Hampshire

POWER ANNUAL IMPACTS				
	Jobs	Value Added	Employee Compensation	Taxes
Direct	495	\$38,941,768	\$23,184,359	Local \$10,376,765
Indirect	262	\$40,555,800	\$19,078,040	State \$8,627,160
Induced	698	\$37,657,332	\$18,312,427	Federal \$5,230,773
Total	1,454	\$117,154,900	\$60,574,826	Total \$24,234,699

BUILDINGS ANNUAL IMPACTS				
	Jobs	Value Added	Employee Compensation	Taxes
Direct	323	\$18,458,748	\$12,018,226	Local \$624,249
Indirect	150	\$15,326,491	\$8,501,875	State \$760,269
Induced	260	\$25,961,703	\$12,699,823	Federal \$2,069,217
Total	733	\$59,746,941	\$33,219,924	Total \$3,453,735

TRANSPORTATION ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	218	\$15,170,702	\$16,488,856	Local	\$424,468
Indirect	134	\$15,279,411	\$7,755,016	State	\$454,385
Induced	212	\$21,549,605	\$10,486,054	Federal	\$841,291
Total	564	\$51,999,717	\$34,729,927	Total	\$1,720,144

INDUSTRIAL ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	77	\$6,364,230	\$3,887,803	Local	\$235,400
Indirect	29	\$4,075,983	\$2,031,965	State	\$237,318
Induced	60	\$6,509,808	\$3,054,282	Federal	\$425,993
Total	165	\$16,950,020	\$8,974,050	Total	\$898,710

AGRICULTURE & FORESTRY ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	588	\$23,155,202	\$9,815,189	Local	\$530,546
Indirect	63	\$4,805,086	\$2,165,708	State	\$655,712
Induced	270	\$28,912,474	\$14,273,888	Federal	\$1,875,063
Total	921	\$56,872,762	\$26,254,784	Total	\$3,061,321

EJ & LC ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	169	\$12,438,345	\$8,226,956	Local	\$2,487,712
Indirect	84	\$11,211,356	\$5,527,323	State	\$2,301,866
Induced	295	\$24,294,589	\$12,679,225	Federal	\$2,787,655
Total	549	\$47,944,290	\$26,433,505	Total	\$7,577,233

Pennsylvania

POWER ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	1,141	\$144,359,512	\$68,228,172	Local	\$27,110,976
Indirect	617	\$121,654,959	\$55,200,155	State	\$22,474,685
Induced	1,730	\$98,792,650	\$51,599,267	Federal	\$13,172,787
Total	3,488	\$364,807,121	\$175,027,594	Total	\$62,758,448

BUILDINGS ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	1,462	\$127,933,484	\$71,365,432	Local	\$3,279,322
Indirect	672	\$76,638,700	\$39,800,520	State	\$3,946,024
Induced	1,344	\$127,003,163	\$66,815,361	Federal	\$10,436,774
Total	3,478	\$331,575,347	\$177,981,313	Total	\$17,662,120

TRANSPORTATION ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	1,429	\$141,247,468	\$90,937,013	Local	\$6,672,469
Indirect	799	\$100,215,140	\$48,227,358	State	\$7,960,475
Induced	1,463	\$140,769,323	\$73,774,938	Federal	\$20,420,924
Total	3,691	\$382,231,931	\$212,939,309	Total	\$35,053,869

INDUSTRIAL ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	650	\$48,868,183	\$32,068,758	Local	\$1,253,730
Indirect	325	\$39,029,544	\$20,026,720	State	\$1,418,870
Induced	596	\$55,077,740	\$27,030,693	Federal	\$3,393,373
Total	1,571	\$142,975,466	\$79,126,171	Total	\$6,065,972

AGRICULTURE & FORESTRY ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	5,551	\$161,619,911	\$125,323,597	Local	\$4,407,692
Indirect	380	\$34,652,000	\$18,394,974	State	\$5,465,210
Induced	2,235	\$226,673,028	\$120,260,562	Federal	\$15,751,546
Total	8,165	\$422,944,939	\$263,979,133	Total	\$25,624,448

EJ & LC ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	865	\$82,089,527	\$48,032,006	Local	\$8,531,790
Indirect	418	\$58,400,156	\$28,669,696	State	\$8,885,187
Induced	1,395	\$124,811,240	\$67,520,543	Federal	\$13,598,282
Total	2,678	\$265,300,923	\$144,222,244	Total	\$31,015,259

West Virginia

POWER ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	304	\$34,460,670	\$19,503,107	Local	\$4,014,726
Indirect	163	\$19,526,960	\$9,098,631	State	\$3,531,555
Induced	357	\$18,633,688	\$9,406,001	Federal	\$3,468,109
Total	824	\$72,621,318	\$38,007,739	Total	\$11,014,390

BUILDINGS ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	162	\$12,977,374	\$8,068,385	Local	\$287,839
Indirect	57	\$5,400,826	\$2,648,050	State	\$359,172
Induced	95	\$7,503,496	\$3,795,101	Federal	\$1,032,133
Total	314	\$25,881,696	\$14,511,537	Total	\$1,679,145

TRANSPORTATION ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	305	\$36,473,539	\$17,792,886	Local	\$1,776,155
Indirect	146	\$14,257,264	\$6,708,434	State	\$2,178,399
Induced	196	\$15,795,415	\$7,968,258	Federal	\$5,958,507
Total	647	\$66,526,219	\$32,469,578	Total	\$9,913,060

INDUSTRIAL ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	100	\$6,480,063	\$4,218,541	Local	\$148,675
Indirect	37	\$3,827,408	\$1,999,147	State	\$165,839
Induced	62	\$5,032,864	\$2,580,676	Federal	\$383,629
Total	198	\$15,340,335	\$8,798,363	Total	\$698,143

AGRICULTURE & FORESTRY ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	3,266	\$80,529,356	\$74,770,034	Local	\$1,882,091
Indirect	236	\$12,868,524	\$7,163,633	State	\$2,459,032
Induced	830	\$70,519,772	\$35,936,899	Federal	\$7,960,326
Total	4,332	\$163,917,651	\$117,870,565	Total	\$12,301,449

EJ & LC ANNUAL IMPACTS					
	Jobs	Value Added	Employee Compensation		Taxes
Direct	442	\$34,070,758	\$21,932,943	Local	\$2,312,629
Indirect	162	\$16,028,017	\$8,081,269	State	\$2,531,250
Induced	430	\$35,750,463	\$18,988,032	Federal	\$4,624,487
Total	1,033	\$85,849,238	\$49,002,244	Total	\$9,468,365

Appendix B: Modeling Methodology

Policies Modeled

This section details the federal and total investment for each investment vehicle, each policy group, and overall, as well as the specific legislation each investment vehicle is derived from.

TOTAL INPUTS BY POLICY GROUP

Federal and total investments for each policy group are detailed in the table below.

Policy Group	Federal Investment (\$billions)	Total Investment (\$billions)
Power	\$137.85	\$141.47
Buildings	\$70.17	\$70.81
Industrial	\$29.80	\$29.80
Transportation	\$45.60	\$49.42
Agriculture & Forestry	\$59.90	\$59.90
EJ & LC	\$68.92	\$70.24
Total Investment	\$412.25	\$421.64

POWER POLICY GROUP INPUTS

Investment vehicles used in the Power policy group modeling with specific legislation, senate legislation in red.

Investment Vehicle	Legislation
S.45 - PTC Ext	SEC. 136101 / 126101 - Extension and Modification of Credit for Electricity Produced from Certain Renewable Resources
S.48 - ITC Ext	SEC. 136102 / 126102 - Extension and Modification of Energy Credit
ITC Increase	SEC. 136103 / 126103 - Increase in energy credit for solar and wind facilities placed in service in connection with low-income communities
Nuclear Tax Credit	SEC. 136108 / 126108 – Green Energy Publicly Traded Partnerships / Zero-Emission Nuclear Power Production Credit
Transmission ITC	SEC. 136105 / 126105 – Investment Credit for Electric Transmission Property SEC. 30451 / 70151 – Transmission Line and Intertie Incentives
Transmission Investments	SEC. 30452 / 70152 – Grants to Facilitate the Siting of Inter-state Electricity Transmission Lines SEC. 30454 / 70153 – Interregional and Offshore Wind Electricity Transmission Planning, Modeling, and Analysis

Rural Electrification Act	SEC. 12003 - Additional Funding for Electric Loans for Renewable Energy
Rural Electrification USDA	SEC. 12007 – USDA Assistance for Rural Electric Cooperatives

Federal and total investments for each investment vehicle for the Power policy group are detailed in the table below.

Title	Type	Federal Investment (\$billions)	Private Match	Total Investment (\$billions)
S.45 – PTC Ext	Tax Credit	\$56.51	N/A	\$56.51
S.48 – ITC Ext & Increase	Tax Credit	\$53.61	N/A	\$53.61
Nuclear Tax Credit	Tax Credit	\$0.98	N/A	\$0.98
Transmission ITC	Tax Credit	\$11.28	N/A	\$11.28
Transmission Investments	Grant	\$2.90	100%	\$5.80
Rural Electrification Act	Loans	\$2.88	25%	\$3.60
Rural Electrification USDA	Loans	\$9.70	N/A	\$9.70
Total Power Investment		\$137.85		\$141.47

BUILDINGS POLICY GROUP INPUTS

Investment vehicles used in the Buildings policy group modeling with specific legislation, senate legislation in red.

Investment Vehicle	Legislation
Nonbusiness Energy Property Credit	SEC. 136301 – Extension, Increase, and Modifications of Nonbusiness Energy Property Credit
Residential Energy Efficient Property	SEC. 136302 – Residential Energy Efficient Property
Energy Efficient Commercial Buildings Deduction	SEC. 136303 – Energy Efficient Commercial Buildings Deduction
New Energy Efficient Home Credit	SEC. 136304 – Extension, Increase, and Modifications of New Energy Efficient Home Credit
Home Energy Performance-Based, Whole-House Rebates and Training Grants	SEC. 30411 / 70121 - Home Energy Performance-Based, Whole-House Rebates and Training Grants
High-Efficiency Electric Home Rebate Program	SEC. 30412 / 70122 – High-Efficiency Electric Home Rebate Program.
Critical Facility Modernization	SEC. 30421 / 70131 – Critical Facility Modernization
Assistance for Latest and Zero Building Energy Code Adoption	SEC. 30422 / 70132- Assistance for Latest and Zero Building Energy Code Adoption
Federal Procurement	SEC. 80008 – General Services Administration Procurement and Technology
Assistance to Federal Buildings	SEC. 110020 - Assistance for Federal Buildings

Improving Affordable Housing	SEC. 40006 - Improving Energy Efficiency or Water Efficiency or Climate Resilience of Affordable Housing
Rural Energy for America Program	SEC. 12005 - Rural Energy for America Program

Federal and total investments for each investment vehicle for the Buildings policy group are detailed in the table below.

Title	Type	Federal Investment (\$billions)	Private Match	Total Investment (\$billions)
Nonbusiness Energy Property Credit	Tax Credit	\$17.55	N/A	\$17.55
Residential Energy Efficient Property	Tax Credit	\$24.76	N/A	\$24.76
Energy Efficient Commercial Buildings Deduction	Tax Credit	\$0.63	N/A	\$0.63
New Energy Efficient Home Credit	Tax Credit	\$2.72	N/A	\$2.72
Home Energy Performance-Based, Whole-House Rebates and Training Grants	Cons Rebate	\$5.94	N/A	\$5.94
High-Efficiency Electric Home Rebate Program	Cons Rebate	\$6.25	N/A	\$6.25
Critical Facility Modernization	Grant	\$0.50	N/A	\$0.50
Assistance for Latest and Zero Building Energy Code Adoption	Grant	\$0.30	N/A	\$0.30
Federal Procurement	Grant	\$3.25	N/A	\$3.25
Assistance to Federal Buildings	Grant	\$1.00	N/A	\$1.00
Improving Affordable Housing	Grant	\$6.00	N/A	\$6.00
Rural Energy for America Program	Grant	\$1.28	50%	\$1.91
Total Buildings Investment		\$70.17		\$70.81

TRANSPORTATION POLICY GROUP INPUTS

Investment vehicles used in the Transportation policy group modeling with specific legislation, senate legislation in red.

Investment Vehicle	Legislation
Sustainable Aviation Fuel Credit	SEC. 136203 / 126805 – Sustainable Aviation Fuel Credit / Clean Fuel Production Credit
PEV Individual Tax Credit	SEC. 136401 / 126401 – Refundable New Qualified Plug-In Electric Drive Motor Vehicle Credit for Individuals
Commercial EV Tax Credit	SEC. 136403 / SEC. 126403 – Qualified Commercial Electric Vehicles
Fuel Cell Tax Credit	SEC. 136404 / 126404 – Qualified Fuel Cell Motor Vehicles
ZEV Infrastructure	SEC. 30431 - Zero-Emissions Vehicle Infrastructure Grants
Aviation Tech Program	SEC. 110007 / SEC 81103– Alternative Fuel and Low-Emission Aviation Technology Program
Diesel Emissions	SEC. 30105 / SEC. 30105– Diesel Emissions Reductions
Federal Procurement	SEC. 80001 – General Services Administration Clean Fleets

Clean Heavy Duty Vehicles	SEC. 30101 / 30101 – Clean Heavy-Duty Vehicles
High Speed Rail	SEC. 110006 – Passenger Rail Improvement, Modernization, and Emissions Reduction Grants
USPS Clean Vehicle Fleet and Facility Maintenance	SEC. 80003 - United States Postal Service; Clean Vehicle Fleet and Facility Maintenance
Biofuel Infrastructure	SEC. 12006 - Biofuel Infrastructure and Agriculture Product Market Expansion
Community Climate Incentive Grants	SEC. 110002 - Community Climate Incentive Grants

Federal and total investments for each investment vehicle for the Transportation policy group are detailed in the table below.

Title	Type	Federal Investment (\$billions)	Private Match	Total Investment (\$billions)
Sustainable Aviation Fuel Credit	Tax Credit	\$0.15	N/A	\$0.15
PEV Individual Tax Credit	Tax Credit	\$9.61	21%	\$11.67
Commercial EV Tax Credit	Tax Credit	\$4.76	21%	\$5.78
Fuel Cell Tax Credit	Tax Credit	\$0.04	21%	\$0.05
ZEV Infrastructure	Grant	\$1.00	N/A	\$1.00
Aviation Tech Program	Grant	\$0.03	N/A	\$0.03
Diesel Emissions	Grant	\$0.06	N/A	\$0.06
Federal Procurement	Grant	\$3.00	N/A	\$3.00
Clean Heavy Duty Vehicles	Grant	\$5.00	N/A	\$5.00
High Speed Rail	Grant	\$10.00	100%	\$20.00
USPS Clean Vehicles	Grant	\$7.00	N/A	\$7.00
Biofuel Infrastructure	Grant	\$0.96	75%	\$1.68
Community Climate Incentive Grants	Grant	\$4.00	N/A	\$4.00
Total Transport Investment		\$45.60		\$49.42

INDUSTRIAL POLICY GROUP INPUTS

Investment vehicles used in the Industrial policy group modeling with specific legislation, senate legislation in red.

Investment Vehicle	Legislation
Advanced Energy Project	SEC. 136501 – Extension of the Advanced Energy Project Credit
Advanced Manufacturing Production	SEC. 136504 / 126504 – Advanced Manufacturing Production Credit

Zero Emission Facility	SEC. 136106 / 126106 – Zero Emission Facility Credit / Extension and Modification of Credit for Carbon Oxide Sequestration
Clean Hydrogen	SEC. 136204 / 126204 – Clean Hydrogen
Funding for DOE Loan Programs	SEC. 30441 / 70141 - Funding for DOE Loan Programs
Advanced Technology Vehicle Manufacturing	SEC. 30442 / 70142 - Advanced Technology Vehicle Manufacturing
Domestic Manufacturing Conversion Grants	SEC. 30443 / 70143 - Domestic Manufacturing Conversion Grants
Advanced Industrial Facilities Deployment Program	SEC. 30471 / 70161 - Advanced Industrial Facilities Deployment Program

Federal and total investments for each investment vehicle for the Industrial policy group are detailed in the table below.

Title	Type	Federal Investment (\$billions)	Private Match	Total Investment (\$billions)
Advanced Energy Project	Tax Credit	\$7.65	N/A	\$7.65
Advanced Manufacturing Production	Tax Credit	\$3.52	N/A	\$3.52
Zero Emission Facility	Tax Credit	\$2.13	N/A	\$2.13
Clean Hydrogen	Tax Credit	\$4.95	N/A	\$4.95
Funding for DOE Loan Programs	Loan	\$3.35	N/A	\$3.35
Advanced Technology Vehicle Manufacturing	Grant	\$0.92	N/A	\$0.92
Domestic Manufacturing Conversion Grants	Grant	\$3.48	N/A	\$3.48
Advanced Industrial Facilities Deployment Program	Grant	\$3.81	N/A	\$3.81
Total Industrial Investment		\$29.80		\$29.80

AGRICULTURE & FORESTRY POLICY GROUP INPUTS

Investment vehicles used in the Agriculture & Forestry policy group modeling with specific legislation.

Investment Vehicle	Legislation
Soil Conservation Assistance	SEC. 15001 Soil Conservation Assistance
Agriculture Conservation Assistance	SEC. 15002 Agriculture Conservation Assistance
Conservation Technical Assistance	SEC. 15003 Conservation Technical Assistance
NFS Restoration & Fuels Reduction Projects	SEC. 11001 - NFS Restoration & Fuels Reduction Projects
Non-Federal Land Forest Restoration & Research	SEC. 11002 - Non-Federal Land Forest Restoration & Research
State and Private Forestry Conservation Programs	SEC. 11003 - State and Private Forestry Conservation Programs

Grassland Restoration Program

SEC. 70610 - Funding for the United States Fish and Wildlife Service for Grassland Restoration

Federal and total investments for each investment vehicle for the Agriculture & Forestry policy group are detailed in the table below.

Title	Type	Federal Investment (\$billions)	Private Match	Total Investment (\$billions)
Soil Conservation Assistance	Grant	\$5.05	N/A	\$5.05
Agriculture Conservation Assistance	Grant	\$27.00	N/A	\$27.00
Conservation Technical Assistance	Grant	\$3.15	N/A	\$3.15
NFS Restoration & Fuels Reduction Projects	Grant	\$15.85	N/A	\$15.85
Non-Federal Land Forest Restoration & Research	Grant	\$4.10	N/A	\$4.10
State and Private Forestry Conservation Programs	Grant	\$4.65	N/A	\$4.65
Grassland Restoration Program	Grant	\$0.10	N/A	\$0.10
Total Transportation Policy group Investment		\$59.90		\$59.90

ENVIRONMENTAL JUSTICE & LOCAL COMMUNITIES POLICY GROUP INPUTS

Investment vehicles used in the Environmental Justice & Local Communities policy group modeling with specific legislation, senate legislation in red.

Investment Vehicle	Legislation
Civilian Climate Corps	SEC. 26002 -Corporation for National and Community Service and the National Service Trust, AmeriCorps State and National (includes Education Corps, Health Futures Corps, Clean Energy Services Corps, Veterans Corps, Opportunity Corps), National Civilian Community Corps, and YouthBuild, DOL SEC. 22009 - Job Corps, DOL SEC. 70702-70705 - Land Corps, DOL
Healthy Ports	SEC. 30102 / 30102 – Grants to Reduce Air Pollution at Ports
Environmental and Climate Justice	SEC. 30204 / 30202 – Grants to community-based organizations and partnerships for community-led environmental and climate justice projects
Energy Community Reinvestment	SEC. 30444 – Energy Community Reinvestment Financing
Economic Development Administration	SEC. 110009 – Economic Development Administration
Greenhouse Gas Reduction Fund	SEC. 30103 – Greenhouse Gas Reduction Fund
Low-Income Solar Credit	SEC. 136103 – Increase in energy credit for solar facilities in low-income communities
Rural Energy Savings Program (RESP)	SEC. 12004 – Rural Energy Savings Program
NOAA Grants	SEC. 70501 – Coastal and Great Lakes Restoration and Technical Assistance

Federal and total investments for each investment vehicle for the Environmental Justice & Local Communities policy group are detailed in the table below.

Title	Type	Federal Investment (\$billions)	Private Match	Total Investment (\$billions)
Civilian Climate Corps	Grant	\$15.04	N/A	\$15.04
Healthy Ports	Grant	\$3.50	N/A	\$3.50
Environmental and Climate Justice	Grant	\$5.00	N/A	\$5.00
Energy Community Reinvestment	Grant	\$5.00	N/A	\$5.00
Economic Development Administration	Grant	\$1.68	79%	\$3.00
Greenhouse Gas Reduction Fund	Loan	\$29.00	N/A	\$29.00
Low-Income Solar Credit ²⁷	Tax Credit	\$0.00	N/A	\$0.00
Rural Energy Savings Program (RESP)	Loan	\$0.20	N/A	\$0.20
NOAA Grants	Grant	\$9.50	N/A	\$9.50
Total Transport Investment		\$68.92		\$70.24

Policy Group Modeling Assumptions

This section details the specific assumptions made in the modeling of each investment vehicle in each policy group. This includes how funds are allocated across states and by activity, match funding, and any other assumptions made in the modeling process.

POWER

- **Renewable Energy Tax Credit**
 - PTC and ITC extensions – estimated future installed capacity of solar and wind with and without extension of PTC and ITC from NREL’s *Impacts of Federal Tax Credit Extensions on Renewable Deployment and Power Sector Emissions* report, adjusting to current baseline capacity using EIA installed capacity data
 - Use installed capacity in solar, wind, other renewables as input into NREL’s JEDI wind model and BW proprietary solar and other renewables employment models
 - State allocation determined by current renewable energy generation employment from the DOE’s US Energy and Employment Report (USEER)
 - No match funding
- **Transmission Tax Credit**
 - Input value of tax credit into industry mix detailed in State allocation determined by percentage of state identified as low income communities as defined by the EPA EJScreen
 - No match spending

²⁷ Investment dollar amount for this provision included in the Power sector S.48 - ITC Ext

- **Rural Energy Savings Program (RESP)**
 - Input value of investment into overall multipliers from Power policy group
 - State allocation determined by current rural renewable energy employment from USEER
 - No match spending
- **NOAA Grants**
 - Input value of grants into IMPLAN industry codes for port operations, environmental and other technical consulting services, and construction of other new nonresidential structures
 - State allocation determined by current port and harbor operations industry employment from BLS (NAICS 488310)
 - No match spending

- Electrification Industry Mix
- State allocation determined by current Transmission & Distribution employment from USEER
- No match funding
- **Transmission Investments**
 - Input into industry mix detailed in State allocation determined by percentage of state identified as low income communities as defined by the EPA EJScreen
 - No match spending
- **Rural Energy Savings Program (RESP)**
 - Input value of investment into overall multipliers from Power policy group
 - State allocation determined by current rural renewable energy employment from USEER
 - No match spending
- **NOAA Grants**
 - Input value of grants into IMPLAN industry codes for port operations, environmental and other technical consulting services, and construction of other new nonresidential structures
 - State allocation determined by current port and harbor operations industry employment from BLS (NAICS 488310)
 - No match spending

- Electrification Industry Mix
- State allocation determined by current Transmission & Distribution employment from USEER
- 100% match funding based on as a conservative counter to the [following FERC citation](#): "Under ARRA, \$3 billion in public and matching private smart grid investments from 2009 to 2012 generated \$6.8 billion in economic output"
- **Rural Electrification**
 - Input into industry mix detailed in State allocation determined by percentage of state identified as low income communities as defined by the EPA EJScreen
 - No match spending
- **Rural Energy Savings Program (RESP)**
 - Input value of investment into overall multipliers from Power policy group
 - State allocation determined by current rural renewable energy employment from USEER
 - No match spending
- **NOAA Grants**
 - Input value of grants into IMPLAN industry codes for port operations, environmental and other technical consulting services, and construction of other new nonresidential structures
 - State allocation determined by current port and harbor operations industry employment from BLS (NAICS 488310)
 - No match spending

- Electrification Industry Mix
- State allocation determined by current rural renewable energy employment from USEER – rural defined by USDA Rural-Urban Continuum Codes (≥ 4 , non-metro)
- 25% match funding on electric loan amount – from Rural Energy for America Program (REAP) language
- **Nuclear Tax Credit**
 - Production tax credit – money flows directly to existing nuclear facilities
 - Input – total value of tax credit, output – jobs supported from value of tax credit generated using IMPLAN nuclear power generation industry code 41
 - No match spending
 - State allocation determined by current nuclear employment from USEER

TRANSPORTATION

- **EV Tax Credits**
 - Input value of tax credit into vehicle retailers IMPLAN code 402
 - State allocation determined by population
 - 21% match spending, calculated by using the midpoint of the range of rebate/credit values (\$8.25k, from range of \$4k-12.5k from the House [ways and means](#)) multiplied on an EV sales multiplier of 2.6% per \$1000 credit. A 2018 study *Effectiveness of electric vehicle incentives in the United States* by Alan Jenn, Katalin Springel, and Anand R. Gopal, linked [here](#), gives evidence that for every \$1,000 of tax credit or consumer rebate, sales of EV increase by 2.6%.
- **EV Infrastructure Investments**
 - Allocate infrastructure grant investments by equipment and labor, and thus by IMPLAN industry code, as determined by the table outlined in Transportation Infrastructure Industry Mix
 - Rail grants input into rail transportation IMPLAN industry code 415
 - Vehicle purchase grants input into vehicle retail sales, federal procurement amount decreased to 65% from the Buy American Act [provision](#)
 - State allocation determined by SEP
 - Match spending of 100% for high speed rail grant based on historical DOT TIFIA leverage, no match spending for all others
- **Sustainable Aviation Fuels Tax Credit**
 - Input total value of tax credit, generate output using fuel wholesalers IMPLAN industry code 399
 - State allocation determined by current clean fuels employment from USEER
 - No match spending

- **Biofuel Infrastructure Investments**
 - Input total value of investment, generate output using fuel retail sales IMPLAN industry code 408 and maintenance and repair construction of nonresidential structures IMPLAN industry code 60
 - State allocation determined by current employment in Fuel Dealers (NAICS 45431), Gasoline Stations (NAICS 447), and Petroleum Bulk Stations and Terminals (42471)
 - No match spending
- **Community Climate Investment Grants**
 - Input total value of grants into IMPLAN industry codes detailed by the above policies
 - State allocation determined by selecting a sample of states likely to receive competitive grants based on a 50% greater reduction in 2010-2019 VMT compared to the national average, data from FHWA. Grant funding is then allocated to each select state by the FHWA FY2021 Apportionment
 - No match spending

BUILDINGS

- **Energy Efficiency Tax Credits**
 - Input into industry mix – Buildings Industry Mix
 - State allocation determined by current energy efficiency employment from USEER
 - No match spending
- **Consumer Rebates**
 - Input into industry mix– Buildings Industry Mix
 - State allocation determined by current energy efficiency employment from USEER
 - No match spending
- **Federal Grants**
 - Input into industry mix– Buildings Industry Mix
 - State allocation determined by current energy efficiency employment from USEER
 - No match funding
- **Federal Procurement**
 - Input into industry mix– Buildings Industry Mix
 - State allocation determined by current energy efficiency employment from USEER
 - No match funding

INDUSTRIAL

- **Manufacturing Tax Credits**

- Input investment tax credit into IMPLAN code 51 construction of new manufacturing facilities

Input production tax credit into manufacturing industry mix determined from NREL solar and wind technical papers outlined in

- Industrial Manufacturing Industry Mix
- State allocation determined by current renewable energy employment from USEER
- No match funding

- **Carbon Capture & Storage Tax Credits**

- Input investment tax credit into IMPLAN code 51 construction of new manufacturing facilities
- No match funding
- State allocation determined by current clean storage employment from USEER

- **Clean Hydrogen Tax Credit**

- From legislative text, clean hydrogen is defined as steam methane reformation (SMR) with carbon capture, electrolysis, and bioenergy with carbon capture (BECCS). Based on previous studies and technological availability over the ten year time frame, we assume production of clean hydrogen to be split 75% BECCS, 5% electrolysis, and 20% SMR.

Input total value of tax credit into hydrogen spending industry mix, detailed in

- Hydrogen Production Industry Mix.
- State allocation determined by current clean fuels employment from USEER
- No match spending
- **RD&D and Emissions Reductions**
 - Input total value of DOE loans into overall multipliers from Power, Buildings, and Transportation policy groups. DOE loan investment split between policy group multipliers determined by total investment in each policy group
 - State allocation of DOE loans determined by current clean energy employment from USEER
 - Input total value of Advanced Technology Vehicle Manufacturing grant and Domestic Manufacturing Conversion Grants into IMPLAN code 51 construction of new manufacturing facilities and IMPLAN code 340 automobile manufacturing.
 - State allocation of Advanced Technology Vehicle Manufacturing grant and Domestic Manufacturing Conversion Grants determined by current vehicle manufacturing employment from USEER
 - Input total value of Advanced Industrial Facilities Deployment Program into Industrial Manufacturing industry mix.
 - State allocation of Advanced Industrial Facilities Deployment Program determined by current clean energy manufacturing employment from USEER
 - No match spending

AGRICULTURE & FORESTRY

- **Agriculture & Forestry**
 - Use national cost estimates to allocate funds dispersed by policies identified in TNC policy data by state and policy group (reforestation/restocking, agroforestry, and fire risk management) derived from WRI's *The Economic Benefit of the New Climate Economy in Rural America* report
 - Input funds into industry mix derived from same report
 - No match funding

ENVIRONMENTAL JUSTICE & LOCAL COMMUNITIES

- **Healthy Ports**
 - Input value of grants into IMPLAN industry codes for port operations and construction of new commercial structures
 - No match funding

- State allocation determined by current port and harbor operations industry employment from BLS (NAICS 488310)
- **Civilian Climate Corps**
 - Input total value of investments into labor income output multipliers to generate induced impacts.
 - State allocation determined by SEP as a proxy for Civilian Climate Corps employment
 - No match spending
- **Environmental and Climate Justice Block Grants**
 - Input 50% of value of grants into IMPLAN industry code 522, Grantmaking, giving, and social advocacy organizations, input other 50% into overall multipliers from Power, Buildings, and Transportation policy groups. Investment split between policy group multipliers determined by total investments in each policy group
 - State allocation determined by current clean energy employment from USEER
 - No match spending
- **Investment in Workers and Communities**
 - Input total value of grants into EDA industry mix detailed in EDA Industry Mix, derived from EDA spending patterns from 2 most recent EDA state allocations from [annual reports](#) 2019-2020
 - State allocation determined by the 2 most recent EDA state allocations from [annual reports](#) 2019-2020
 - 79% match spending determined by the 2 most recent EDA state allocations from [annual reports](#) 2019-2020
- **Greenhouse Gas Reduction Fund**
 - Input total value of investment into overall multipliers from Power, Buildings, and Transportation policy groups. Green bank investment split between policy group multipliers determined by NY Green Bank 2020-21 Impact Report [portfolio summary](#)
 - State allocation determined by current clean energy employment from USEER
 - No match spending
- **Low-Income Solar Credit**
 - Input value of tax credit into overall multipliers from Power policy group
 - State allocation determined by percentage of state identified as low income communities as defined by the EPA EJScreen
 - No match spending
- **Rural Energy Savings Program (RESP)**
 - Input value of investment into overall multipliers from Power policy group

- State allocation determined by current rural renewable energy employment from USEER
- No match spending
- **NOAA Grants**
 - Input value of grants into IMPLAN industry codes for port operations, environmental and other technical consulting services, and construction of other new nonresidential structures
 - State allocation determined by current port and harbor operations industry employment from BLS (NAICS 488310)
 - No match spending

ELECTRIFICATION INDUSTRY MIX

Share	Grouping	IMPLAN	
		Code	Description
10%		47	Electric power transmission and distribution
30%		52	Construction of new power and communication structures
5%		56	Construction of other new nonresidential structures
5%		60	Maintenance and repair construction of nonresidential structures
30%	Manufacturing	302	Broadcast and wireless communications equipment manufacturing
		315	Totalizing fluid meter and counting device manufacturing
		316	Electricity and signal testing instruments manufacturing
		339	All other miscellaneous electrical equipment and component manufacturing
20%	Computer Engineering	428	Software publishers
		436	Data processing, hosting, and related services
		459	Custom computer programming services
		460	Computer systems design services
		461	Other computer related services, including facilities management

TRANSPORTATION INFRASTRUCTURE INDUSTRY MIX

Cost data are derived from *Levelized Cost of Charging Electric Vehicles in the United States*.²⁸

	Equipment	Installation	Total Cost
Residential L1	\$0	\$0	\$0
Residential L2	\$550	\$1,286	\$1,836
Public L2	\$3,500	\$2,500	\$6,000
Public DCFC 50kW	\$38,000	\$20,000	\$58,000
Public DCFC 150kW	\$90,000	\$60,000	\$150,000

Equipment costs are input into IMPLAN code 329 – Power, distribution, and specialty transformer manufacturing. Residential installation is input into Maintenance and repair construction of residential structures (IMPLAN code 61), while commercial installation is input into Maintenance and repair construction of nonresidential structures (IMPLAN code 60).

²⁸ <https://www.sciencedirect.com/science/article/pii/S2542435120302312>

BUILDINGS INDUSTRY MIX

Share	IMPLAN	
	Code	Description
2%	50	Construction of new health care structures
4%	51	Construction of new manufacturing structures
1%	52	Construction of new power and communication structures
1%	53	Construction of new educational and vocational structures
1%	55	Construction of new commercial structures, including farm structures
2%	56	Construction of other new nonresidential structures
6%	57	Construction of new single-family residential structures
4%	58	Construction of new multifamily residential structures
4%	59	Construction of other new residential structures
29%	60	Maintenance and repair construction of nonresidential structures
8%	61	Maintenance and repair construction of residential structures
38%	457	Architectural, engineering, and related services

INDUSTRIAL MANUFACTURING INDUSTRY MIX

Share	Grouping	IMPLAN	
		Code	Description
30%		51	Construction of new manufacturing structures
55%	Manufacturing	193	Other plastics product manufacturing
		236	Fabricated metal structure manufacturing
		307	Semiconductor and related device manufacturing
		329	Power, distribution, and specialty transformer manufacturing
		333	Storage battery manufacturing
		336	Other energy wire manufacturing
15%	Computer Engineering	428	Software publishers
		436	Data processing, hosting, and related services
		459	Custom computer programming services
		460	Computer systems design services
		461	Other computer related services, including facilities management

HYDROGEN PRODUCTION INDUSTRY MIX

Hydrogen Type	IMPLAN Code	IMPLAN Industry
Electrolysis	307	Semiconductor Manufacturing
	236	Fabricated metal structure manufacturing
	336	Other energy wire manufacturing
	52	Construction of new power structures
BECCS	16	Commercial logging
	160	Industrial Gas Manufacturing
	479	Waste management and remediation services
	47	Electric power transmission and distribution
	51	Construction of new manufacturing structures
SMR	457	Architectural, engineering, and related services
	160	Industrial gas manufacturing
	286	Air and gas compressor manufacturing
	242	Metal tank (heavy gauge) manufacturing

EDA INDUSTRY MIX

IMPLAN Industry	IMPLAN Code	Share
Construction of new highways and streets	54	7%
Construction of other new nonresidential structures	55	7%
Maintenance and repair construction of nonresidential structures	60	7%
Employment services	472	14%
Junior colleges, colleges, universities, and professional schools	481	18%
Business and professional associations	523	14%
Labor and civic organizations	524	15%
Other local government enterprises	534	18%

Occupational Group Definitions

SOC	Occupation Description	Occupation Group
11-0000	Management Occupations	Management/ Professional
13-0000	Business and Financial Operations Occupations	
15-0000	Computer and Mathematical Occupations	
17-0000	Architecture and Engineering Occupations	
19-0000	Life, Physical, and Social Science Occupations	
23-0000	Legal Occupations	
21-0000	Community and Social Service Occupations	Other
25-0000	Educational Instruction and Library Occupations	
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	
29-0000	Healthcare Practitioners and Technical Occupations	
31-0000	Healthcare Support Occupations	
33-0000	Protective Service Occupations	
35-0000	Food Preparation and Serving Related Occupations	
39-0000	Personal Care and Service Occupations	
45-0000	Farming, Fishing, and Forestry Occupations	
53-0000	Transportation and Material Moving Occupations	
37-0000	Building and Grounds Cleaning and Maintenance Occupations	Installation or Repair
47-0000	Construction and Extraction Occupations	
49-0000	Installation, Maintenance, and Repair Occupations	
41-0000	Sales and Related Occupations	Sales
43-0000	Office and Administrative Support Occupations	Administrative
51-0000	Production Occupations	Production/ Manufacturing