

# EMPLOYMENT IMPACTS OF NEW U.S. CLEAN ENERGY, MANUFACTURING, AND INFRASTRUCTURE LAWS

## Job Creation, Job Quality, and Demographic Distribution Measures for:

- **BIL**—*Bipartisan Infrastructure Legislation*
- **IRA**—*Inflation Reduction Act*
- **CHIPS**—*Creating Helpful Incentives to Produce Semiconductors*

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# Table of Contents

<b>Source Material and Methodology for Generating Results in Tables</b> .....	1
<b>Summary Tables: Job Creation and Job Quality Estimates for BIL, IRA, and CHIPS</b> .....	8
<b>Employment Impacts of BIL</b> ( <i>Bipartisan Infrastructure Legislation</i> ) .....	12
Job Creation .....	13
Indicators of Job Quality .....	20
Prevalent Job Types .....	23
<b>Employment Impacts of IRA</b> ( <i>Inflation Reduction Act</i> ) .....	34
Job Creation .....	35
Indicators of Job Quality .....	42
Prevalent Job Types .....	44
<b>Employment Impacts of CHIPS</b> ( <i>Creating Helpful Incentives to Produce Semiconductors</i> ) .....	51
Job Creation .....	52
Indicators of Job Quality .....	59
Prevalent Job Types .....	61
<b>Appendix: Individual Programs and Annual Budgetary Allocations by Investment Categories for:</b>	
BIL .....	64
IRA.....	76
CHIPS.....	80
<i>Acknowledgments</i> .....	81
<i>About the Authors</i> .....	81

# Source Material and Methodology for Generating Results in Tables

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## Sources for BIL Estimates

- Text of the Bipartisan Infrastructure Law (BIL)/Infrastructure Investment and Jobs Act (IIJA): <https://www.congress.gov/117/plaws/publ58/PLAW-117publ58.pdf>
- White House Guidebook to the Bipartisan Infrastructure Law: <https://www.whitehouse.gov/build/guidebook/>
- Spreadsheet tabulation of the individual BIL programs modeled in this analysis: [peri.umass.edu/images/spreadsheets/bil-spreadsheet-8-2-23.xlsx](https://peri.umass.edu/images/spreadsheets/bil-spreadsheet-8-2-23.xlsx)

## Sources for IRA Estimates

- Text of the Inflation Reduction Act of 2022: [https://www.democrats.senate.gov/imo/media/doc/inflation\\_reduction\\_act\\_of\\_2022.pdf](https://www.democrats.senate.gov/imo/media/doc/inflation_reduction_act_of_2022.pdf)
- Line-item summary of the IRA programs modeled in this analysis: [https://docs.google.com/document/d/1PpmSTgaA7gQ\\_hX2Sjpf04tsrD1I8p5MRtFrFYb7pzQ/edit](https://docs.google.com/document/d/1PpmSTgaA7gQ_hX2Sjpf04tsrD1I8p5MRtFrFYb7pzQ/edit)
- Spreadsheet tabulation of the IRA programs modeled in this analysis: <https://docs.google.com/spreadsheets/d/1iHbr4Ph3cD7r30Z093pWUMV2P1kLhywAeW2UilVp09U/edit#gid=0>
- Tax credit scores from the Congressional Budget Office and the Joint Committee on Taxation: [https://www.cbo.gov/system/files/2022-08/hr5376\\_IR\\_Act\\_8-3-22.pdf](https://www.cbo.gov/system/files/2022-08/hr5376_IR_Act_8-3-22.pdf)

## Sources for CHIPS Estimates

- Text of the CHIPS and Science Act: <https://www.congress.gov/117/plaws/publ167/PLAW-117publ167.pdf>
- CHIPS Program Fact Sheet: [CHIPS\\_NOFO-1\\_Fact\\_Sheet\\_0.pdf](https://www.nist.gov/files/CHIPS_NOFO-1_Fact_Sheet_0.pdf) (nist.gov)
- Spreadsheet tabulation of the CHIPS programs modeled in this analysis: [peri.umass.edu/images/spreadsheets/budget-figures-for-chips-from-bga-8-2-23.xlsx](https://peri.umass.edu/images/spreadsheets/budget-figures-for-chips-from-bga-8-2-23.xlsx)

## Data Sources

All figures have been estimated on the basis of calculations generated within the 2023 IMPLAN U.S. input/output tables. The IMPLAN U.S. input/output model features 546 industries within the U.S. economy. The data in the model are from 2021.

## Direct, Indirect, and Induced Job Creation

Jobs are created through investments generated by BIL, IRA, and CHIPS, or any other category of spending in the economy, via three channels: direct, indirect, and induced job creation channels. To illustrate these three channels for job creation, consider the impacts of investments in the respective areas of home retrofitting or installing solar panels:

**1. Direct job creation**—the jobs created, for example, by retrofitting buildings to make them more energy efficient or installing solar panels;

**2. Indirect job creation**—the jobs associated with industries that supply intermediate goods for the building retrofits or solar panels, such as glass, steel, and transportation. In other words, indirect effects measure job creation along the clean energy investment supply chain;

**3. Induced job creation**—the expansion of employment that results when people who are paid in the construction or steel industries spend the money they have earned on other products in the economy. These are the multiplier effects within a standard macro-economic model.

## Time Dimension in Measuring Job Creation

Any type of spending activity creates employment over a given amount of time. To understand the impact on jobs of a given spending activity, one must therefore incorporate a time dimension into the measurement of employment creation. For example, a project that creates 100 jobs that last for one year only needs to be distinguished from another project that creates 100 jobs that continue for 10 years each. It is important to keep this time dimension in mind in any assessment of the impact on job creation of any investment activity.

There are two straightforward ways in which one can express such distinctions. One is through measuring “job years.” This measures cumulative job creation over the total number of years that jobs have been created. Thus, an activity that generates 100 jobs for one year would create 100 job years. By contrast, the activity that produces 100 jobs for 10 years would generate 1,000 job years. The other way to report the same figures would be in terms of jobs-per-year. Through this measure, we show the year-to-year breakdown of the overall level of job creation. Thus, with the 10-year project we are using in our example, we could express its effects as creating 100 jobs per year for 10 years.

In the following tables, we report employment creation both in terms of jobs-per-year—i.e. annual job creation—as well as cumulative job years.

## Employment Creation Estimates by Major Economic Sectors

In addition to presenting employment creation for the U.S. economy overall through BIL, IRA, and CHIPS, we also report employment creation estimates for six major U.S. economic sectors. These six sectors are: services, construction, manufacturing, transport/warehouse-

ing, wholesale/retail, and utilities. The services sector includes all service-providing industries aside from transport/warehousing, wholesale/retail, and utilities. Specifically, these other service industries include: information; finance and insurance; real estate and rental and leasing; professional, scientific, and technical services; management of companies and enterprises; administrative and support and waste management and remediation services; educational services; health care and social assistance; arts, entertainment, and recreation; accommodation and food services; and other services (repair and maintenance; personal and laundry services; religious, grant-making, civic, professional, and similar organizations). Note that the level of employment generated within these six sectors through BIL, IRA, and CHIPS does not account for total employment creation through these laws. In fact, the employment levels generated within these six sectors total to about 93 percent of all employment creation. The remaining 7 percent of employment creation is divided among agriculture/forestry/hunting and mining and mining-related activities.

## Details on Employment Estimates

For in-depth discussions of our methodological approach to estimating job creation through investments in clean energy and infrastructure, see:

- Pollin et al. (2009) *How Infrastructure Investments Support the U.S. Economy*, [http://s3-us-west-2.amazonaws.com/aamweb/uploads/research-pdf/Infrastructure\\_2009.pdf](http://s3-us-west-2.amazonaws.com/aamweb/uploads/research-pdf/Infrastructure_2009.pdf);
- Pollin et al. (2014) *Green Growth*, <https://www.americanprogress.org/issues/green/reports/2014/09/18/96404/green-growth/>;
- Pollin et al. (2015) *Global Green Growth*, [https://www.unido.org/sites/default/files/2015-05/GLOBAL\\_GREEN\\_GROWTH\\_REPORT\\_vol1\\_final\\_0.pdf](https://www.unido.org/sites/default/files/2015-05/GLOBAL_GREEN_GROWTH_REPORT_vol1_final_0.pdf).

## ESTIMATING JOB CHARACTERISTICS AND REPRESENTATIVE JOBS IN VARIOUS INVESTMENT AREAS

Our strategy for identifying the types of jobs that would be generated through the various investment activities presented here involves two steps.

The first step is to calculate, for each program (within investment category and law), the level of employment generated in each of 546 industries through our input-output model (IMPLAN) as explained above.

Next, we estimate the characteristics of workers currently employed in jobs with the same industry composition as the new employment created by investment category. Specifically, we weight nationally representative individual worker data with the industry shares of jobs across the individual programs that make up each investment category within each of the three laws, BIL, IRA, and CHIPS. As a result, the weighted sample of workers will have the same industry composition as the employment created by investment category, in terms of both *types* of industries, as well as, *relative shares* of each industry.

For example, we use the industry composition of the jobs created across the 10 individual programs within the “Buildings” investment category of the IRA to weight worker data. That is, we create a weighted sample of workers that have an industry composition that matches that of the jobs we estimate will be added by implementing the programs that make up the “Buildings” investment category of the IRA. We then use summary measures of these workers' characteristics (e.g. median wage, percent women, percent with a high school diploma, and so on) to describe the jobs created by the programs within the "Buildings" investment category of the IRA.

In this way, we use the characteristics of current workers to create a profile of the types of jobs and the types of workers that will likely hold the jobs created by each of the three measures—BIL, IRA, and CHIPS. These characteristics include types of occupations, gender, race/ethnicity, union status, credential requirements, wages, and job-related benefits.

For details on the estimating methodology, see Pollin et al. (2021), *Impact of the Reimagine Appalachia & Clean Energy Transition Program for Pennsylvania*, Appendix 2.<sup>1</sup> Most of the job characteristic estimates in this analysis are based on the most up-to-date micro-data files available from the U.S. Labor Department as of the writing of this report, i.e. the 2022 Basic Monthly data files from the Labor Department’s household survey, the Current Population Survey (CPS). Major exceptions include our estimates of job-related health insurance and retirement benefits. For these figures, we use data from the March supplemental survey of the CPS, the Annual Social and Economic survey (ASEC). Specifically, we pool ASEC data from the survey years of 2016–2019, and 2022. We omit data collected during March 2020 and March 2021 to exclude data affected by the survey administration problems and employment shocks specific to the COVID-19 pandemic.

## **Additional Points of Clarification on Job Quality, Demographics, and Prevalent Job Types**

**1. Current vs. future workforce composition.** The figures we report on, for example, wage levels and percentages of women and people of color employed in the various activities, reflect the current composition of the workforce. Wage rates could rise over time through effective union organizing campaigns. Similarly, the share of women and people of color in the workforce could also rise through organizing and the establishment of effective affirmative action policies. See Pollin et al. (2020) for further discussion on these issues.<sup>2</sup>

**2. All jobs within given industries vs. specific occupational categories.** The figures we report on jobs by industry, such as the services, manufacturing, or construction industry, are distinct from the figures we cite on specific prevalent occupations. For example, the share of construction jobs, as an occupation, that are generated by BIL-related broadband

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1 <https://www.peri.umass.edu/component/k2/item/1394-impacts-of-the-reimagine-appalachia-clean-energy-transition-programs-for-pennsylvania>

2 <https://www.peri.umass.edu/publication/item/1366-employment-creation-and-just-transition-through-a-u-s-zero-carbon-program>

investments is a distinct category from the overall job creation in the construction sector. Jobs generated in the construction sector will include secretaries, accountants, and truck drivers as well as those who perform construction work as their occupation.

## ESTIMATES ON LEVERAGING PUBLIC FUNDS TO EXPAND OVERALL PUBLIC AND PRIVATE SPENDING

### BIL and CHIPS Loan and Loan Guarantee Programs

These are the specific measures in the BIL and CHIPS programs that include loan or loan guarantee financing.

#### BIL

■ *Broadband:*

- Distance Learning, Telemedicine, and Broadband Program: Broadband Loans (corporations eligible for direct loans)
- Distance Learning, Telemedicine, and Broadband Program: Reconnect Program (corporations eligible for combinations of direct loans and grants)

■ *Energy:*

- Transmission Facilitation Program (developers may access funding through loans, direct financing, and capacity purchases)

#### CHIPS

■ *Manufacturing:*

- Manufacturing Incentives

To estimate total spending levels for these programs relative to their public funding allocation, we work from the relevant description in the CHIPS Program Fact Sheet. The Fact Sheet includes the following explanation on leveraging for the relevant CHIPS programs:

There is also no fixed limit on the loans or loan guarantees that a project may receive. Applicants can request loans or loan guarantees to provide debt financing that is not available on comparable terms on the private market, and the specific terms will be based on a project's financing requirements and risk profile. A single application can result in an award that contains more than one type of incentive. The CHIPS Program Office generally expects that the total amount of an award, inclusive of direct funding and the principal amount of a loan or loan guarantee, will not exceed 35% of project capital expenditures.

Based on this expectation within the CHIPS Program Office, we assume that with both the BIL and CHIPS programs listed above that the public funding that is allocated for these programs will constitute 35 percent of total public and private funding. That is, for all of these programs, we multiply the public funding allocation by 2.85 to estimate the total funding level.

## IRA and CHIPS Tax Credit and Related Incentive Programs

For all tax credit and related programs other than loan guarantees in which public spending is designed to incentivize further private spending, we assume that the overall level of public spending will be matched equally by the same level of private spending—i.e. \$2 in total spending for every dollar of public funding (we discuss the IRA loan guarantee programs separately below). For example, we assume that the proposed \$7,500 tax credit per electric vehicle would incentivize another \$7,500 in private spending for electric vehicle purchases, for a total of \$15,000 in overall spending. As listed in the appendix, the IRA includes 28 tax credit and related programs in which we assume that private investment spending will match the public funding levels. CHIPS includes one tax credit program in which we make this same assumption—the Advanced Manufacturing Tax Credit.

The literature on leveraging public sector funds for incentivizing private spending through tax credits and related programs considers a large number of variables and presents a range of estimates as to the likely private spending levels that result from such leveraging programs. We deliberately assume here a relatively low leveraging rate for the relevant IRA programs.<sup>3</sup>

## IRA Loan Guarantee Programs

The Department of Energy’s loan guarantee programs stipulate the loan authority associated with each level of appropriation. This includes a \$250 billion loan authority associated with a \$5 billion appropriation for the larger DOE program and a \$40 billion authority based on a \$3.6 billion appropriation. For the Tribal Loan Guarantee program, we assume the authority is \$3.8 billion based on an appropriation of \$75 million. The program thus assumes an approximate 50-to-1 leveraging ratio.<sup>4</sup> The relevant figures for public and private spending on these are shown in the appendix.

## ESTIMATING DOMESTIC AND IMPORT CONTENT SHARES OF OVERALL BIL, IRA, AND CHIPS SPENDING LEVELS

The IMPLAN model that we use for generating employment estimates offers two options for estimating the relative shares of domestic and import content of any future activity within the U.S. economy, such as expenditures on the BIL, IRA, and CHIPS programs. One option within IMPLAN is to assume that the relative shares of domestic and import spending resulting from these activities will be equal to the existing shares of domestic and im-

3 [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/438763/bis-15-340-relationship-between-public-and-private-investment-in-R-D.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/438763/bis-15-340-relationship-between-public-and-private-investment-in-R-D.pdf); <https://www.cgdev.org/sites/default/files/assessing-leverage-climate-investment-funds.pdf>

4 Discussion of the larger DOE program is at <https://prospect.org/environment/inflation-reduction-bill-uses-public-finance-to-stoke-energy-investment/>. We note that this 50-to-1 leveraging ratio for the DOE loan guarantees is close to the 47-to-1 ratio resulting from the DOE’s 1705 loan guarantee program within the 2009 American Recovery and Reinvestment Act. See Pollin et al. (2014), pp. 260 – 263 for discussion on this earlier loan guarantee program



port spending for each activity. The second option provided within IMPLAN is to assume that all expenditures will take place within the domestic U.S. economy—i.e. that domestic content will rise to 100 percent across-the-board and that import content will be zero.

The employment estimates that we report here are based on taking the midpoint estimates between existing domestic content levels and a 100 percent domestic content scenario. Because the BIL, IRA, and CHIPS programs are explicitly designed to promote domestic activity within the U.S. economy, it is reasonable to assume that domestic content for these programs will be higher than existing domestic content levels. At the same time, it is unrealistic to assume that domestic content will rise across-the-board to 100 percent, especially within the initial years in which these programs are operating.

It is the case, however, that in our previous August 2022 report in which we estimated job creation potential for the IRA only, we did work with the assumption that domestic content for the IRA activities would be 100 percent. As such, the estimates we report here on job creation through the IRA are modestly lower than the estimates we generated in our August 2022 report. Specifically, our overall current estimate for average annual job creation through the IRA is 848,728 jobs. In our August 2022 report, our estimate was an average of 912,159 jobs per year. That is, our current overall average annual job estimate for the IRA has decreased by about 7 percent relative to the August 2022 report.

## TIME HORIZONS FOR BIL, IRA, AND CHIPS PROGRAMS

The time periods during which the various programs of these measures operate vary—both within each measure and between them. For the purposes of our estimates, we work with the simple summary assumption that the BIL and CHIPS programs will operate, on average, for 5 years, and the IRA programs will operate for 10 years. Our assumptions are based on the following:

**BIL:** There are a total nearly 300 individual programs under BIL. According to the White House's *BIL Guidebook*, roughly 30 programs within BIL are mandated to operate for 5 years. Another roughly 50 programs are mandated for 4 years. Roughly 20 programs have fewer than 4-year time frames, and less than 20 are designated for 10 years or longer. The remaining more than 200 programs are designed to continue until "available funds are expended." For our purposes, assuming an average 5-year time span for all BIL programs is a reasonable rough and workable approximation.

**IRA:** According to the IRS, many of the tax credits and other programs of the IRA are meant to remain in place for 10 years: <https://www.irs.gov/inflation-reduction-act-of-2022#:~:text=Since%20the%20Inflation%20Reduction%20Act,as%20quickly%20as%20we%20can.>

**CHIPS:** According to the Congressional Budget Office, the budget authority for more than 90 percent of spending under CHIPS extends for 5 years: [https://www.cbo.gov/system/files?file=2022-07/hr4346\\_chip.pdf](https://www.cbo.gov/system/files?file=2022-07/hr4346_chip.pdf). As a working approximation, we therefore assume that the full set of programs under CHIPS will operate for 5 years.

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## **SUMMARY TABLES:**

### **Job Creation and Job Quality Estimates for BIL, IRA, and CHIPS**

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- **Average Annual Budgets and Job Creation ..... p. 9**
- **Average Annual Job Creation in 6 Major Sectors ..... p. 9**
- **Job Quality Indicators ..... p. 10**
- **Educational Credentials and Race/Gender  
Composition of Workers ..... p. 11**

**SUMMARY TABLE 1.****Average Annual Budgets and Job Creation through BIL, IRA, and CHIPS**

	Average Annual Budgets <i>Public + Estimated Private Spending</i>	Average Annual Job Creation	Total Job Years
BIL	\$170 billion	1.8 million	8.8 million <i>5-year average job years for BIL programs</i>
IRA	\$98 billion	849,000	8.5 million <i>10-year average job years for IRA programs</i>
CHIPS	\$35 billion	279,000	1.4 million <i>5-year average job years for CHIPS programs</i>
<b>TOTALS</b>	<b>\$303 billion</b> <i>Total combined budgets as share of 2022 U.S. GDP = 1.2%</i>	<b>2.9 million</b> <i>Total job creation as share of 2022 U.S. labor force = 1.8%</i>	<b>18.7 million</b>

Note: Figures in table are rounded.

**SUMMARY TABLE 2.****Average Annual Job Creation in 6 Major Sectors through BIL, IRA, and CHIPS**

*Combined job creation within 6 major sectors totals to ~ 93% of total job creation;  
Small shares of total job creation generated in other U.S. sectors*

	BIL	IRA	CHIPS	TOTALS
<b>Total Job Creation</b>	<b>1.8 million</b>	<b>849,000</b>	<b>279,000</b>	<b>2.9 million</b>
Services	808,000	369,000	157,000	1.3 million
Construction	305,000	133,000	29,000	467,000
Manufacturing	140,000	160,000	36,000	336,000
Transport/Warehousing	199,000	44,000	14,000	257,000
Wholesale/Retail	180,000	80,000	27,000	287,000
Utilities	12,000	3,000	400	15,400
Combined job creation in 6 major sectors	1.6 million	789,000	263,000	2.7 million
Combined job creation in 6 major sectors as share of total job creation	88.9%	92.9%	94.4%	93.1%

Notes: Figures in table are rounded. Remaining job creation divided among agriculture/forestry/hunting; mining and mining-related activities.

**SUMMARY TABLE 3.****Job Quality Indicators of Employment Created through BIL, IRA, and CHIPS:  
Direct Jobs Only**

	1. Total U.S. Workforce	2. BIL, IRA, and CHIPS Combined <i>(1.0 million average annual direct jobs)</i>	3. BIL <i>(644,000 average annual direct jobs)</i>	4. IRA <i>(305,000 average annual direct jobs)</i>	5. CHIPS <i>(79,000 average annual direct jobs)</i>
Average (median) hourly wage	\$23.70	\$26.20	\$25.20	\$26.20	\$30.25
Health Insurance coverage, percentage	50.0%	49.0%	46.2%	53.0%	55.6%
Retirement plans, percentage	40.8%	33.7%	31.7%	36.6%	39.4%
Union membership	11.3%	10.9%	12.5%	9.1%	6.9%

Notes: Wages are in 2023 dollars. Health insurance coverage indicates the share of jobs with employer-sponsored health insurance. Retirement plans indicate the share of jobs with employers that offer retirement plans

## SUMMARY TABLE 4.

### Educational Credentials and Race/Gender Composition of Workers in BIL, IRA, CHIPS-Related Employment: Direct Jobs Only

	1. Total U.S. Workforce	2. BIL, IRA, and CHIPS Combined (1.0 million average annual direct jobs)	3. BIL (644,000 average annual direct jobs)	4. IRA (305,000 average annual direct jobs)	5. CHIPS (79,000 average annual direct jobs)
<b>Educational credentials</b>					
Share with less than high school degree	7.8%	11.2%	11.6%	11.1%	8.1%
Share with high school degree only	26.0%	33.1%	34.4%	32.8%	24.0%
Share with some college, no degree	15.4%	14.5%	15.0%	14.0%	12.2%
Share with Associate's degree (occupational/vocational or academic)	10.4%	10.3%	10.1%	11.2%	9.2%
Share with Bachelor's degree or higher	40.5%	30.9%	28.9%	30.8%	46.4%
<b>Racial and gender composition of workforce</b>					
Pct. White, non-Latinx	60.5%	59.7%	58.2%	62.5%	61.2%
Pct. BIPOC (incl. Latinx)	39.5%	40.3%	41.8%	37.5%	38.8%
Pct. Black, non-Latinx	12.7%	9.7%	10.9%	7.7%	7.0%
Pct. Asian, non-Latinx	6.9%	5.9%	5.6%	5.4%	10.3%
Pct. American Indian/Aleut/Eskimo, non-Latinx	0.7%	0.7%	0.7%	0.5%	0.5%
Pct. Other*, non-Latinx	0.9%	0.8%	0.6%	0.9%	1.3%
Pct. Latinx**	18.6%	23.6%	24.3%	23.2%	19.9%
Pct. Men***	53.2%	78.8%	79.6%	79.0%	71.3%
Pct. Women***	46.8%	21.2%	20.4%	21.0%	28.7%

Note: \*\*"Other" includes the following groups: Hawaiian/Pacific Islanders and multi-racial.

\*\* The CPS survey, on which these data are based, asks respondents to identify whether they are "Spanish, Hispanic, or Latino." We use Latinx here because of the growing usage of this ethnic category to identify people with Latin American, as opposed to, Spanish heritage. We use Latinx to be more inclusive across gender categories.

\*\*\*Labor Department data include only binary gender categories.

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## **EMPLOYMENT IMPACTS OF BIL:** *Bipartisan Infrastructure Legislation*

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- **Job Creation** ..... **pp. 13 – 19**  
*Job creation across all industries and 6 major industries*
  
- **Indicators of Job Quality** ..... **pp. 20 – 22**
  
- **Prevalent Job Types** ..... **pp. 23 – 33**

## Job Creation Through Investment Categories: Across All Industries and by 6 Major Industries

### BIL-1.

#### Jobs Created Across *All Industries* by BIL Major Investment Category with Budgetary Figures

BIL Investment Category	All Sectors Jobs/ \$1 Million				Annual Budget	Annual Job Creation				Job Years Created over 5 Years	
	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs		Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs	Total Budget	Total Job Years
1. Roads, Bridges, Ports and Waterways, and Transportation Safety	3.9	3.0	3.7	10.5	\$75.8 billion	292,197	229,186	278,232	799,615	\$379.2 billion	3,998,075
2. Public Transit and Freight Rail	4.4	3.0	3.8	11.2	\$29.9 billion	131,250	90,046	113,948	335,244	\$149.5 billion	1,676,220
3. Energy Production, Safety, and Environmental Remediation	3.0	2.1	3.6	8.7	\$13.8 billion	41,340	29,098	50,122	120,560	\$69.2 billion	602,800
4. Broadband	2.4	2.9	3.1	8.4	\$13.6 billion	32,693	39,504	42,228	114,425	\$68.1 billion	572,125
5. Water	2.9	2.9	3.5	9.3	\$12.9 billion	37,158	37,861	45,581	120,600	\$64.7 billion	603,000
6. Lands and Resilience	6.6	2.7	4.8	14.1	\$7.5 billion	49,233	20,140	35,950	105,323	\$37.5 billion	526,615
7. Alternative Energy and Storage	2.4	2.4	3.4	8.1	\$5.7 billion	13,833	13,632	19,288	46,753	\$28.7 billion	233,765
8. Airports	3.9	3.2	3.9	11.1	\$5.0 billion	19,500	16,000	19,500	55,000	\$25.0 billion	275,000
9. Electric Vehicles, Buses, and Ferries	5.5	2.6	3.6	11.6	\$3.7 billion	20,471	9,570	13,335	43,376	\$18.6 billion	216,880
10. Buildings	4.0	3.8	3.8	11.6	\$1.2 billion	4,660	4,427	4,427	13,514	\$5.8 billion	67,570
11. Economic Development	5.2	2.8	4.4	12.4	\$306.4 million	1,582	847	1,357	3,786	\$1.5 billion	18,930
<b>Totals</b>	--	--	--	--	\$169.6 billion	643,917	490,311	623,968	1,758,196	\$847.8 billion	8,790,980

Note: Due to rounding, direct, indirect, and induced job multipliers, within row, may not sum to "Total" job multiplier. This table includes the jobs created across all industries. The tables that follow (BIL 2–7) present job numbers for the subset of jobs within six major industries.

**BIL-2.****Jobs Created Within *Service Sector ONLY* by BIL Major Investment Category with Budgetary Figures**

BIL Investment Category	Service Sector Jobs/ \$1 Million				Annual Budget	Annual Job Creation				Job Years Created over 5 Years	
	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs		Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs	Total Budget	Total Job Years
1. Roads, Bridges, Ports and Waterways, and Transportation Safety	0.3	1.6	2.6	4.5	\$75.8 billion	24,558	117,540	198,009	340,107	\$379.2 billion	1,700,535
2. Public Transit and Freight Rail	0.2	1.3	2.7	4.2	\$29.9 billion	5,530	38,852	80,770	125,152	\$149.5 billion	625,760
3. Energy Production, Safety, and Environmental Remediation	2.1	1.4	2.5	6.0	\$13.8 billion	28,286	19,119	35,051	82,456	\$69.2 billion	412,280
4. Broadband	0.5	1.9	2.2	4.6	\$13.6 billion	6,402	26,427	30,173	63,002	\$68.1 billion	315,010
5. Water	1.5	1.6	2.5	5.6	\$12.9 billion	19,452	20,213	32,172	71,837	\$64.7 billion	359,185
6. Lands and Resilience	2.8	1.6	3.4	7.8	\$7.5 billion	20,968	11,806	25,494	58,268	\$37.5 billion	291,340
7. Alternative Energy and Storage	0.5	1.3	2.4	4.2	\$5.7 billion	3,027	7,471	13,662	24,160	\$28.7 billion	120,800
8. Airports	0.0	1.3	2.8	4.1	\$5.0 billion	0	6,475	14,075	20,550	\$25.0 billion	102,750
9. Electric Vehicles, Buses, and Ferries	0.2	1.3	2.5	4.0	\$3.7 billion	550	4,958	9,440	14,948	\$18.6 billion	74,740
10. Buildings	0.0	1.2	2.8	4.0	\$1.2 billion	0	1,433	3,215	4,648	\$5.8 billion	23,240
11. Economic Development	3.5	1.6	3.1	8.3	\$306.4 million	1,083	486	955	2,524	\$1.5 billion	12,620
<b>Totals</b>	--	--	--	--	\$169.6 billion	109,856	254,780	443,016	807,652	\$847.8 billion	4,038,260

Note: Service sectors in this table include all service-providing industries except for wholesale and retail sectors; transportation and warehousing; and utilities. These three service industries are treated separately.



**BIL-3.****Jobs Created Within *Construction Sector ONLY* by BIL Major Investment Category with Budgetary Figures**

BIL Investment Category	Construction Sector Jobs/ \$1 Million				Annual Budget	Annual Job Creation				Job Years Created over 5 Years	
	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs		Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs	Total Budget	Total Job Years
1. Roads, Bridges, Ports and Waterways, and Transportation Safety	2.6	0.02	0.02	2.6	\$75.8 billion	193,899	1,630	1,621	197,150	\$379.2 billion	985,750
2. Public Transit and Freight Rail	1.0	0.02	0.02	1.1	\$29.9 billion	30,248	650	651	31,549	\$149.5 billion	157,745
3. Energy Production, Safety, and Environmental Remediation	0.2	0.02	0.03	0.3	\$13.8 billion	2,987	233	426	3,646	\$69.2 billion	18,230
4. Broadband	1.6	0.02	0.02	1.6	\$13.6 billion	21,795	272	272	22,339	\$68.1 billion	111,695
5. Water	0.4	0.2	0.02	0.6	\$12.9 billion	4,653	2,297	266	7,216	\$64.7 billion	36,080
6. Lands and Resilience	1.6	0.02	0.03	1.6	\$7.5 billion	11,730	122	243	12,095	\$37.5 billion	60,475
7. Alternative Energy and Storage	0.7	0.03	0.02	0.7	\$5.7 billion	3,967	180	118	4,265	\$28.7 billion	21,325
8. Airports	3.4	0.02	0.02	3.4	\$5.0 billion	17,000	100	100	17,200	\$25.0 billion	86,000
9. Electric Vehicles, Buses, and Ferries	1.1	0.02	0.02	1.2	\$3.7 billion	4,145	62	75	4,282	\$18.6 billion	21,410
10. Buildings	4.0	0.02	0.02	4.0	\$1.2 billion	4,613	23	23	4,659	\$5.8 billion	23,295
11. Economic Development	1.5	0.1	0.02	1.6	\$306.4 million	465	17	7	489	\$1.5 billion	2,445
<b>Totals</b>	--	--	--	--	\$169.6 billion	295,502	5,586	3,802	304,890	\$847.8 billion	1,524,450

**BIL-4.****Jobs Created Within *Transportation and Warehousing Sector ONLY* by BIL Major Investment Category with Budgetary Figures**

BIL Investment Category	Transportation and Warehousing Sector Jobs/ \$1 Million				Annual Budget	Annual Job Creation				Job Years Created over 5 Years	
	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs		Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs	Total Budget	Total Job Years
1. Roads, Bridges, Ports and Waterways, and Transportation Safety	0.7	0.3	0.2	1.2	\$75.8 billion	50,251	23,977	14,566	88,794	\$379.2 billion	443,970
2. Public Transit and Freight Rail	1.7	0.4	0.2	2.3	\$29.9 billion	50,822	10,953	6,064	67,839	\$149.5 billion	339,195
3. Energy Production, Safety, and Environmental Remediation	0.02	0.2	0.2	0.4	\$13.8 billion	334	2,672	2,571	5,577	\$69.2 billion	27,885
4. Broadband	0.0	0.2	0.2	0.4	\$13.6 billion	0	2,997	2,248	5,245	\$68.1 billion	26,225
5. Water	0.002	0.3	0.2	0.5	\$12.9 billion	22	4,264	2,473	6,759	\$64.7 billion	33,795
6. Lands and Resilience	0.01	0.3	0.3	0.5	\$7.5 billion	76	1,878	1,911	3,865	\$37.5 billion	19,325
7. Alternative Energy and Storage	0.04	0.2	0.2	0.5	\$5.7 billion	215	1,404	1,012	2,631	\$28.7 billion	13,155
8. Airports	0.2	0.4	0.2	0.8	\$5.0 billion	1,125	1,900	1,000	4,025	\$25.0 billion	20,125
9. Electric Vehicles, Buses, and Ferries	3.2	0.3	0.2	3.7	\$3.7 billion	11,942	1,049	718	13,709	\$18.6 billion	68,545
10. Buildings	0.0	0.4	0.2	0.6	\$1.2 billion	0	443	233	676	\$5.8 billion	3,380
11. Economic Development	0.0	0.3	0.3	0.5	\$306.4 million	0	78	76	154	\$1.5 billion	770
<b>Totals</b>	--	--	--	--	\$169.6 billion	114,787	51,615	32,872	199,274	\$847.8 billion	996,370

**BIL-5.****Jobs Created Within *Wholesale and Retail Sector Only* by BIL Major Investment Category with Budgetary Figures**

BIL Investment Category	Wholesale and Retail Sector Jobs/ \$1 Million				Annual Budget	Annual Job Creation				Job Years Created over 5 Years	
	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs		Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs	Total Budget	Total Job Years
1. Roads, Bridges, Ports and Waterways, and Transportation Safety	0.0	0.6	0.6	1.2	\$75.8 billion	0	48,317	43,920	92,237	\$379.2 billion	461,185
2. Public Transit and Freight Rail	0.0	0.5	0.6	1.1	\$29.9 billion	0	13,921	17,897	31,818	\$149.5 billion	159,090
3. Energy Production, Safety, and Environmental Remediation	0.0	0.1	0.6	0.7	\$13.8 billion	0	1,296	7,701	8,997	\$69.2 billion	44,985
4. Broadband	0.0	0.3	0.5	0.8	\$13.6 billion	0	3,610	6,743	10,353	\$68.1 billion	51,765
5. Water	0.0	0.3	0.6	0.9	\$12.9 billion	0	3,853	7,161	11,014	\$64.7 billion	55,070
6. Lands and Resilience	0.0	0.4	0.8	1.1	\$7.5 billion	0	2,691	5,691	8,382	\$37.5 billion	41,910
7. Alternative Energy and Storage	0.0	0.2	0.5	0.8	\$5.7 billion	0	1,308	2,976	4,284	\$28.7 billion	21,420
8. Airports	0.0	0.8	0.6	1.4	\$5.0 billion	0	3,725	3,100	6,825	\$25.0 billion	34,125
9. Electric Vehicles, Buses, and Ferries	0.0	0.3	0.6	0.9	\$3.7 billion	0	1,205	2,057	3,262	\$18.6 billion	16,310
10. Buildings	0.0	1.3	0.6	1.9	\$1.2 billion	0	1,503	711	2,214	\$5.8 billion	11,070
11. Economic Development	0.0	0.4	0.7	1.1	\$306.4 million	0	111	218	329	\$1.5 billion	1,645
<b>Totals</b>	--	--	--	--	\$169.6 billion	0	81,540	98,175	179,715	\$847.8 billion	898,575

**BIL-6.****Jobs Created Within *Manufacturing Sector ONLY* by BIL Major Investment Category with Budgetary Figures**

BIL Investment Category	Manufacturing Sector Jobs/ \$1 Million				Annual Budget	Annual Job Creation				Job Years Created over 5 Years	
	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs		Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs	Total Budget	Total Job Years
1. Roads, Bridges, Ports and Waterways, and Transportation Safety	0.3	0.3	0.04	0.6	\$75.8 billion	21,865	19,289	3,148	44,302	\$379.2 billion	221,510
2. Public Transit and Freight Rail	1.1	0.5	0.04	1.6	\$29.9 billion	32,291	14,306	1,291	47,888	\$149.5 billion	239,440
3. Energy Production, Safety, and Environmental Remediation	0.2	0.1	0.1	0.4	\$13.8 billion	2,795	1,389	907	5,091	\$69.2 billion	25,455
4. Broadband	0.3	0.2	0.03	0.6	\$13.6 billion	4,427	2,997	341	7,765	\$68.1 billion	38,825
5. Water	0.8	0.3	0.03	1.2	\$12.9 billion	10,090	3,844	451	14,385	\$64.7 billion	71,925
6. Lands and Resilience	0.1	0.3	0.1	0.4	\$7.5 billion	626	1,862	491	2,979	\$37.5 billion	14,895
7. Alternative Energy and Storage	1.0	0.2	0.03	1.3	\$5.7 billion	5,876	1,233	190	7,299	\$28.7 billion	36,495
8. Airports	0.3	0.5	0.1	0.9	\$5.0 billion	1,450	2,700	250	4,400	\$25.0 billion	22,000
9. Electric Vehicles, Buses, and Ferries	1.0	0.3	0.04	1.4	\$3.7 billion	3,530	1,270	149	4,949	\$18.6 billion	24,745
10. Buildings	0.0	0.6	0.04	0.7	\$1.2 billion	0	641	47	688	\$5.8 billion	3,440
11. Economic Development	0.0	0.2	0.1	0.3	\$306.4 million	0	64	19	83	\$1.5 billion	415
<b>Totals</b>	--	--	--	--	\$169.6 billion	82,950	49,595	7,284	139,829	\$847.8 billion	699,145

**BIL-7.****Jobs Created Within *Utilities Sector ONLY* by BIL Major Investment Category with Budgetary Figures**

BIL Investment Category	Utilities Sector Jobs/ \$1 Million				Annual Budget	Annual Job Creation				Job Years Created over 5 Years	
	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs		Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs	Total Budget	Total Job Years
1. Roads, Bridges, Ports and Waterways, and Transportation Safety	0.003	0.01	0.01	0.02	\$75.8 billion	248	720	587	1,555	\$379.2 billion	7,775
2. Public Transit and Freight Rail	0.0	0.01	0.01	0.02	\$29.9 billion	0	282	244	526	\$149.5 billion	2,630
3. Energy Production, Safety, and Environmental Remediation	0.4	0.1	0.01	0.5	\$13.8 billion	4,986	1,812	102	6,900	\$69.2 billion	34,500
4. Broadband	0.0	0.01	0.01	0.01	\$13.6 billion	0	68	68	136	\$68.1 billion	680
5. Water	0.2	0.01	0.01	0.2	\$12.9 billion	1,988	126	109	2,223	\$64.7 billion	11,115
6. Lands and Resilience	0.002	0.004	0.01	0.02	\$7.5 billion	17	30	73	120	\$37.5 billion	600
7. Alternative Energy and Storage	0.003	0.1	0.01	0.1	\$5.7 billion	15	322	43	380	\$28.7 billion	1,900
8. Airports	0.0	0.01	0.01	0.01	\$5.0 billion	0	50	50	100	\$25.0 billion	500
9. Electric Vehicles, Buses, and Ferries	0.03	0.02	0.01	0.1	\$3.7 billion	105	92	30	227	\$18.6 billion	1,135
10. Buildings	0.0	0.01	0.01	0.01	\$1.2 billion	0	12	12	24	\$5.8 billion	120
11. Economic Development	0.1	0.04	0.01	0.2	\$306.4 million	30	13	3	46	\$1.5 billion	230
<b>Totals</b>	--	--	--	--	\$169.6 billion	7,389	3,527	1,321	12,237	\$847.8 billion	61,185

## Indicators of Job Quality Within Investment Categories

### BIL-8.

#### Indicators of Job Quality in *BIL-Related Employment* by Major Investment Category: Direct Jobs Only

	1. Total U.S. Workforce	BIL Investment Categories					
		2. Total BIL Workforce	3. Roads, Bridges, Ports and Waterways, and Transportation Safety	4. Public Transit and Freight Rail	5. Energy Production, Safety, and Environmental Remediation	6. Broadband	7. Water
Average (median) hourly wage	\$23.70	\$25.20	\$25.20	\$24.15	\$31.25	\$26.20	\$26.20
Health insurance coverage, percentage	50.0%	46.2%	42.8%	47.8%	56.0%	49.8%	59.6%
Retirement plans, percentage	40.8%	31.7%	28.6%	32.7%	39.1%	34.0%	47.9%
Union membership	11.3%	12.5%	12.7%	15.1%	7.7%	11.0%	13.9%

	BIL Investment Categories					
	8. Lands and Resilience	9. Alternative Energy and Storage	10. Airports	11. Electric Vehicles, Buses, and Ferries	12. Buildings	13. Economic Development
Average (median) hourly wage	\$26.20	\$27.75	\$26.20	\$23.10	\$24.65	\$26.20
Health insurance coverage, percentage	41.4%	59.4%	42.8%	44.5%	38.1%	42.7%
Retirement plans, percentage	26.4%	41.2%	29.1%	31.7%	24.7%	30.0%
Union membership	6.4%	6.9%	14.4%	18.3%	12.4%	7.1%

Notes: Wages are in 2023 dollars. Health insurance coverage indicates the share of jobs with employer-sponsored health insurance. Retirement plans indicate the share of jobs with employers that offer retirement plans.

## BIL-9.

### Educational Credentials and Race/Gender Composition of Workers in BIL-Related Employment by Major Investment Category: Direct Jobs Only

	BIL Investment Categories						
	1. Total U.S. Workforce	2. Total BIL Workforce	3. Roads, Bridges, Ports and Waterways, and Transportation Safety	4. Public Transit and Freight Rail	5. Energy Production, Safety, and Environmental Remediation	6. Broadband	7. Water
<b><i>Educational credentials</i></b>							
Share with less than high school degree	7.8%	11.6%	13.4%	10.2%	6.5%	12.8%	6.9%
Share with high school degree only	26.0%	34.4%	36.6%	37.2%	24.0%	35.0%	29.9%
Share with some college, no degree	15.4%	15.0%	15.4%	15.4%	12.1%	16.3%	15.0%
Share with Associate's degree ( <i>occupational/vocational or academic</i> )	10.4%	10.1%	9.9%	10.5%	9.2%	11.1%	11.3%
Share with Bachelor's degree or higher	40.5%	28.9%	24.6%	26.8%	48.2%	24.7%	37.0%
<b><i>Racial and gender composition of workforce</i></b>							
Pct. White, non-Latinx	60.5%	58.2%	54.9%	58.9%	66.5%	58.2%	67.8%
Pct. BIPOC ( <i>incl. Latinx</i> )	39.5%	41.8%	45.1%	41.1%	33.5%	41.8%	32.2%
Pct. Black, non-Latinx	12.7%	10.9%	10.3%	14.8%	9.0%	8.6%	9.7%
Pct. Asian, non-Latinx	6.9%	5.6%	5.2%	6.6%	7.2%	3.7%	4.6%
Pct. American Indian/Aleut/Eskimo, non-Latinx	0.7%	0.7%	0.8%	0.7%	0.4%	0.7%	0.9%
Pct. Other*, non-Latinx	0.9%	0.6%	0.6%	0.6%	0.8%	0.7%	0.9%
Pct. Latinx**	18.6%	24.3%	28.6%	18.7%	16.2%	28.4%	16.4%
Pct. Men***	53.2%	79.6%	82.8%	79.4%	70.8%	83.3%	75.0%
Pct. Women***	46.8%	20.4%	17.2%	20.6%	29.2%	16.7%	25.0%

**BIL-9. (cont.)**

**Educational Credentials and Race/Gender Composition of Workers in *BIL-Related Employment* by Major Investment Category: Direct Jobs Only**

	BIL Investment Categories					
	8. Lands and Resilience	9. Alternative Energy and Storage	10. Airports	11. Electric Vehicles, Buses, and Ferries	12. Buildings	13. Economic Development
<b><i>Educational credentials</i></b>						
Share with less than high school degree	11.2%	8.5%	15.6%	8.5%	17.7%	7.9%
Share with high school degree only	25.4%	30.1%	37.7%	36.0%	40.4%	22.2%
Share with some college, no degree	12.8%	13.5%	15.2%	17.0%	15.3%	13.8%
Share with Associate's degree ( <i>occupational/vocational or academic</i> )	8.1%	10.6%	10.1%	11.2%	9.9%	10.3%
Share with Bachelor's degree or higher	42.5%	37.3%	21.3%	27.4%	16.8%	45.7%
<b><i>Racial and gender composition of workforce</i></b>						
Pct. White, non-Latinx	65.3%	63.6%	56.9%	46.5%	55.8%	65.5%
Pct. BIPOC ( <i>incl. Latinx</i> )	34.7%	36.4%	43.1%	53.5%	44.2%	34.5%
Pct. Black, non-Latinx	7.4%	8.1%	6.7%	21.7%	6.1%	8.7%
Pct. Asian, non-Latinx	5.0%	6.2%	3.2%	9.9%	2.1%	5.4%
Pct. American Indian/Aleut/Eskimo, non-Latinx	0.7%	0.5%	0.8%	0.5%	0.9%	0.5%
Pct. Other*, non-Latinx	0.6%	1.2%	0.6%	0.7%	0.6%	0.7%
Pct. Latinx**	21.7%	20.6%	32.1%	21.2%	34.9%	19.4%
Pct. Men***	68.7%	75.6%	87.1%	76.6%	89.1%	68.6%
Pct. Women***	31.3%	24.4%	12.9%	23.4%	10.9%	31.4%

Note: \*"Other" includes the following groups: Hawaiian/Pacific Islanders and multi-racial.

\*\* The CPS survey, on which these data are based, asks respondents to identify whether they are "Spanish, Hispanic, or Latino." We use Latinx here because of the growing usage of this ethnic category to identify people with Latin American, as opposed to, Spanish heritage. We use Latinx to be more inclusive across gender categories.

\*\*\*Labor Department data include only binary gender categories.



## Prevalent Job Types Within Investment Categories

**BIL-10.**

**Prevalent Job Types in *BIL-Related Employment* by Major Investment Category: Direct Jobs Only**  
*Job categories with 5 percent or more employment*

Job Creation Through: **Roads, Bridges, Ports and Waterways, and Transportation Safety**

Job Category	Number of Direct Jobs	Percentage of Direct Jobs	Representative Occupations
Construction	119,801	41.0%	First-line supervisors of construction trades and extraction workers; painters and paperhangers; electricians
Management	50,842	17.4%	Financial managers; general and operations managers; chief executives
Transportation and Material Moving	43,830	15.0%	Transit and intercity bus drivers; driver/sales workers and truck drivers; taxi drivers
Office and Administrative Support	16,947	5.8%	Dispatchers; first-line supervisors of office and administrative support workers; customer service representatives

**BIL-11.****Prevalent Job Types in *BIL-Related Employment* by Major Investment Category: Direct Jobs Only***Job categories with 5 percent or more employment***Job Creation Through: Public Transit and Freight Rail**

<b>Job Category</b>	<b>Number of Direct Jobs</b>	<b>Percentage of Direct Jobs</b>	<b>Representative Occupations</b>
Transportation and Material Moving	41,344	31.5%	School bus drivers; driver/sales workers and truck drivers; transit and intercity bus drivers
Construction	20,213	15.4%	Electricians; carpenters; construction laborers
Management	15,094	11.5%	Human resources managers; financial managers; construction managers
Production	14,044	10.7%	First-line supervisors of production and operating workers; inspectors, testers, sorters, samplers, and weighers; welding, soldering, and brazing workers
Office and Administrative Support	7,481	5.7%	Bookkeeping, accounting, and auditing clerks; secretaries and administrative assistants; dispatchers
Farming, Fisheries, and Forestry	7,219	5.5%	Forest and conservation workers; first-line supervisors of farming, fishing, and forestry workers; logging workers

**BIL-12.****Prevalent Job Types in *BIL-Related Employment* by Major Investment Category: Direct Jobs Only***Job categories with 5 percent or more employment***Job Creation Through: Energy Production, Safety, and Environmental Remediation**

<b>Job Category</b>	<b>Number of Direct Jobs</b>	<b>Percentage of Direct Jobs</b>	<b>Representative Occupations</b>
Management	7,110	17.2%	Construction managers; marketing managers; general and operations managers
Business Operations Specialists	6,904	16.7%	Human resources workers; market research analysts and marketing specialists; project management specialists
Transportation and Material Moving	4,093	9.9%	Industrial truck and tractor operators; first-line supervisors of transportation and material moving workers; refuse and recyclable material collectors
Production	3,431	8.3%	Inspectors, testers, sorters, samplers, and weighers; first-line supervisors of production and operating workers; welding, soldering, and brazing workers
Office and Administrative Support	3,142	7.6%	First-line supervisors of office and administrative support workers; secretaries and administrative assistants; customer service representatives
Installation, Maintenance, and Repair	2,811	6.8%	Bus and truck mechanics and diesel engine specialists; industrial and refractory machinery mechanics; electrical power-line installers and repairers
Construction	2,687	6.5%	Plumbers, pipefitters, and steamfitters; first-line supervisors of construction trades and extraction workers; carpenters
Architecture and Engineering, and Technicians	2,274	5.5%	Civil engineers; mechanical engineers; electrical and electronics engineers
Computer and Mathematical	2,191	5.3%	Computer systems analysts; computer support specialists; software developers

**BIL-13.****Prevalent Job Types in *BIL-Related Employment* by Major Investment Category: Direct Jobs Only***Job categories with 5 percent or more employment*Job Creation Through: **Broadband**

<b>Job Category</b>	<b>Number of Direct Jobs</b>	<b>Percentage of Direct Jobs</b>	<b>Representative Occupations</b>
Construction	13,404	41.0%	Electricians; carpenters; construction laborers
Management	5,852	17.9%	General and operations managers; sales managers; chief executives
Installation, Maintenance, and Repair	2,517	7.7%	Heavy vehicle and mobile equipment service technicians and mechanics; radio and telecommunications equipment installers and repairers; telecommunications line installers and repairers
Office and Administrative Support	2,419	7.4%	General office clerks; bookkeeping, accounting, and auditing clerks; secretaries and administrative assistants
Production	2,027	6.2%	First-line supervisors of production and operating workers; welding, soldering, and brazing workers; electrical, electronics, and electromechanical assemblers

**BIL-14.****Prevalent Job Types in *BIL-Related Employment* by Major Investment Category: Direct Jobs Only***Job categories with 5 percent or more employment*Job Creation Through: **Water**

Job Category	Number of Direct Jobs	Percentage of Direct Jobs	Representative Occupations
Production	6,726	18.1%	Welding, soldering, and brazing workers; first-line supervisors of production and operating workers; water and wastewater treatment plant and system operators
Management	5,537	14.9%	Sales managers; general and operations managers; construction managers
Architecture and Engineering, and Technicians	4,905	13.2%	Mechanical engineers; architects; civil engineers
Construction	4,273	11.5%	Sheet metal workers; plumbers, pipefitters, and steamfitters; construction laborers
Office and Administrative Support	2,898	7.8%	Bookkeeping, accounting, and auditing clerks; customer service representatives; general office clerks
Transportation and Material Moving	2,564	6.9%	Industrial truck and tractor operators; refuse and recyclable material collectors; laborers and freight, stock, and material movers
Business Operations Specialists	2,044	5.5%	Market research analysts and marketing specialists; purchasing agents; management analysts

**BIL-15.****Prevalent Job Types in *BIL-Related Employment* by Major Investment Category: Direct Jobs Only***Job categories with 5 percent or more employment*Job Creation Through: **Lands and Resilience**

Job Category	Number of Direct Jobs	Percentage of Direct Jobs	Representative Occupations
Management	9,748	19.8%	Chief executives; construction managers; farmers, ranchers, and other agricultural managers
Construction	7,582	15.4%	First-line supervisors of construction trades and extraction workers; painters and paperhangers; construction laborers
Business Operations Specialists	6,154	12.5%	Cost estimators; human resources workers; market research analysts and marketing specialists
Farming, Fisheries, and Forestry	3,840	7.8%	Forest and conservation workers; agricultural product graders and sorters; fishing and hunting workers
Personal Care and Service	3,496	7.1%	Childcare workers; tour and travel guides; animal caretakers
Office and Administrative Support	2,806	5.7%	General office clerks; secretaries and administrative assistants; bookkeeping, accounting, and auditing clerks

**BIL-16.****Prevalent Job Types in *BIL-Related Employment* by Major Investment Category: Direct Jobs Only***Job categories with 5 percent or more employment***Job Creation Through: Alternative Energy and Storage**

<b>Job Category</b>	<b>Number of Direct Jobs</b>	<b>Percentage of Direct Jobs</b>	<b>Representative Occupations</b>
Construction	2,725	19.7%	Plumbers, pipefitters, and steamfitters; first-line supervisors of construction trades and extraction workers; electricians
Management	2,462	17.8%	Financial managers; sales managers; construction managers
Production	2,213	16.0%	Inspectors, testers, sorters, samplers, and weighers; welding, soldering, and brazing workers; first-line supervisors of production and operating workers
Office and Administrative Support	1,079	7.8%	General office clerks; bookkeeping, accounting, and auditing clerks; customer service representatives
Architecture and Engineering, and Technicians	858	6.2%	Electrical and electronics engineers; industrial engineers, including health and safety; mechanical engineers
Life, Physical, and Social Science	719	5.2%	Biological scientists; chemists and materials scientists; medical scientists

**BIL-17.****Prevalent Job Types in *BIL-Related Employment* by Major Investment Category: Direct Jobs Only***Job categories with 5 percent or more employment***Job Creation Through: Airports**

<b>Job Category</b>	<b>Number of Direct Jobs</b>	<b>Percentage of Direct Jobs</b>	<b>Representative Occupations</b>
Construction	10,316	52.9%	Painters and paperhangers; electricians; carpenters
Management	3,549	18.2%	Financial managers; general and operations managers; chief executives
Office and Administrative Support	1,034	5.3%	Reservation and transportation ticket agents and travel clerks; first-line supervisors of office and administrative support workers; customer service representatives
Installation, Maintenance, and Repair	1,034	5.3%	Telecommunications line installers and repairers; general maintenance and repair workers; aircraft mechanics and service technicians
Transportation and Material Moving	1,034	5.3%	Laborers and freight, stock, and material movers; flight attendants; aircraft pilots and flight engineers



**BIL-18.****Prevalent Job Types in *BIL-Related Employment* by Major Investment Category: Direct Jobs Only***Job categories with 5 percent or more employment***Job Creation Through: Electric Vehicles, Buses, and Ferries**

<b>Job Category</b>	<b>Number of Direct Jobs</b>	<b>Percentage of Direct Jobs</b>	<b>Representative Occupations</b>
Transportation and Material Moving	10,215	49.9%	School bus drivers; transit and intercity bus drivers; taxi drivers
Construction	2,723	13.3%	First-line supervisors of construction trades and extraction workers; carpenters; construction laborers
Management	1,822	8.9%	Transportation, storage, and distribution managers; general and operations managers; construction managers
Production	1,453	7.1%	Welding, soldering, and brazing workers; first-line supervisors of production and operating workers
Office and Administrative Support	1,064	5.2%	Customer service representatives; bookkeeping, accounting, and auditing clerks; dispatchers

**BIL-19.****Prevalent Job Types in *BIL-Related Employment* by Major Investment Category: Direct Jobs Only**  
*Job categories with 5 percent or more employment*Job Creation Through: **Buildings**

Job Category	Number of Direct Jobs	Percentage of Direct Jobs	Representative Occupations
Construction	2,833	60.8%	Electricians; carpenters; construction laborers
Management	904	19.4%	Financial managers; general and operations managers; construction managers

**BIL-20.****Prevalent Job Types in *BIL-Related Employment* by Major Investment Category: Direct Jobs Only***Job categories with 5 percent or more employment***Job Creation Through: Economic Development**

<b>Job Category</b>	<b>Number of Direct Jobs</b>	<b>Percentage of Direct Jobs</b>	<b>Representative Occupations</b>
Construction	296	18.7%	First-line supervisors of construction trades and extraction workers; painters and paperhangers; electricians
Management	259	16.4%	General and operations managers; chief executives; education and childcare administrators
Installation, Maintenance, and Repair	198	12.5%	Heating, air conditioning, and refrigeration mechanics and installers; precision instrument and equipment repairers; computer, automated teller, and office machine repairers
Education, Training, and Library	185	11.7%	Teaching assistants; postsecondary teachers; tutors
Business Operations Specialists	131	8.3%	Logisticians; human resources workers; market research analysts and marketing specialists
Architecture and Engineering, and Technicians	100	6.3%	Electrical and electronics engineers; mechanical engineers; architects; civil engineers
Office and Administrative Support	89	5.6%	General office clerks; bookkeeping, accounting, and auditing clerks; first-line supervisors of office and administrative support workers

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## **EMPLOYMENT IMPACTS OF IRA:** *Inflation Reduction Act*

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- **Job Creation** ..... **pp. 35 – 41**  
*Job creation across all industries and 6 major industries*
  
- **Indicators of Job Quality** ..... **pp. 42 – 43**
  
- **Prevalent Job Types** ..... **pp. 44 – 50**

## Job Creation Through Investment Categories: Across All Industries and by 6 Major Industries

### IRA-1.

#### Jobs Created Across *All Industries* by IRA Major Investment Category with Budgetary Figures

IRA Investment Category	All Sectors Jobs/ \$1 Million				Annual Budget	Annual Job Creation				Job Years Created over 10 Years	
	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs		Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs	Total Budget	Total Job Years
1. Electricity	3.1	2.3	3.3	8.6	\$66.3 billion	205,649	150,417	217,169	573,235	\$663.1 billion	5,732,350
2. Manufacturing	2.5	2.2	3.1	7.8	\$12.8 billion	32,176	28,618	39,155	99,949	\$127.7 billion	999,490
3. Buildings	2.4	2.5	2.8	7.7	\$9.4 billion	22,138	23,264	26,313	71,715	\$93.8 billion	717,150
4. Transportation	3.3	2.6	3.0	8.9	\$5.6 billion	18,253	14,728	16,902	49,883	\$56.0 billion	498,830
5. Agriculture	6.5	2.6	3.8	12.9	\$2.2 billion	13,988	5,724	8,139	27,851	\$21.7 billion	278,510
6. Lands	7.2	2.4	4.0	13.7	\$1.1 billion	7,891	2,645	4,382	14,918	\$10.9 billion	149,180
7. Environmental Justice and Community Resilience	4.0	2.4	3.7	10.1	\$1.1 billion	4,433	2,645	4,099	11,177	\$11.0 billion	111,770
<b>Totals</b>	--	--	--	--	\$98.4 billion	304,528	228,041	316,159	848,728	\$984.2 billion	8,487,280

Note: Due to rounding, direct, indirect, and induced job multipliers, within row, may not sum to "Total" job multiplier. This table includes the jobs created across all industries. The tables that follow (IRA 2–7) present job numbers for the subset of jobs within six major industries.

## IRA-2.

### Jobs Created Within *Service Sector Only* by IRA Major Investment Category with Budgetary Figures

IRA Investment Category	Service Sector Jobs/ \$1 Million				Annual Budget	Annual Job Creation				Job Years Created over 10 Years	
	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs		Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs	Total Budget	Total Job Years
1. Electricity	0.2	1.1	2.3	3.6	\$66.3 billion	14,127	70,164	153,926	238,217	\$663.1 billion	2,382,170
2. Manufacturing	0.1	1.1	2.2	3.4	\$12.8 billion	1,355	13,874	27,861	43,090	\$127.7 billion	430,900
3. Buildings	0.0	1.0	2.0	3.0	\$9.4 billion	0	9,240	18,480	27,720	\$93.8 billion	277,200
4. Transportation	0.4	1.2	2.1	3.7	\$5.6 billion	2,411	6,468	11,929	20,808	\$56.0 billion	208,080
5. Agriculture	3.7	1.5	2.7	7.8	\$2.2 billion	7,925	3,133	5,817	16,875	\$21.7 billion	168,750
6. Lands	7.1	1.7	2.9	11.7	\$1.1 billion	7,770	1,886	3,114	12,770	\$10.9 billion	127,700
7. Environmental Justice and Community Resilience	3.9	1.8	2.7	8.3	\$1.1 billion	4,261	1,968	2,938	9,167	\$11.0 billion	91,670
<b>Totals</b>	--	--	--	--	\$98.4 billion	37,849	106,733	224,065	368,647	\$984.2 billion	3,686,470

Note: Service sectors in this table include all service-providing industries except for wholesale and retail sectors; transportation and warehousing; and utilities. These three service industries are treated separately.

**IRA-3.****Jobs Created Within *Manufacturing Sector Only* by IRA Major Investment Category with Budgetary Figures**

IRA Investment Category	Manufacturing Sector Jobs/ \$1 Million				Annual Budget	Annual Job Creation				Job Years Created over 10 Years	
	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs		Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs	Total Budget	Total Job Years
1. Electricity	1.2	0.4	0.03	1.6	\$66.3 billion	77,975	24,795	2,008	104,778	\$663.1 billion	1,047,780
2. Manufacturing	1.2	0.3	0.03	1.5	\$12.8 billion	15,084	3,606	322	19,012	\$127.7 billion	190,120
3. Buildings	2.3	0.6	0.02	2.9	\$9.4 billion	21,763	5,628	235	27,626	\$93.8 billion	276,260
4. Transportation	0.9	0.4	0.03	1.3	\$5.6 billion	5,056	2,271	152	7,479	\$56.0 billion	74,790
5. Agriculture	0.1	0.1	0.04	0.3	\$2.2 billion	281	219	80	580	\$21.7 billion	5,800
6. Lands	0.03	0.1	0.1	0.2	\$1.1 billion	29	79	64	172	\$10.9 billion	1,720
7. Environmental Justice and Community Resilience	0.01	0.04	0.04	0.1	\$1.1 billion	11	47	40	98	\$11.0 billion	980
<b>Totals</b>	--	--	--	--	\$98.4 billion	120,199	36,645	2,901	159,745	\$984.2 billion	1,597,450

**IRA-4.****Jobs Created Within *Construction Sector Only* by IRA Major Investment Category with Budgetary Figures**

IRA Investment Category	Construction Sector Jobs/ \$1 Million				Annual Budget	Annual Job Creation				Job Years Created over 10 Years	
	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs		Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs	Total Budget	Total Job Years
1. Electricity	1.7	0.01	0.02	1.7	\$66.3 billion	110,414	859	1,326	112,599	\$663.1 billion	1,125,990
2. Manufacturing	1.2	0.02	0.02	1.2	\$12.8 billion	14,741	319	255	15,315	\$127.7 billion	153,150
3. Buildings	0.0	0.01	0.02	0.03	\$9.4 billion	0	94	188	282	\$93.8 billion	2,820
4. Transportation	0.6	0.02	0.02	0.6	\$5.6 billion	3,053	131	112	3,296	\$56.0 billion	32,960
5. Agriculture	0.4	0.02	0.02	0.4	\$2.2 billion	753	43	44	840	\$21.7 billion	8,400
6. Lands	0.1	0.03	0.02	0.1	\$1.1 billion	83	29	22	134	\$10.9 billion	1,340
7. Environmental Justice and Community Resilience	0.01	0.01	0.02	0.1	\$1.1 billion	15	15	22	52	\$11.0 billion	520
<b>Totals</b>	--	--	--	--	\$98.4 billion	129,059	1,490	1,969	132,518	\$984.2 billion	1,325,180



**IRA-5.****Jobs Created Within *Wholesale and Retail Sector Only* by IRA Major Investment Category with Budgetary Figures**

IRA Investment Category	Wholesale and Retail Sector Jobs/ \$1 Million				Annual Budget	Annual Job Creation				Job Years Created over 10 Years	
	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs		Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs	Total Budget	Total Job Years
1. Electricity	0.0	0.3	0.5	0.8	\$66.3 billion	0	21,424	34,150	55,574	\$663.1 billion	555,740
2. Manufacturing	0.0	0.3	0.5	0.7	\$12.8 billion	0	3,251	6,192	9,443	\$127.7 billion	94,430
3. Buildings	0.0	0.4	0.4	0.8	\$9.4 billion	0	3,518	3,987	7,505	\$93.8 billion	75,050
4. Transportation	0.0	0.3	0.5	0.8	\$5.6 billion	0	1,813	2,618	4,431	\$56.0 billion	44,310
5. Agriculture	0.0	0.2	0.6	0.8	\$2.2 billion	0	397	1,290	1,687	\$21.7 billion	16,870
6. Lands	0.0	0.1	0.6	0.7	\$1.1 billion	0	112	687	799	\$10.9 billion	7,990
7. Environmental Justice and Community Resilience	0.0	0.1	0.6	0.7	\$1.1 billion	0	93	657	750	\$11.0 billion	7,500
<b>Totals</b>	--	--	--	--	\$98.4 billion	0	30,608	49,581	80,189	\$984.2 billion	801,890

**IRA-6.****Jobs Created Within *Transportation and Warehousing Sector Only* by IRA Major Investment Category with Budgetary Figures**

IRA Investment Category	Transportation and Warehousing Sector Jobs/\$1 Million				Annual Budget	Annual Job Creation				Job Years Created over 10 Years	
	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs		Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs	Total Budget	Total Job Years
1. Electricity	0.0	0.2	0.2	0.4	\$66.3 billion	0	16,215	11,452	27,667	\$663.1 billion	276,670
2. Manufacturing	0.0	0.2	0.2	0.4	\$12.8 billion	0	3,097	2,072	5,169	\$127.7 billion	51,690
3. Buildings	0.0	0.3	0.1	0.5	\$9.4 billion	0	3,049	1,360	4,409	\$93.8 billion	44,090
4. Transportation	0.4	0.3	0.2	0.8	\$5.6 billion	2,210	1,559	907	4,676	\$56.0 billion	46,760
5. Agriculture	0.0	0.3	0.2	0.5	\$2.2 billion	0	598	426	1,024	\$21.7 billion	10,240
6. Lands	0.0	0.3	0.2	0.5	\$1.1 billion	1	281	219	501	\$10.9 billion	5,010
7. Environmental Justice and Community Resilience	0.03	0.3	0.2	0.5	\$1.1 billion	28	275	217	520	\$11.0 billion	5,200
<b>Totals</b>	--	--	--	--	\$98.4 billion	2,239	25,074	16,653	43,966	\$984.2 billion	439,660

**IRA-7.****Jobs Created Within *Utilities Sector Only* by IRA Major Investment Category with Budgetary Figures**

IRA Investment Category	Utilities Sector Jobs/ \$1 Million				Annual Budget	Annual Job Creation				Job Years Created over 10 Years	
	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs		Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs	Total Budget	Total Job Years
1. Electricity	0.005	0.01	0.005	0.02	\$66.3 billion	306	731	331	1,368	\$663.1 billion	13,680
2. Manufacturing	0.0	0.1	0.004	0.1	\$12.8 billion	0	672	46	718	\$127.7 billion	7,180
3. Buildings	0.0	0.01	0.005	0.01	\$9.4 billion	0	94	47	141	\$93.8 billion	1,410
4. Transportation	0.004	0.01	0.01	0.02	\$5.6 billion	24	84	31	139	\$56.0 billion	1,390
5. Agriculture	0.0	0.01	0.01	0.02	\$2.2 billion	0	21	22	43	\$21.7 billion	430
6. Lands	0.01	0.01	0.01	0.03	\$1.1 billion	7	11	11	29	\$10.9 billion	290
7. Environmental Justice and Community Resilience	0.1	0.05	0.01	0.2	\$1.1 billion	113	51	11	175	\$11.0 billion	1,750
<b>Totals</b>	--	--	--	--	\$98.4 billion	450	1,664	499	2,613	\$984.2 billion	26,130

## Indicators of Job Quality Within Investment Category

### IRA-8.

#### Indicators of Job Quality in *IRA-Related Employment* by Major Investment Category: Direct Jobs Only

	1. Total U.S. Workforce	IRA Investment Categories							
		2. Total IRA Workforce	3. Electricity	4. Manufacturing	5. Buildings	6. Transportation	7. Agriculture	8. Lands	9. Environmental Justice and Community Resilience
Average (median) hourly wage	\$23.70	\$26.20	\$26.20	\$26.20	\$24.30	\$23.10	\$21.00	\$21.00	\$26.20
Health insurance coverage, percentage	50.0%	53.0%	53.5%	56.1%	65.4%	47.1%	38.5%	35.0%	48.0%
Retirement plans, percentage	40.8%	36.6%	36.5%	38.7%	47.5%	32.1%	27.7%	26.7%	32.9%
Union membership	11.3%	9.1%	9.5%	9.7%	7.2%	10.6%	5.1%	4.2%	5.6%

Notes: Wages are in 2023 dollars. Health insurance coverage indicates the share of jobs with employer-sponsored health insurance. Retirement plans indicate the share of jobs with employers that offer retirement plans.

## IRA-9.

### Educational Credentials and Race/Gender Composition of Workers in *IRA-Related Employment* by Major Investment Category: Direct Jobs Only

	IRA Investment Categories								
	1. Total Workforce	2. Total IRA Workforce	3. Electricity	4. Manufacturing	5. Buildings	6. Transportation	7. Agriculture	8. Lands	9. Environmental Justice and Community Resilience
<b><i>Educational credentials</i></b>									
Share with less than high school degree	7.8%	11.1%	11.3%	10.4%	7.8%	13.7%	12.9%	12.3%	9.0%
Share with high school degree only	26.0%	32.8%	33.5%	35.3%	37.9%	31.9%	21.6%	19.1%	22.1%
Share with some college, no degree	15.4%	14.0%	14.0%	14.7%	15.6%	13.3%	12.3%	12.0%	12.1%
Share with Associate's degree ( <i>occupational/vocational or academic</i> )	10.4%	11.2%	11.6%	11.2%	12.4%	10.0%	8.4%	7.0%	6.7%
Share with Bachelor's degree or higher	40.5%	30.8%	29.6%	28.4%	26.3%	31.1%	44.8%	49.6%	50.2%
<b><i>Racial and gender composition of workforce</i></b>									
Pct. White, non-Latinx	60.5%	62.5%	61.1%	61.9%	69.7%	59.8%	71.5%	68.0%	65.5%
Pct. BIPOC (incl. Latinx)	39.5%	37.5%	38.9%	38.1%	30.3%	40.2%	28.5%	32.0%	34.5%
Pct. Black, non-Latinx	12.7%	7.7%	7.4%	8.3%	8.3%	10.6%	5.9%	7.5%	9.5%
Pct. Asian, non-Latinx	6.9%	5.4%	5.6%	4.9%	5.4%	5.9%	3.4%	4.4%	6.2%
Pct. American Indian/Aleut/Eskimo, non-Latinx	0.7%	0.5%	0.5%	0.6%	0.3%	0.5%	0.6%	0.4%	0.4%
Pct. Other*, non-Latinx	0.9%	0.9%	0.9%	0.8%	0.9%	0.8%	0.9%	0.9%	0.7%
Pct. Latinx**	18.6%	23.2%	24.6%	23.8%	15.5%	22.6%	18.1%	18.9%	17.7%
Pct. Men***	53.2%	79.0%	82.1%	81.4%	77.7%	73.0%	57.8%	54.1%	63.3%
Pct. Women***	46.8%	21.0%	17.9%	18.6%	22.3%	27.0%	42.2%	45.9%	36.7%

Notes: \*"Other" includes the following groups: Hawaiian/Pacific Islanders and multi-racial.

\*\* The CPS survey, on which these data are based, asks respondents to identify whether they are "Spanish, Hispanic, or Latino." We use Latinx here because of the growing usage of this ethnic category to identify people with Latin American, as opposed to, Spanish heritage. We use Latinx to be more inclusive across gender categories.

\*\*\* Labor Department data include only binary gender categories.

## Prevalent Job Types Within Investment Categories

### IRA-10.

#### Prevalent Job Types in *IRA-Related Employment* by Major Investment Category: Direct Jobs Only

*Job categories with 5 percent or more employment*

#### Job Creation Through: **Electricity**

Job Category	Number of Direct Jobs	Percentage of Direct Jobs	Representative Occupations
Construction	69,715	33.9%	Electricians; carpenters; construction laborers
Management	35,989	17.5%	Sales managers; purchasing managers; construction managers
Production	28,174	13.7%	Welding, soldering, and brazing workers; electrical, electronics, and electromechanical assemblers
Architecture and Engineering, and Technicians	12,133	5.9%	Electrical and electronic engineering technologists and technicians; industrial engineers, including health and safety; mechanical engineers
Office and Administrative Support	12,133	5.9%	General office clerks; first-line supervisors of office and administrative support workers; bookkeeping, accounting, and auditing clerks
Installation, Maintenance, and Repair	11,516	5.6%	General maintenance and repair workers; bus and truck mechanics and diesel engine specialists; industrial and refractory machinery mechanics

**IRA-11.****Prevalent Job Types in IRA-Related Employment by Major Investment Category: Direct Jobs Only***Job categories with 5 percent or more employment***Job Creation Through: Manufacturing**

<b>Job Category</b>	<b>Number of Direct Jobs</b>	<b>Percentage of Direct Jobs</b>	<b>Representative Occupations</b>
Construction	9,460	29.4%	First-line supervisors of construction trades and extraction workers; painters and paperhangers; electricians
Production	5,599	17.4%	Electrical, electronics, and electromechanical assemblers; first-line supervisors of production and operating workers
Management	5,534	17.2%	General and operations managers; chief executives; construction managers
Office and Administrative Support	2,059	6.4%	Shipping, receiving, and inventory clerks; customer service representatives; secretaries and administrative assistants
Architecture and Engineering, and Technicians	1,898	5.9%	Industrial engineers, including health and safety; electrical and electronics engineers; mechanical engineers
Installation, Maintenance, and Repair	1,673	5.2%	Bus and truck mechanics and diesel engine specialists; heavy vehicle and mobile equipment service technicians and mechanics; heating, air conditioning, and refrigeration mechanics and installers

**IRA-12.****Prevalent Job Types in IRA-Related Employment by Major Investment Category: Direct Jobs Only***Job categories with 5 percent or more employment*Job Creation Through: **Buildings**

Job Category	Number of Direct Jobs	Percentage of Direct Jobs	Representative Occupations
Production	8,922	40.3%	Welding, soldering, and brazing workers; first-line supervisors of production and operating workers
Management	2,966	13.4%	Industrial production managers; architectural and engineering managers; chief executives
Transportation and Material Moving	1,837	8.3%	Hand packers and packagers; stockers and order fillers; driver/sales workers and truck drivers
Architecture and Engineering, and Technicians	1,660	7.5%	Electrical and electronics engineers; industrial engineers, including health and safety; mechanical engineers
Office and Administrative Support	1,616	7.3%	General office clerks; customer service representatives; shipping, receiving, and inventory clerks



**IRA-13.****Prevalent Job Types in IRA-Related Employment by Major Investment Category: Direct Jobs Only***Job categories with 5 percent or more employment***Job Creation Through: Transportation**

<b>Job Category</b>	<b>Number of Direct Jobs</b>	<b>Percentage of Direct Jobs</b>	<b>Representative Occupations</b>
Management	4,070	22.3%	General and operations managers; chief executives; construction managers
Transportation and Material Moving	2,519	13.8%	Laborers and freight, stock, and material movers; driver/sales workers and truck drivers; bus drivers, transit and intercity
Farming, Fisheries, and Forestry	2,282	12.5%	Logging workers; agricultural product graders and sorters; forest and conservation workers
Production	2,227	12.2%	Electrical, electronics, and electromechanical assemblers; first-line supervisors of production and operating workers
Construction	2,044	11.2%	Electricians; carpenters; construction laborers
Office and Administrative Support	1,077	5.9%	First-line supervisors of office and administrative support workers; secretaries and administrative assistants; bookkeeping, accounting, and auditing clerks

**IRA-14.****Prevalent Job Types in IRA-Related Employment by Major Investment Category: Direct Jobs Only***Job categories with 5 percent or more employment***Job Creation Through: Agriculture**

<b>Job Category</b>	<b>Number of Direct Jobs</b>	<b>Percentage of Direct Jobs</b>	<b>Representative Occupations</b>
Management	3,175	22.7%	Social and community service managers; financial managers; farmers, ranchers, and other agricultural managers
Farming, Fisheries, and Forestry	1,623	11.6%	Agricultural inspectors; forest and conservation workers; first-line supervisors of farming, fishing, and forestry workers
Business Operations Specialists	1,217	8.7%	Project management specialists; meeting, convention, and event planners; human resources workers
Personal Care and Service	1,189	8.5%	Childcare workers; tour and travel guides; animal caretakers
Education, Training, and Library	1,091	7.8%	Tutors; preschool and kindergarten teachers; archivists, curators, and museum technicians
Office and Administrative Support	1,035	7.4%	Bookkeeping, accounting, and auditing clerks; customer service representatives; receptionists and information clerks

**IRA-15.****Prevalent Job Types in IRA-Related Employment by Major Investment Category: Direct Jobs Only***Job categories with 5 percent or more employment*Job Creation Through: **Lands**

Job Category	Number of Direct Jobs	Percentage of Direct Jobs	Representative Occupations
Building and Grounds Cleaning and Maintenance	1,775	22.5%	Tree trimmers and pruners; first-line supervisors of landscaping, lawn service, and groundskeeping workers; landscaping and groundskeeping workers
Education, Training, and Library	1,555	19.7%	Postsecondary teachers; tutors; archivists, curators, and museum technicians
Management	923	11.7%	Financial managers; general and operations managers; education and childcare administrators
Office and Administrative Support	608	7.7%	Bookkeeping, accounting, and auditing clerks; customer service representatives; receptionists and information clerks
Business Operations Specialists	521	6.6%	Project management specialists; fundraisers; meeting, convention, and event planners
Personal Care and Service	521	6.6%	Childcare workers; tour and travel guides; animal caretakers
Arts, Design, Entertainment, Sports, and Media	481	6.1%	Interpreters and translators; artists and related workers; coaches and scouts

**IRA-16.****Prevalent Job Types in IRA-Related Employment by Major Investment Category: Direct Jobs Only***Job categories with 5 percent or more employment*Job Creation Through: **Environmental Justice and Community Resilience**

Job Category	Number of Direct Jobs	Percentage of Direct Jobs	Representative Occupations
Business Operations Specialists	825	18.6%	Human resources workers; project management specialists; management analysts
Management	811	18.3%	General and operations managers; social and community service managers; chief executives
Building and Grounds Cleaning and Maintenance	607	13.7%	Janitors and building cleaners; tree trimmers and pruners; first-line supervisors of landscaping, lawn service, and groundskeeping workers
Transportation and Material Moving	532	12.0%	Industrial truck and tractor operators; first-line supervisors of transportation and material moving workers; refuse and recyclable material collectors
Office and Administrative Support	381	8.6%	General office clerks; receptionists and information clerks; secretaries and administrative assistants

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## **EMPLOYMENT IMPACTS OF CHIPS:** *Creating Helpful Incentives to Produce Semiconductors*

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- **Job Creation** ..... pp. 52 – 58  
*Job creation across all industries and 6 major industries*
  
- **Indicators of Job Quality** ..... pp. 59 – 60
  
- **Prevalent Job Types** ..... pp. 61 – 63

## Job Creation Through Investment Categories: Across All Industries and by 6 Major Industries

### CHIPS-1.

#### Jobs Created Across *All Industries* by CHIPS Major Investment Category with Budgetary Figures

CHIPS Investment Category	All Sectors Jobs/ \$1 Million				Annual Budget	Annual Job Creation				Job Years Created over 5 Years	
	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs		Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs	Total Budget	Total Job Years
1. Manufacturing	2.0	2.3	3.3	7.6	\$31.9 billion	63,218	74,230	104,550	241,998	\$159.7 billion	1,209,990
2. Research and Development	5.2	2.7	4.5	12.4	\$2.6 billion	13,554	6,915	11,790	32,259	\$13.0 billion	161,295
3. Defense	5.3	2.2	4.2	11.7	\$440.0 million	2,344	975	1,845	5,164	\$2.2 billion	25,820
<b>Totals</b>	--	--	--	--	\$35.0 billion	79,116	82,120	118,185	279,421	\$175.0 billion	1,397,105

Note: Due to rounding, direct, indirect, and induced job multipliers, within row, may not sum to "Total" job multiplier. This table includes the jobs created across all industries. The tables that follow (CHIPS 2–7) present job numbers for the subset of jobs within six major industries.

## CHIPS-2.

### Jobs Created Within **Service Sector ONLY** by CHIPS Major Investment Category with Budgetary Figures

CHIPS Investment Category	Service Sector Jobs/ \$1 Million				Annual Budget	Annual Job Creation				Job Years Created over 5 Years	
	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs		Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs	Total Budget	Total Job Years
1. Manufacturing	0.3	1.4	2.3	4.0	\$31.9 billion	8,225	43,391	73,577	125,193	\$159.7 billion	625,965
2. Research and Development	5.2	2.2	3.2	10.6	\$2.6 billion	13,426	5,819	8,375	27,620	\$13.0 billion	138,100
3. Defense	5.3	1.9	2.9	10.2	\$440.0 million	2,344	816	1,292	4,452	\$2.2 billion	22,260
Totals	--	--	--	--	\$35.0 billion	23,995	50,026	83,244	157,265	\$175.0 billion	786,325

Note: Service sectors in this table include all service-providing industries except for wholesale and retail sectors; transportation and warehousing; and utilities. These three service industries are treated separately.

**CHIPS-3.****Jobs Created Within *Manufacturing Sector ONLY* by CHIPS Major Investment Category with Budgetary Figures**

CHIPS Investment Category	Manufacturing Sector Jobs/ \$1 Million				Annual Budget	Annual Job Creation				Job Years Created over 5 Years	
	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs		Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs	Total Budget	Total Job Years
1. Manufacturing	0.8	0.2	0.04	1.1	\$31.9 billion	26,664	7,415	1,229	35,308	\$159.7 billion	176,540
2. Research and Development	0.1	0.03	0.1	0.2	\$2.6 billion	143	70	154	367	\$13.0 billion	1,835
3. Defense	0.0	0.01	0.1	0.1	\$440.0 million	0	6	26	32	\$2.2 billion	160
Totals	--	--	--	--	\$35.0 billion	26,807	7,491	1,409	35,707	\$175.0 billion	178,535



**CHIPS-4.****Jobs Created Within *Wholesale and Retail Sector ONLY* by CHIPS Major Investment Category with Budgetary Figures**

CHIPS Investment Category	Wholesale and Retail Sector Jobs/ \$1 Million				Annual Budget	Annual Job Creation				Job Years Created over 5 Years	
	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs		Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs	Total Budget	Total Job Years
1. Manufacturing	0.0	0.3	0.5	0.8	\$31.9 billion	0	8,090	16,208	24,298	\$159.7 billion	121,490
2. Research and Development	0.0	0.1	0.7	0.8	\$2.6 billion	0	119	1,868	1,987	\$13.0 billion	9,935
3. Defense	0.0	0.04	0.7	0.7	\$440.0 million	0	18	293	311	\$2.2 billion	1,555
Totals	--	--	--	--	\$35.0 billion	0	8,227	18,369	26,596	\$175.0 billion	132,980

**CHIPS-5.****Jobs Created Within *Construction Sector ONLY* by CHIPS Major Investment Category with Budgetary Figures**

CHIPS Investment Category	Construction Sector Jobs/ \$1 Million				Annual Budget	Annual Job Creation				Job Years Created over 5 Years	
	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs		Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs	Total Budget	Total Job Years
1. Manufacturing	0.9	0.01	0.02	0.9	\$31.9 billion	28,010	368	639	29,017	\$159.7 billion	145,085
2. Research and Development	0.0	0.02	0.04	0.1	\$2.6 billion	0	52	96	148	\$13.0 billion	740
3. Defense	0.0	0.02	0.02	0.04	\$440.0 million	0	9	9	18	\$2.2 billion	90
Totals	--	--	--	--	\$35.0 billion	28,010	429	744	29,183	\$175.0 billion	145,915

**CHIPS-6.****Jobs Created Within *Transportation and Warehousing Sector ONLY* by CHIPS Major Investment Category with Budgetary Figures**

CHIPS Investment Category	Transportation and Warehousing Sector Jobs/\$1 Million				Annual Budget	Annual Job Creation				Job Years Created over 5 Years	
	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs		Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs	Total Budget	Total Job Years
1. Manufacturing	0.0	0.2	0.2	0.4	\$31.9 billion	0	7,378	5,539	12,917	\$159.7 billion	64,585
2. Research and Development	0.0	0.2	0.3	0.4	\$2.6 billion	0	394	639	1,033	\$13.0 billion	5,165
3. Defense	0.0	0.1	0.2	0.3	\$440.0 million	0	54	99	153	\$2.2 billion	765
Totals	--	--	--	--	\$35.0 billion	0	7,826	6,277	14,103	\$175.0 billion	70,515

**CHIPS-7.****Jobs Created Within *Utilities Sector ONLY* by CHIPS Major Investment Category with Budgetary Figures**

CHIPS Investment Category	Utilities Sector Jobs/ \$1 Million				Annual Budget	Annual Job Creation				Job Years Created over 5 Years	
	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs		Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs	Total Budget	Total Job Years
1. Manufacturing	0.0	0.01	0.0	0.02	\$31.9 billion	0	208	160	368	\$159.7 billion	1,840
2. Research and Development	0.0	0.001	0.01	0.02	\$2.6 billion	0	2	26	28	\$13.0 billion	140
3. Defense	0.0	0.0	0.01	0.02	\$440.0 million	0	0	4	4	\$2.2 billion	20
Totals	--	--	--	--	\$35.0 billion	0	210	190	400	\$175.0 billion	2,000

## Indicators of Job Quality Within Investment Categories

### CHIPS-8.

#### Indicators of Job Quality in *CHIPS-Related Employment* by Major Investment Category: Direct Jobs Only

	1. Total U.S. Workforce	CHIPS Investment Categories			
		2. Total CHIPS Workforce	3. Manufacturing	4. Research and Development	5. Defense
Average (median) hourly wage	\$23.70	\$30.25	\$29.35	\$33.55	\$33.80
Health insurance coverage, percentage	50.0%	55.6%	56.2%	52.3%	59.1%
Retirement plans, percentage	40.8%	39.4%	38.6%	41.2%	49.7%
Union membership	11.3%	6.9%	7.4%	4.6%	6.3%

Notes: Wages are in 2023 dollars. Health insurance coverage indicates the share of jobs with employer-sponsored health insurance. Retirement plans indicate the share of jobs with employers that offer retirement plans.

## CHIPS-9.

### Educational Credentials and Race/Gender Composition of Workers in CHIPS-Related Employment by Major Investment Category: Direct Jobs Only

	1. Total U.S. Workforce	CHIPS Investment Categories			
		2. Total CHIPS Workforce	3. Manufacturing	4. Research and Development	5. Defense
<b><i>Educational credentials</i></b>					
Share with less than high school degree	7.8%	8.1%	9.6%	2.5%	1.3%
Share with high school degree only	26.0%	24.0%	28.2%	7.6%	6.0%
Share with some college, no degree	15.4%	12.3%	13.1%	9.0%	9.5%
Share with Associate's degree ( <i>occupational/vocational or academic</i> )	10.4%	9.2%	10.0%	6.1%	5.6%
Share with Bachelor's degree or higher	40.5%	46.4%	39.1%	74.8%	77.7%
<b><i>Racial and gender composition of workforce</i></b>					
Pct. White, non-Latinx	60.5%	61.2%	60.0%	66.4%	65.4%
Pct. BIPOC ( <i>incl. Latinx</i> )	39.5%	38.8%	40.0%	33.6%	34.6%
Pct. Black, non-Latinx	12.7%	7.0%	6.5%	9.0%	9.7%
Pct. Asian, non-Latinx	6.9%	10.3%	9.7%	12.4%	13.2%
Pct. American Indian/Aleut/Eskimo, non-Latinx	0.7%	0.5%	0.5%	0.4%	0.4%
Pct. Other*, non-Latinx	0.9%	1.3%	1.2%	1.8%	1.8%
Pct. Latinx**	18.6%	19.9%	22.4%	10.1%	9.6%
Pct. Men***	53.2%	71.3%	77.5%	46.4%	47.6%
Pct. Women***	46.8%	28.7%	22.5%	53.6%	52.4%

Note: \*"Other" includes the following groups: Hawaiian/Pacific Islanders and multi-racial.

\*\* The CPS survey, on which these data are based, asks respondents to identify whether they are "Spanish, Hispanic, or Latino." We use Latinx here because of the growing usage of this ethnic category to identify people with Latin American, as opposed to, Spanish heritage. We use Latinx to be more inclusive across gender categories.

\*\*\* Labor Department data include only binary gender categories.

## Prevalent Job Types Within Investment Categories

### CHIPS-10.

Prevalent Job Types in *CHIPS-Related Employment* by Major Investment Category: Direct Jobs Only  
*Job categories with 5 percent or more employment*

#### Job Creation Through: **Manufacturing**

Job Category	Number of Direct Jobs	Percentage of Direct Jobs	Representative Occupations
Construction	17,511	27.7%	First-line supervisors of construction trades and extraction workers; painters and paperhangers; electricians
Management	11,885	18.8%	Sales managers, marketing managers; chief executives
Production	7,397	11.7%	First-line supervisors of production and operating workers; inspectors, testers, sorters, samplers, and weighers; electrical, electronics, and electromechanical assemblers
Architecture and Engineering, and Technicians	5,690	9.0%	Industrial engineers, including health and safety; mechanical engineers; electrical and electronics engineers
Office and Administrative Support	4,109	6.5%	Shipping, receiving, and inventory clerks; bookkeeping, accounting, and auditing clerks; secretaries and administrative assistants
Life, Physical, and Social Science	3,287	5.2%	Chemists and materials scientists; biological scientists; medical scientists

**CHIPS-11.****Prevalent Job Types in CHIPS-Related Employment by Major Investment Category: Direct Jobs Only**  
*Job categories with 5 percent or more employment*Job Creation Through: **Research and Development**

Job Category	Number of Direct Jobs	Percentage of Direct Jobs	Representative Occupations
Education, Training, and Library	3,267	24.1%	Teaching assistants; tutors; postsecondary teachers
Management	2,467	18.2%	Marketing managers; computer and information systems managers; chief executives
Life, Physical, and Social Science	2,331	17.2%	Chemists and materials scientists; biological scientists; medical scientists
Office and Administrative Support	1,057	7.8%	General office clerks; first-line supervisors of office and administrative support workers; customer service representatives
Computer and Mathematical	867	6.4%	Computer support specialists; network and computer systems administrators; software developers
Arts, Design, Entertainment, Sports, and Media	691	5.1%	Public relations specialists; graphic designers; writers and authors



**CHIPS-12.****Prevalent Job Types in *CHIPS-Related Employment* by Major Investment Category: Direct Jobs Only***Job categories with 5 percent or more employment*Job Creation Through: **Defense**

<b>Job Category</b>	<b>Number of Direct Jobs</b>	<b>Percentage of Direct Jobs</b>	<b>Representative Occupations</b>
Education, Training, and Library	551	23.5%	Tutors; teaching assistants; postsecondary teachers
Life, Physical, and Social Science	410	17.5%	Chemists and materials scientists; biological scientists; medical scientists
Management	401	17.1%	Computer and information systems managers; chief executives; education and childcare administrators
Office and Administrative Support	209	8.9%	Customer service representatives; general office clerks; secretaries and administrative assistants
Computer and Mathematical	152	6.5%	Network and computer systems administrators; computer support specialists

## Appendix: Individual Programs and Annual Budgetary Allocations by Investment Categories for BIL, IRA, and CHIPS

### BIL

1. BIL Individual Programs by Investment Category	Annual Budget (\$million)		
	2. Public Funding	3. Estimated Private Funding	4. Total Funding (= columns 2+3)
<b>ROADS, BRIDGES, PORTS AND WATERWAYS, AND TRANSPORTATION SAFETY</b>	<b>\$75,849</b>	<b>\$0</b>	<b>\$75,849</b>
<b><i>Roads, Bridges, and Major Projects</i></b>	<i>\$65,135</i>	<i>\$0</i>	<i>\$65,135</i>
National Highway Performance Program	\$29,600	\$0	\$29,600
Surface Transportation Block Grant Program	\$14,400	\$0	\$14,400
Bridge Formula Program	\$5,335	\$0	\$5,335
Congestion Mitigation and Air Quality Improvement Program	\$2,640	\$0	\$2,640
Bridge Investment Program	\$2,440	\$0	\$2,440
Local and Regional Project Assistance Grants (RAISE)	\$1,500	\$0	\$1,500
Nationally Significant Freight and Highway Projects (INFRA)	\$1,450	\$0	\$1,450
National Highway Freight Program	\$1,430	\$0	\$1,430
Carbon Reduction Program	\$1,284	\$0	\$1,284
National Infrastructure Project Assistance (Megaprojects)	\$1,000	\$0	\$1,000
Tribal Transportation Program	\$593	\$0	\$593
Metropolitan Planning	\$456	\$0	\$456
Rural Surface Transportation Grant Program	\$400	\$0	\$400
Federal Lands Transportation Program (funds for National Park Service)	\$346	\$0	\$346
Federal Lands Access Program	\$298	\$0	\$298
Appalachian Development Highway System	\$250	\$0	\$250
Transportation Infrastructure Finance and Innovation Act	\$250	\$0	\$250
National Culvert Removal, Replacement, & Restoration Grant	\$200	\$0	\$200
Reconnecting Communities Pilot Program	\$200	\$0	\$200
Puerto Rico Highway Program	\$180	\$0	\$180
Tribal Transportation Facility Bridges (Bridge Formula Funding Set-Aside)	\$165	\$0	\$165
State Incentives Pilot Program (Set-aside within Nationally Significant Freight and Highway Projects - INFRA)	\$150	\$0	\$150
Highway Research & Development Program	\$62	\$0	\$62
Advanced Transportation Technologies & Innovative Mobility Deployment	\$60	\$0	\$60
Nationally Significant Federal Lands and Tribal Projects	\$55	\$0	\$55
Congestion Relief Program	\$50	\$0	\$50
Intelligent Transportation Systems Program	\$50	\$0	\$50

1. BIL Individual Programs by Investment Category (Cont.)	Annual Budget (\$million)		
	2. Public Funding	3. Estimated Private Funding	4. Total Funding (= columns 2+3)
Territorial Highway Program	\$48	\$0	\$48
Tribal Transportation Facility Bridge (Set-aside)	\$40	\$0	\$40
Federal Lands Transportation Program (Funding for U.S. Fish & Wildlife Service)	\$36	\$0	\$36
Federal Lands Transportation Program (For other Federal Land Management Agencies)	\$31	\$0	\$31
Federal Lands Transportation Program (Funding for U.S. Forest Service)	\$26	\$0	\$26
Accelerated Implementation and Deployment of Advanced Digital Construction Management Systems (Set-aside)	\$20	\$0	\$20
Grants for Planning, Feasibility Analysis, and Revenue Forecasting (Bridge Investment Program Set-aside)	\$20	\$0	\$20
Strategic Innovation for Revenue Collection (Set-aside)	\$15	\$0	\$15
Accelerated Implementation and Deployment of Pavement Technologies (Set-aside)	\$12	\$0	\$12
Disadvantaged Business Enterprises	\$10	\$0	\$10
National Motor Vehicle Per-Mile User Fee Pilot (Set-aside)	\$10	\$0	\$10
On-the-Job Training Program	\$10	\$0	\$10
Tribal High Priority Projects Program	\$9	\$0	\$9
Highway Use Tax Evasion Projects	\$4	\$0	\$4
<b>Transportation Safety</b>	<b>\$7,324</b>	<b>\$0</b>	<b>\$7,324</b>
Highway Safety Improvement Program	\$3,111	\$0	\$3,111
Safe Streets and Roads for All	\$1,000	\$0	\$1,000
Railroad Crossing Elimination Grants	\$600	\$0	\$600
Motor Carrier Safety Assistance Program	\$487	\$0	\$487
Highway Safety Programs	\$398	\$0	\$398
Motor Carrier Safety Operations and Programs	\$385	\$0	\$385
National Priority Safety Programs	\$375	\$0	\$375
Railway-Highway Crossings Program	\$245	\$0	\$245
Highway Safety Research & Development	\$194	\$0	\$194
Crash Data	\$150	\$0	\$150
Vehicle Safety and Behavioral Research	\$110	\$0	\$110
High Priority Activities Program	\$87	\$0	\$87
Wildlife Crossings Pilot Program	\$70	\$0	\$70
Commercial Driver's License Implementation Program	\$60	\$0	\$60
High-Visibility Enforcement	\$40	\$0	\$40
National Driver Register	\$7	\$0	\$7
Commercial Motor Vehicle Enforcement Training & Support Grant Program	\$5	\$0	\$5
<b>Ports and Waterways</b>	<b>\$3,334</b>	<b>\$0</b>	<b>\$3,334</b>
Corps of Engineers Operation and Maintenance	\$800	\$0	\$800
Real Property Activities	\$684	\$0	\$684

1. BIL Individual Programs by Investment Category (Cont.)	Annual Budget (\$million)		
	2. Public Funding	3. Estimated Private Funding	4. Total Funding (= columns 2+3)
Inland Waterways Projects	\$500	\$0	\$500
Port Infrastructure Development Program Grants	\$450	\$0	\$450
Major Rehabilitation for Rivers and Harbors	\$300	\$0	\$300
Construction of Ferry Boats and Ferry Terminal Facilities	\$182	\$0	\$182
Mississippi River and Tributaries	\$162	\$0	\$162
Reduction of Truck Emissions at Port Facilities	\$80	\$0	\$80
Land Port of Entry Modernization 1	\$66	\$0	\$66
Major Shore, Housing, Aids to Navigation, Survey and Design 2	\$32	\$0	\$32
Major Shore, Housing, Aids to Navigation, Survey and Design 4	\$26	\$0	\$26
Major Shore, Housing, Aids to Navigation, Survey and Design 1	\$24	\$0	\$24
Land Port of Entry Modernization 2	\$20	\$0	\$20
America's Marine Highway Program Grants	\$5	\$0	\$5
Major Shore, Housing, Aids to Navigation, Survey and Design 3	\$4	\$0	\$4
<b>Transportation - Other</b>	<b>\$57</b>	<b>\$0</b>	<b>\$57</b>
Bureau of Transportation Statistics	\$27	\$0	\$27
Asset Concessions Innovative Financing Technical Assistance	\$20	\$0	\$20
Prioritization Process Pilot Program	\$10	\$0	\$10
<b>PUBLIC TRANSIT AND FREIGHT RAIL</b>	<b>\$29,893</b>	<b>\$0</b>	<b>\$29,893</b>
<b>Public Transportation</b>	<b>\$17,293</b>	<b>\$0</b>	<b>\$17,293</b>
Urbanized Area Formula Grants	\$6,678	\$0	\$6,678
State of Good Repair Formula Grants	\$4,328	\$0	\$4,328
Capital Investment Grants	\$1,600	\$0	\$1,600
Formula Grants for Rural Areas	\$822	\$0	\$822
Bus and Bus Facilities Formula Grants	\$632	\$0	\$632
Enhanced Mobility of Seniors and Individuals with Disabilities	\$439	\$0	\$439
Growing State Apportionments	\$411	\$0	\$411
Ferry Service for Rural Communities	\$400	\$0	\$400
Bus and Bus Facilities Competitive Grants	\$393	\$0	\$393
Growing States and High-Density States Formula	\$365	\$0	\$365
All Stations Accessibility Program	\$350	\$0	\$350
Rail Vehicle Replacement Grants	\$300	\$0	\$300
Metropolitan Transportation Planning Program	\$160	\$0	\$160
Strengthening Mobility and Revolutionizing Transportation (SMART) Grants	\$100	\$0	\$100
University Transportation Centers (UTC) Program	\$100	\$0	\$100
Public Transportation on Indian Reservations Formula	\$37	\$0	\$37
Statewide Transportation Planning	\$33	\$0	\$33

1. BIL Individual Programs by Investment Category (Cont.)	Annual Budget (\$million)		
	2. Public Funding	3. Estimated Private Funding	4. Total Funding (= columns 2+3)
Urbanized Area Passenger Ferry Program	\$30	\$0	\$30
Appalachian Development Public Transportation Assistance Program	\$27	\$0	\$27
Research, Development, Demonstration and Deployment Projects	\$26	\$0	\$26
Rural Transportation Assistance Program	\$18	\$0	\$18
Pilot Program for Transit Oriented Development	\$14	\$0	\$14
Public Transportation on Indian Reservations Competitive	\$9	\$0	\$9
Transit Cooperative Research Program	\$7	\$0	\$7
Public Transportation Technical Assistance and Workforce Development	\$6	\$0	\$6
Pilot Program for Enhanced Mobility	\$5	\$0	\$5
National Rural Transportation Assistance Program	\$3	\$0	\$3
<b>Passenger and Freight Rail</b>	<b>\$12,600</b>	<b>\$0</b>	<b>\$12,600</b>
Federal-State Partnership for Intercity Passenger Rail Grants	\$7,200	\$0	\$7,200
Amtrak National Network Grants	\$3,150	\$0	\$3,150
Amtrak Northeast Corridor Grants	\$1,200	\$0	\$1,200
Consolidated Rail Infrastructure and Safety Improvement Grants	\$1,000	\$0	\$1,000
Restoration & Enhancement Grant Program	\$50	\$0	\$50
<b>ENERGY PRODUCTION, SAFETY, AND ENVIRONMENTAL REMEDIATION</b>	<b>\$12,907</b>	<b>\$925</b>	<b>\$13,832</b>
<b>Energy</b>	<b>\$8,269</b>	<b>\$925</b>	<b>\$9,194</b>
Power Marketing Administration Transmission Borrowing Authority	\$2,000	\$0	\$2,000
Transmission Facilitation Program	\$500	\$925	\$1,425
Civil Nuclear Credit Program	\$1,200	\$0	\$1,200
Preventing Outages and Enhancing the Lands & Resilience of the Electric Grid / Hazard Hardening	\$1,000	\$0	\$1,000
Program Upgrading Our Electric Grid and Ensuring Reliability and Resiliency	\$1,000	\$0	\$1,000
Smart Grid Investment Matching Grant Program	\$600	\$0	\$600
Advanced Reactor Demonstration Program	\$495	\$0	\$495
Clean Hydrogen Electrolysis Program	\$200	\$0	\$200
Energy Improvement in Rural or Remote Areas	\$200	\$0	\$200
Critical Material Innovation, Efficiency, and Alternatives	\$120	\$0	\$120
Rehabilitation of High Hazard Potential Dams	\$117	\$0	\$117
Maintaining and Enhancing Hydroelectricity Incentives	\$111	\$0	\$111
Purchase of Power and Transmission Services	\$100	\$0	\$100
State Energy Program	\$100	\$0	\$100
Energy Storage Demonstration and Pilot Grant Program	\$71	\$0	\$71
Earth Mapping Resources Initiative	\$64	\$0	\$64
Cybersecurity for the Energy Sector Research, Development, and Demonstration Program	\$50	\$0	\$50
National Dam Safety Program	\$43	\$0	\$43

1. BIL Individual Programs by Investment Category (Cont.)	Annual Budget (\$million)		
	2. Public Funding	3. Estimated Private Funding	4. Total Funding (= columns 2+3)
Energy and Minerals Research Facility	\$33	\$0	\$33
Long-Duration Energy Storage Demonstration Initiative and Joint Program	\$30	\$0	\$30
Rare Earth Elements Demonstration Facility	\$28	\$0	\$28
Rare Earth Security Activities	\$25	\$0	\$25
Hydroelectric Production Incentives	\$25	\$0	\$25
Watershed Rehabilitation Program	\$24	\$0	\$24
Enhanced Geothermal Systems and Pilot Demonstrations	\$17	\$0	\$17
Section 243 Hydroelectric Efficiency Improvement Incentives (Sec 40332)	\$15	\$0	\$15
Critical Material Supply Chain Research Facility	\$15	\$0	\$15
Marine Energy Research, Development, and Demonstration	\$14	\$0	\$14
Wind Energy Technology Program	\$12	\$0	\$12
Advanced Energy Security Program	\$10	\$0	\$10
National Marine Energy Centers	\$8	\$0	\$8
Solar Energy Research and Development	\$8	\$0	\$8
Wind Energy Tech Recycling Research & Development	\$8	\$0	\$8
Hydropower Research, Development, and Demonstration	\$7	\$0	\$7
Solar Recycling Research & Development	\$4	\$0	\$4
New Solar Research & Development	\$4	\$0	\$4
Capital Improvement and Maintenance for Dams	\$2	\$0	\$2
Energy Efficient Transformer Rebates	\$2	\$0	\$2
Extended Product System Rebates	\$2	\$0	\$2
Pumped Storage Hydropower Wind and Solar Integration and System Reliability Initiative	\$2	\$0	\$2
Bioproduct Pilot Program	\$2	\$0	\$2
<b>Environmental Remediation</b>	<b>\$4,438</b>	<b>\$0</b>	<b>\$4,438</b>
Abandoned Mine Reclamation Fund	\$2,259	\$0	\$2,259
Orphaned Well Site Plugging, Remediation, And Restoration	\$935	\$0	\$935
Superfund	\$700	\$0	\$700
Brownfields Projects	\$240	\$0	\$240
Clean Energy Demonstrations on Current and Former Mine Land	\$100	\$0	\$100
Brownfields State & Tribal Response Programs	\$60	\$0	\$60
Solid Waste Infrastructure for Recycling Infrastructure Grants	\$55	\$0	\$55
Marine Debris 1	\$30	\$0	\$30
Direct Federal Spending for Revegetation of Mined Lands	\$20	\$0	\$20
Reduce, Reuse, Recycling Education and Outreach Grants	\$15	\$0	\$15
Marine Debris 2	\$10	\$0	\$10
Good Neighbor Agreements with States and Tribes	\$8	\$0	\$8

1. BIL Individual Programs by Investment Category (Cont.)	Annual Budget (\$million)		
	2. Public Funding	3. Estimated Private Funding	4. Total Funding (= columns 2+3)
Funding to Support Orphan Well Plugging	\$6	\$0	\$6
<b>Pipeline Safety</b>	\$200	\$0	\$200
Natural Gas Distribution Infrastructure Safety and Modernization Grants	\$200	\$0	\$200
<b>BROADBAND</b>	<b>\$12,882</b>	<b>\$740</b>	<b>\$13,622</b>
Broadband Equity, Access, and Deployment Program	\$8,490	\$0	\$8,490
Affordable Connectivity Program	\$2,840	\$0	\$2,840
Distance Learning, Telemedicine, and Broadband Program: Reconnect Program	\$385	\$713	\$1,098
Tribal Broadband Connectivity Program	\$400	\$0	\$400
State Digital Equity Capacity Grant	\$288	\$0	\$288
State Digital Equity Competitive Grant	\$250	\$0	\$250
Middle Mile Grant Program	\$200	\$0	\$200
Distance Learning, Telemedicine, and Broadband Program: Broadband Loans	\$15	\$27	\$42
State Digital Equity Planning Grant	\$12	\$0	\$12
Broadband Deployment Locations Map	\$2	\$0	\$2
Denali Commission: Broadband Funding	\$0.05	\$0	\$0.05
<b>WATER</b>	<b>\$12,932</b>	<b>\$0</b>	<b>\$12,932</b>
Drinking Water State Revolving Fund Lead Service Lines Replacement	\$3,000	\$0	\$3,000
Clean Water State Revolving Fund	\$2,343	\$0	\$2,343
Drinking Water State Revolving Fund	\$2,343	\$0	\$2,343
Water Infrastructure Improvements for the Nation, Small and Underserved Communities Emerging Contaminants Grant Program	\$1,000	\$0	\$1,000
Drinking Water State Revolving Fund Emerging Contaminants (incl. PFAS)	\$800	\$0	\$800
Indian Health Service Sanitation Facilities Construction Program	\$700	\$0	\$700
Aging Infrastructure Account	\$640	\$0	\$640
Indian Water Rights Settlements	\$500	\$0	\$500
Water & Groundwater Storage, and Conveyance	\$230	\$0	\$230
Clean Water State Revolving Fund-Emerging Contaminants	\$200	\$0	\$200
Rural Water Projects	\$200	\$0	\$200
Water Recycling	\$200	\$0	\$200
Geographic Programs - Great Lakes Restoration Initiative	\$200	\$0	\$200
Dam Safety Program	\$100	\$0	\$100
WaterSMART Grants	\$80	\$0	\$80
Colorado River Drought Contingency Plan	\$60	\$0	\$60
Water Desalination Projects	\$50	\$0	\$50
Geographic Programs - Chesapeake Bay Program	\$48	\$0	\$48
Safety of Dams, Water Sanitation, and Other Facilities	\$40	\$0	\$40

1. BIL Individual Programs by Investment Category (Cont.)	Annual Budget (\$million)		
	2. Public Funding	3. Estimated Private Funding	4. Total Funding (= columns 2+3)
National Estuary Program Grants	\$26	\$0	\$26
Geographic Programs - Long Island Sound	\$21	\$0	\$21
Watershed Management Projects	\$20	\$0	\$20
Geographic Programs - Puget Sound	\$18	\$0	\$18
Geographic Programs - Columbia River Basin Restoration Program	\$16	\$0	\$16
Gulf Hypoxia	\$12	\$0	\$12
Geographic Programs - Gulf of Mexico	\$11	\$0	\$11
Geographic Programs - Lake Pontchartrain Restoration Program	\$11	\$0	\$11
Tribal Irrigation and Power Systems	\$10	\$0	\$10
Underground Injection Control Grants: Class VI wells	\$10	\$0	\$10
Colorado River Endangered Species Recovery and Conservation Programs	\$10	\$0	\$10
Central Utah Project	\$10	\$0	\$10
Geographic Programs - Lake Champlain	\$8	\$0	\$8
Water Resources Development Act Data Acquisition	\$5	\$0	\$5
Geographic Programs - San Francisco Bay Water Quality Improvement Fund	\$5	\$0	\$5
Geographic Programs - South Florida Geographic Initiatives Program	\$3	\$0	\$3
Geographic Programs - Southeast New England Coastal Watershed Restoration Program	\$3	\$0	\$3
Geographic Programs - Northwest Forest	\$1	\$0	\$1
Soil Moisture and Snowpack Pilot Program	\$0.20	\$0	\$0.20
<b>LANDS &amp; RESILIENCE</b>	<b>\$7,494</b>	<b>\$0</b>	<b>\$7,494</b>
Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) - Formula	\$1,460	\$0	\$1,460
Flood Mitigation Assistance Grants (National Flood Insurance Act Sec 1366)	\$700	\$0	\$700
Coastal Storm Risk Management, Hurricane, and Storm Damage Reduction Projects	\$510	\$0	\$510
Inland Flood Risk Management Projects	\$500	\$0	\$500
Aquatic Ecosystem Restoration Projects	\$380	\$0	\$380
Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) - Discretionary 1	\$280	\$0	\$280
Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) - Discretionary 2	\$280	\$0	\$280
Building Resilient Infrastructure and Communities (Robert T Stafford Act Section 203(i))	\$200	\$0	\$200
Community Wildfire Defense Grant Program for At-Risk Communities	\$200	\$0	\$200
State and Local Cybersecurity Grant Program	\$200	\$0	\$200
Wildfire Management - Fuels Management	\$176	\$0	\$176
Hazardous Fuels Management	\$103	\$0	\$103
Hazard Mitigation Revolving Loan Funds/Safeguarding Tomorrow through Ongoing Risk Mitigation (STORM) Act (Robert T Stafford Act, Sec 205)	\$100	\$0	\$100
Watershed And Flood Prevention Operations	\$100	\$0	\$100



1. BIL Individual Programs by Investment Category (Cont.)	Annual Budget (\$million)		
	2. Public Funding	3. Estimated Private Funding	4. Total Funding (= columns 2+3)
Flood and Inundation Mapping and Forecasting, Water Modeling, and Precipitation Studies	\$98	\$0	\$98
National Oceans and Coastal Security Fund	\$98	\$0	\$98
Habitat Restoration	\$98	\$0	\$98
Federal Wildland Firefighter Salaries and Expenses	\$96	\$0	\$96
Continuing Authorities Program (Under Flood Control Act and River and Harbor Act)	\$93	\$0	\$93
Fish Passage	\$80	\$0	\$80
Financial Assistance to Facilities that Purchase and Process Byproducts for Ecosystem Restoration Projects	\$80	\$0	\$80
Grants for States and Tribes for Voluntary Restoration	\$80	\$0	\$80
Hazardous Fuels (Mechanical Thinning and Timber Harvesting; Precommercial Thinning in Young Growth)	\$80	\$0	\$80
Department of Interior Wildfire Management - Burned Area Rehabilitation	\$65	\$0	\$65
Emergency Watershed Protection Program	\$60	\$0	\$60
Flood Control and Coastal Emergencies	\$50	\$0	\$50
Aquatic Ecosystem Restoration and Protection Projects	\$50	\$0	\$50
Capital Improvement And Maintenance - Legacy Road and Trail Remediation Program	\$50	\$0	\$50
Fuel Breaks	\$50	\$0	\$50
Prescribed Fires	\$50	\$0	\$50
Rural and Municipal Utility Advances Cybersecurity Grant and Technical Assistance Program	\$50	\$0	\$50
Department of Interior Wildfire Management - Preparedness	\$49	\$0	\$49
Hazardous Materials and Emergency Preparedness Grants	\$47	\$0	\$47
Burned Area Recovery	\$45	\$0	\$45
Coastal Zone Management	\$41	\$0	\$41
State Forest Action Plans	\$40	\$0	\$40
Ecosystem - Fish Passage	\$40	\$0	\$40
Water-Related Environmental Infrastructure Assistance	\$40	\$0	\$40
Pacific Coastal Salmon Recovery Fund	\$34	\$0	\$34
Ecosystem - Klamath Basin	\$32	\$0	\$32
Regulatory Program	\$32	\$0	\$32
Restoration Projects Via States and Tribes	\$32	\$0	\$32
Ecological Health Restoration Contracts	\$30	\$0	\$30
Tribal Climate Lands & Resilience - Community Relocation	\$26	\$0	\$26
Capital Improvement and Maintenance - Construction and Maintenance of Roads for Forest Restoration Projects that Reduce Wildfire Risk	\$20	\$0	\$20
Collaborative Forest Landscape Restoration Program	\$20	\$0	\$20
Cyber Response and Recovery Fund	\$20	\$0	\$20
Direct Federal Spending for Invasives	\$20	\$0	\$20

1. BIL Individual Programs by Investment Category (Cont.)	Annual Budget (\$million)		
	2. Public Funding	3. Estimated Private Funding	4. Total Funding (= columns 2+3)
Forest Health Management on Federal Lands Program and Forest Health Management on Cooperative Lands Program	\$20	\$0	\$20
Multi-Benefit Projects to Improve Watershed Health	\$20	\$0	\$20
Ocean and Coastal Observing Systems 1	\$20	\$0	\$20
Pollution Prevention Grants	\$20	\$0	\$20
Post-Fire Restoration	\$20	\$0	\$20
Removal of Vegetation for Biochar and Innovative Wood Products	\$20	\$0	\$20
Restore Native Vegetation on Federal/Non-Federal Land	\$20	\$0	\$20
Working Capital Fund	\$20	\$0	\$20
State Fire Assistance	\$18	\$0	\$18
Tribal Climate Lands & Resilience - Adaptation Planning	\$17	\$0	\$17
Landscape Scale Restoration Water Quality and Fish Passage	\$16	\$0	\$16
Research Supercomputing	\$16	\$0	\$16
National Estuarine Research Reserve System	\$15	\$0	\$15
Water Infrastructure Finance and Innovation Program Account	\$15	\$0	\$15
Direct Federal Spending (or Other) for National Revegetation Strategy	\$14	\$0	\$14
Revegetation Effort to Implement National Seed Strategy	\$14	\$0	\$14
Critical Infrastructure Security and Lands & Resilience Research	\$14	\$0	\$14
National Seed Strategy	\$12	\$0	\$12
Regional Ocean Partnerships	\$11	\$0	\$11
Recreation Sites	\$11	\$0	\$11
Temporary Water Crossing Structures	\$10	\$0	\$10
Contracts and Agreements for Restoration on Federal Lands	\$10	\$0	\$10
Ecosystem - Sagebrush-Steppe	\$10	\$0	\$10
Energy Sector Operational Support for Cyber Lands & Resilience Program	\$10	\$0	\$10
Ocean and Coastal Observing Systems 2	\$10	\$0	\$10
Preplanning Fire Response Workshops and Workforce Training	\$10	\$0	\$10
Wildfire	\$10	\$0	\$10
Direct Federal Spending for Resilient Recreation Sites	\$9	\$0	\$9
Flood Plain Management Services	\$9	\$0	\$9
To Complete or Initiate and Complete Studies that Were Authorized Prior to the Date of this Act	\$9	\$0	\$9
Physical Security	\$8	\$0	\$8
Sector Risk Management Agencies	\$7	\$0	\$7
Planning Assistance to States	\$6	\$0	\$6
Provide Financial Assistance to States, Tribes, and Units of Local Government to Establish and Operate Reverse-911 Telecommunication Systems	\$6	\$0	\$6
Section 118 Of Water Resources Development Act of 2020	\$6	\$0	\$6

1. BIL Individual Programs by Investment Category (Cont.)	Annual Budget (\$million)		
	2. Public Funding	3. Estimated Private Funding	4. Total Funding (= columns 2+3)
Ecosystem - Delaware River Basin Conservation Act	\$5	\$0	\$5
National Geological and Geophysical Data Preservation Program	\$5	\$0	\$5
Consultations and Permitting	\$4	\$0	\$4
Southwest Ecological Restoration Institute	\$4	\$0	\$4
Volunteer Fire Assistance	\$4	\$0	\$4
Ecosystem - Lake Tahoe	\$3	\$0	\$3
Cybersecurity	\$3	\$0	\$3
Probabilistic Analysis of National Threats, Hazards, and Risks	\$3	\$0	\$3
Countering Violent Extremism	\$3	\$0	\$3
Agreement with National Oceanic and Atmospheric Administration for Geostationary Operations Environmental Satellite Program	\$2	\$0	\$2
Research and Development Via Joint Fire Science Program Partnership with Department Of Interior	\$2	\$0	\$2
Wildfire Management - Joint Fire Science Program with Department of Agriculture	\$2	\$0	\$2
Firewood Banks	\$2	\$0	\$2
Wildfire Detection and Monitoring Equipment	\$1	\$0	\$1
First Responder Capability	\$1	\$0	\$1
Explosives Threat Assessment	\$1	\$0	\$1
Develop and Publish Every 5 Years a Map Depicting At-Risk Communities, Including Tribal Communities	\$0.24	\$0	\$0.24
Network and System Security and Investment	\$0.20	\$0	\$0.20
<b>ALTERNATIVE ENERGY AND STORAGE</b>	<b>\$5,740</b>	<b>\$0</b>	<b>\$5,740</b>
Regional Clean Hydrogen Hubs	\$1,600	\$0	\$1,600
Four Regional Clean Direct Air Capture Hubs	\$700	\$0	\$700
Battery Manufacturing and Recycling Grants	\$600	\$0	\$600
Battery Materials Processing Grants	\$600	\$0	\$600
Carbon Capture Demonstration Projects Program	\$507	\$0	\$507
Carbon Storage Validation and Testing	\$500	\$0	\$500
Carbon Dioxide Transportation Infrastructure Finance and Innovation Program	\$420	\$0	\$420
Carbon Capture Large-Scale Pilot Programs	\$187	\$0	\$187
Advanced Energy Manufacturing and Recycling Grants	\$150	\$0	\$150
Clean Hydrogen Manufacturing Recycling Research, Development, and Demonstration Program	\$100	\$0	\$100
Industrial Emission Demonstration Projects	\$100	\$0	\$100
Industrial Research and Assessment Center Implementation Grants	\$80	\$0	\$80
Carbon Utilization Program	\$62	\$0	\$62
Industrial Research and Assessment Centers	\$30	\$0	\$30
Battery and Critical Mineral Recycling	\$25	\$0	\$25
Commercial Direct Air Capture Technology Prize Competition	\$20	\$0	\$20

1. BIL Individual Programs by Investment Category (Cont.)	Annual Budget (\$million)		
	2. Public Funding	3. Estimated Private Funding	4. Total Funding (= columns 2+3)
Front-End Engineering and Design Program out Activities under Carbon Capture Tech Program 962 of EPA (Sec 40303)	\$20	\$0	\$20
Technology & Innovation Deployment Program	\$18	\$0	\$18
Manufacturing Leadership (Sec 40534)	\$10	\$0	\$10
Pre-Commercial Direct Air Capture Prize Competitions	\$3	\$0	\$3
Battery Labeling Guidelines	\$3	\$0	\$3
Lithium-Ion Recycling Prize	\$2	\$0	\$2
Battery Recycling Best Practices	\$2	\$0	\$2
<b>AIRPORTS</b>	<b>\$5,000</b>	<b>\$0</b>	<b>\$5,000</b>
Airport Infrastructure Grants	\$3,000	\$0	\$3,000
Airport Terminal Program	\$1,000	\$0	\$1,000
Facilities and Equipment	\$1,000	\$0	\$1,000
<b>ELECTRIC VEHICLES, BUSES, AND FERRIES</b>	<b>\$3,727</b>	<b>\$0</b>	<b>\$3,727</b>
Low or No Emission (Bus) Grants	\$1,125	\$0	\$1,125
Clean School Bus Program	\$1,000	\$0	\$1,000
National Electric Vehicle Infrastructure Formula Program	\$1,000	\$0	\$1,000
Charging and Fueling Infrastructure Grants (Community Charging)	\$250	\$0	\$250
Charging and Fueling Infrastructure Grants (Corridor Charging)	\$250	\$0	\$250
Electric or Low-Emitting Ferry Program	\$50	\$0	\$50
Electric Drive Vehicle Battery Recycling and 2nd Life Apps	\$40	\$0	\$40
Low or No Emission Vehicle Component Assessment Program	\$5	\$0	\$5
Safety-Related Activities	\$4	\$0	\$4
Commercial Motor Vehicle Operators Grant Program	\$3	\$0	\$3
<b>BUILDINGS</b>	<b>\$1,165</b>	<b>\$0</b>	<b>\$1,165</b>
Weatherization Assistance Program	\$700	\$0	\$700
Energy Efficiency and Conservation Block Grant Program	\$110	\$0	\$110
Grants for Energy Efficiency and Renewable Energy Improvements at Public School Facilities	\$100	\$0	\$100
Low Income Home Energy Assistance Program	\$100	\$0	\$100
Assisting Federal Facilities with Energy Conservation Technologies Grant Program	\$50	\$0	\$50
Energy Efficiency Revolving Loan Fund Capitalization Grant Program	\$50	\$0	\$50
Cost-Effective Codes Implementation for Efficiency and Lands & Resilience	\$45	\$0	\$45
Energy Efficiency Materials Pilot Program	\$10	\$0	\$10
<b>ECONOMIC DEVELOPMENT</b>	<b>\$306</b>	<b>\$0</b>	<b>\$306</b>
Appalachian Regional Commission Funds	\$160	\$0	\$160
Training & Education	\$26	\$0	\$26
Northern Border Regional Commission: Infrastructure Program	\$25	\$0	\$25

1. BIL Individual Programs by Investment Category (Cont.)	Annual Budget (\$million)		
	2. Public Funding	3. Estimated Private Funding	4. Total Funding (= columns 2+3)
Appalachian Area Development: Allocations to ARC States	\$20	\$0	\$20
Appalachian Area Development: Regional MultiState Initiative	\$16	\$0	\$16
Delta Regional Authority: Community Infrastructure Fund	\$15	\$0	\$15
Denali Commission: Infrastructure Fund	\$10	\$0	\$10
Energy Auditor Training Grant Program	\$8	\$0	\$8
Delta Regional Authority: Delta Workforce Program	\$6	\$0	\$6
Delta Regional Authority: States' Economic Development Assistance Program	\$5	\$0	\$5
Appalachian Area Development: Community Capacity Initiative	\$2	\$0	\$2
Building, Training, and Assessment Centers	\$2	\$0	\$2
Career Skills Training	\$2	\$0	\$2
Denali Commission: Village Infrastructure Protection	\$2	\$0	\$2
Northern Border Regional Commission: State Economic & Infrastructure Development (SEID) Program	\$2	\$0	\$2
Delta Regional Authority: Strategic Planning Grants	\$2	\$0	\$2
Delta Regional Authority: LDD Pilot Program	\$1	\$0	\$1
Denali Commission: Energy Reliability & Security	\$1	\$0	\$1
Southeast Crescent Regional Commission Funding	\$1	\$0	\$1
Denali Commission: Workforce Development	\$1	\$0	\$1
Denali Commission: Emergency Fund	\$1	\$0	\$1

## IRA

1. IRA Individual Programs by Investment Category	Annual Budget (\$million)		
	2. Public Funding	3. Estimated Private Funding	4. Total Funding (= columns 2+3)
<b>ELECTRICITY</b>	<b>\$21,405</b>	<b>\$44,907</b>	<b>\$66,312</b>
Energy Infrastructure Reinvestments: Sec. 50144 DOE Loan Guarantee Authority	\$500	\$24,500	\$25,000
Renewable Energy Production Tax Credit: Sec. 13101: Extension and modification of credit for electricity produced, Sec. 13103: Increase in energy credit for solar and wind facilities placed in service in connection with low-income communities	\$5,106	\$5,106	\$10,212
Clean Electricity Investment Tax Credit: Sec. 13702: Clean electricity investment credit	\$5,086	\$5,086	\$10,172
Nuclear Production Tax Credit: Sec. 13105: Zero-emission nuclear power production credit	\$3,000	\$3,000	\$6,000
Clean Energy Loan Guarantees: Sec. 50141 DOE Loan Programs Office	\$360	\$3,640	\$4,000
Energy Investment Tax Credit: Sec. 13102: Extension and modification of energy credit	\$1,396	\$1,396	\$2,792
Greenhouse Gas Reduction Fund: Sec. 60103: Greenhouse Gas Reduction Fund	\$2,700	\$0	\$2,700
Clean Electricity Production Tax Credit: Sec. 13701: Clean electricity production credit	\$1,120	\$1,120	\$2,241
Rural Electric Cooperative Loans: Sec. 22004: USDA assistance for rural electric cooperatives	\$970	\$0	\$970
Carbon Capture Tax Credit: Sec. 13104: Extension and Modification of Credit for Carbon Dioxide	\$323	\$323	\$646
Transmission Facility Loans: Sec. 50151: Transmission facility financing	\$200	\$200	\$400
Tribal Energy Loan Guarantees: Sec. 50145 Tribal loan guarantuees	\$8	\$373	\$380
National Laboratory Investments: Sec. 50172: National laboratory infrastructure	\$200	\$0	\$200
Rural Renewable Energy Loans: Sec. 22001: Additional funding for electric loans for renewable energy	\$100	\$100	\$200
Cost Recovery for Energy Technology: Sec. 13703: Cost recovery for qualified facilities, qualified property, and energy storage technology	\$62	\$62	\$125
Hydrogen and Fuel Cell Technologies: Sec. 22002: Rural Energy for America Program	\$100	\$0	\$100
Interstate Transmission Line Grants: Sec. 50152: Grants to facilitate the siting of interstate electricity transmission lines; Sec. 50153: Interregional and offshore wind electricity transmission planning, modeling, and analysis	\$76	\$0	\$76
Uranium Investments: Sec. 50173: Availability of high-assay low-enriched uranium	\$70	\$0	\$70
Underutilized renewable energy technologies: Sec. 22002: Rural Energy for America Program	\$18	\$0	\$18
Interregional Transmission Planning Investments: Sec. 50153: Interregional and offshore wind electricity transmission planning, modeling, and analysis	\$10	\$0	\$10
<b>MANUFACTURING</b>	<b>\$6,683</b>	<b>\$6,086</b>	<b>\$12,769</b>
Wind, Solar, and Battery Manufacturing Production Tax Credit: Sec. 13502: Advanced manufacturing production credit	\$3,062	\$3,062	\$6,124
Hydrogen Production Tax Credit: Sec. 13204: Clean Hydrogen	\$1,317	\$1,317	\$2,633
Clean Manufacturing Investment Tax Credit: Sec. 13501: Extension of the Advanced Energy Project Credit	\$626	\$626	\$1,251
Industrial Emissions Reduction Investments: Sec. 50161: Advanced Industrial Facilities Deployment Program	\$581	\$581	\$1,162
EV Manufacturing Loans: Sec. 50142: Advanced Technology Vehicle Manufacturing	\$300	\$300	\$600
EV Manufacturing Grants: Sec. 50143: Domestic manufacturing conversion grants	\$200	\$200	\$400
Low-Carbon Materials Investments: Sec. 60503: Use of low-carbon materials; Sec. 70006: FEMA building materials program	\$215	\$0	\$215

1. IRA Individual Programs by Investment Category (Cont.)	Annual Budget (\$million)		
	2. Public Funding	3. Estimated Private Funding	4. Total Funding (= columns 2+3)
Low-Carbon Materials Investments: Sec. 60506: Low-carbon transportation materials grants; Sec. 70006: FEMA building materials program	\$200	\$0	\$200
Low-Carbon Materials Investments: Sec. 60504: General Services Administration emerging technologies	\$98	\$0	\$98
Defense Production Act: Sec. 30001: Enhanced use of Defense Production Act of 1950	\$50	\$0	\$50
Low-Carbon Materials Investments: Sec. 60112: Environmental Product Declaration Assistance	\$25	\$0	\$25
Low-Carbon Materials Investments: Sec. 60116: Low-embodied carbon labeling for construction materials	\$10	\$0	\$10
<b>BUILDINGS</b>	<b>\$4,813</b>	<b>\$4,568</b>	<b>\$9,381</b>
Residential Clean Electricity Tax Credit: Sec. 13302: Residential clean energy credit	\$2,202	\$2,202	\$4,404
Residential Energy Efficiency Tax Credit: Sec. 13301: Extension, increase, and modifications of nonbusiness energy property credit	\$1,245	\$1,245	\$2,490
Home Electrification and Energy Efficiency Rebates: Electrification rebates: Sec. 50122: High-efficiency electric home rebate program	\$450	\$450	\$900
Home Electrification and Energy Efficiency Rebates: whole-house energy efficiency retrofit rebates: Sec. 50121: Home energy performance-based, whole house rebates	\$430	\$430	\$860
New Energy Efficient Home Tax Credit: Sec. 13304: Extension, increase, and modifications of new energy efficient home credit	\$204	\$204	\$409
Affordable Housing Resilience and Efficiency Investments: Sec.30002: Affordable Housing Resilience and Efficiency Investments	\$100	\$0	\$100
Efficient Building Code Adoption Grants: Sec. 50131: Efficient Building Code Adoption Grants	\$100	\$0	\$100
Commercial Energy Efficiency Tax Credit Deduction: Sec. 13303: Energy efficient commercial buildings deduction	\$36	\$36	\$72
Federal Building Investments: Sec. 60502: Federal Building Investments	\$25	\$0	\$25
Home Electrification and Energy Efficiency Rebates: Training for contractors: Sec. 50123: State-based home energy efficiency contractor training grants	\$20	\$0	\$20
<b>TRANSPORTATION</b>	<b>\$3,319</b>	<b>\$2,283</b>	<b>\$5,602</b>
New EV Tax Credit: Sec. 13401: Clean vehicle credit	\$754	\$754	\$1,508
Biodiesel Tax Credits: Sec. 13201: Extension of incentives for biodiesel, renewable diesel, and alternative fuels; Sec. 13202: Extension of second-generation biofuel incentives	\$563	\$563	\$1,125
Commercial EV Tax Credit: Sec. 13403: Qualifeid commercial clean vehicles	\$358	\$358	\$717
Clean Fuel Production Tax Credit : Sec. 13704: Clean fuel production credit	\$295	\$295	\$589
EV Charging / Alt Fuel Tax Credit: Sec. 13404: Alternative fuel refueling property credit	\$174	\$174	\$348
Neighborhood Access and Equity Grants: Sec. 60501: Neighborhood Access and Equity Grant Program	\$305	\$0	\$305
Clean Ports Investments: Sec. 60102: Grants to reduce air pollution at ports	\$300	\$0	\$300
USPS Clean Fleet Investments: Sec. 70002: United State Postal Service Clean Fleets	\$300	\$0	\$300
Used EV Tax Credit : Sec. 13402: Credit for previously owned clean vehicles	\$135	\$135	\$269
Zero-Emission Heavy-Duty Vehicle Investments: Sec. 60101: Clean Heavy-Duty Vehicles	\$100	\$0	\$100
Low-Emission Aviation Grants: Sec. 40007: Alternative fuel and low-emission aviation technology	\$30	\$0	\$30
Aviation Fuel Tax Credit: Sec. 13203: Sustainable Aviation Fuel Credit	\$5	\$5	\$10
Biofuels Investments: Sec. 60108: Funding for Section 211(O) of the Clean Air Act	\$2	\$0	\$2

1. IRA Individual Programs by Investment Category (Cont.)	Annual Budget (\$million)		
	2. Public Funding	3. Estimated Private Funding	4. Total Funding (= columns 2+3)
<b>AGRICULTURE</b>	<b>\$2,165</b>	<b>\$0</b>	<b>\$2,165</b>
Environmental Quality Incentives Program: Sec. 21001: Additional agricultural conservation investments	\$845	\$0	\$845
Regional Conservation Partnership Program: Sec. 21001: Additional agricultural conservation investments	\$675	\$0	\$675
Conservation Stewardship Program: Sec. 21001: Additional agricultural conservation investments	\$325	\$0	\$325
Agriculture Conservation Easement Program: Sec. 21001: Additional agricultural conservation investments;	\$140	\$0	\$140
Agricultural Conservation Technical Assistance: Sec. 21002: Conservation technical assistance	\$130	\$0	\$130
Biofuel Production Grants: Sec. 22003: Biofuel infrastructure and agriculture product market expansion	\$50	\$0	\$50
<b>LANDS</b>	<b>\$1,093</b>	<b>\$0</b>	<b>\$1,093</b>
Coastal Climate Resilience Investments: Sec. 40001: Investing in coastal communities and climate resilience	\$260	\$0	\$260
Federal Forest Restoration Investments : Sec. 23001: National forest system restoration and fuels reduction projects	\$215	\$0	\$215
Urban and Community Forestry Assistance Program: Sec. 23003: State and private forestry conservation programs	\$150	\$0	\$150
Public Lands Conservation Investments: Sec. 50221: National parks and public lands conservation and resilience; Sec. 50222: National parks and public lands conservation and ecosystem restoration; Sec. 50223: National Park Service employees	\$100	\$0	\$100
Environmental Reviews: Sec. 50301: Department of Energy; Sec. 50302: Federal Energy Regulatory Commission; Sec. 50303: Department of the Interior; Sec. 60115: Environmental Protection Agency Efficient, Accurate, and Timely Reviews; Sec. 60402: Council on Environmental Quality efficient and effective environmental reviews; Sec. 60505: Environmental review implementation funds; Sec. 70007: Federal Permitting Improvement Steering Council Environmental Review Improvement Fund mandatory funding	\$90	\$0	\$90
NOAA Equipment, Facilities, and Research : Sec. 40002: Facilities of the National Oceanic and Atmospheric Administration and national marine sanctuaries; Sec. 40003: NOAA efficient and effective reviews; Sec. 40004: Oceanic and atmospheric research and forecasting for weather and climate; Sec. 40005: Computing capacity and research for weather, oceans, and climate; Sec. 40006: Acquisition of hurricane forecasting aircraft	\$71	\$0	\$71
Forest Legacy Program: Sec. 23003: State and private forestry conservation programs	\$70	\$0	\$70
Drinking water/wastewater/stormwater: Sec. 50231: Bureau of Reclamation domestic water supply projects; Sec. 50232: Canal improvement projects	\$58	\$0	\$58
Non-Federal Forest Grants: Sec. 23002: Competitive grants for non-federal forest landowners	\$55	\$0	\$55
Fish and Wildlife Investments: Sec. 60301: Endangered Species Act Recovery Plans; Sec. 60302: Funding for the United States Fish and Wildlife Service to Address Climate-Induced Weather Events	\$25	\$0	\$25
<b>ENVIRONMENTAL JUSTICE AND COMMUNITY RESILIENCE</b>	<b>\$1,104</b>	<b>\$0</b>	<b>\$1,104</b>
Climate Pollution Reduction Grants: Sec. 60114: Climate pollution reduction grants	\$500	\$0	\$500
Environmental and Climate Justice Block Grants: Sec. 60201: Environmental and Climate Justice Block Grants	\$300	\$0	\$300
Methane Reduction Investments: Sec. 60113: Methane Emissions Reduction Program	\$155	\$0	\$155
Chief Readiness Officer Investments: Sec. 70001: DHS Office of Chief Readiness Support Officer	\$50	\$0	\$50
Tribal and Native Hawaiian Climate Resilience Investments: Sec. 80001: Tribal climate resilience; Sec. 80002: Native Hawaiian climate resilience; Sec. 80003: Tribal Electrification Program; Sec. 80004: Emergency drought relief for Tribes; Sec. 60401: Environmental and Climate Data Collection	\$41	\$0	\$41



1. IRA Individual Programs by Investment Category (Cont.)	Annual Budget (\$million)		
	2. Public Funding	3. Estimated Private Funding	4. Total Funding (= columns 2+3)
Air Pollution Reduction Investments: Sec. 60104: Diesel emissions reductions; Sec. 60105: Funding to address air pollution; Sec. 60106: Funding to address air pollution at schools	\$39	\$0	\$39
Funding for Environmental Data and Enforcement: Sec. 60401: Environmental and Climate Data Collection; Sec. 60109: Funding for implementation of the American Innovation and Manufacturing Act; Sec. 60110: Funding for enforcement technology and public information; Sec. 60111: Greenhouse gas corporate reporting	\$10	\$0	\$10
Low Emissions Electricity Program: Sec. 60107: Low Emissions Electricity Program	\$9	\$0	\$9

## CHIPS

1. CHIPS Individual Programs by Investment Category	Annual Budget (\$million)		
	2. Public Funding	3 Estimated Private Funding	4. Total Funding (= columns 2+3)
<b>MANUFACTURING</b>	\$12,650	\$19,280	\$31,930
Manufacturing Incentives	\$7,800	\$14,430	\$22,230
Advanced Manufacturing Investment Credit (48D)	\$4,850	\$4,850	\$9,700
<b>RESEARCH AND DEVELOPMENT</b>	\$2,600	\$0	\$2,600
Commerce Department Programs	\$2,500	\$0	\$2,500
State Department Programs	\$100	\$0	\$100
<b>DEFENSE</b>	\$440	\$0	\$440
CHIPS for America Defense Fund	\$400	\$0	\$400
CHIPS for America Workforce and Education Fund	\$40	\$0	\$40

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Established in 1998, PERI is an independent unit of the University of Massachusetts, Amherst, with close ties to the Department of Economics. PERI staff frequently work collaboratively with faculty members and graduate students from the University of Massachusetts, and other economists from around the world. Since its founding, PERI has become a leading source of research and policy initiatives on issues of globalization, unemployment, financial market instability, central bank policy, living wages and decent work, and the economics of peace, development, and environmental sustainability.

