U.S. Solar Industry Impact

An Economic Impact Analysis

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Project Overview

Background

- Over 41 GW of solar power systems were installed across the United States in 2023, bringing the total U.S. solar capacity to over 184 GW.
- Across the residential, commercial, and utility market segments, these installations required a wide range of economic activities to plan, develop, construct, install, and maintain.
- In addition, a growing portion of hardware components for solar systems were manufactured in the United States. For instance, 7.2 GW of solar modules were made domestically in 2023 (NREL, p. 75).
- All these activities brought economic benefits to the states where they occurred, and to the nation more broadly. This report summarizes the impacts of the solar industry's activities in 2023, including project development and installation, manufacturing, operations and maintenance, and wholesale trade and distribution.

Study Purpose

1. Determine the economic impact of solar power installations from the residential, commercial, and utility solar market segments.

2. Measure the direct, indirect, and induced employment and economic activity impacts resulting from construction and operation of U.S. solar installations in 2023.

3. Determine the economic impacts of solar installations at the national level and for every state in the U.S.

Study Scope and Methodology

- The analysis utilizes data on solar sector employment, installed solar system capacity, PV system component costs, domestic manufacturing capacity, and PV system component imports as inputs.

- The above inputs are used to construct an input-output (I-O) model using IMPLAN, an economic impact modeling software.

Inputs and Assumptions

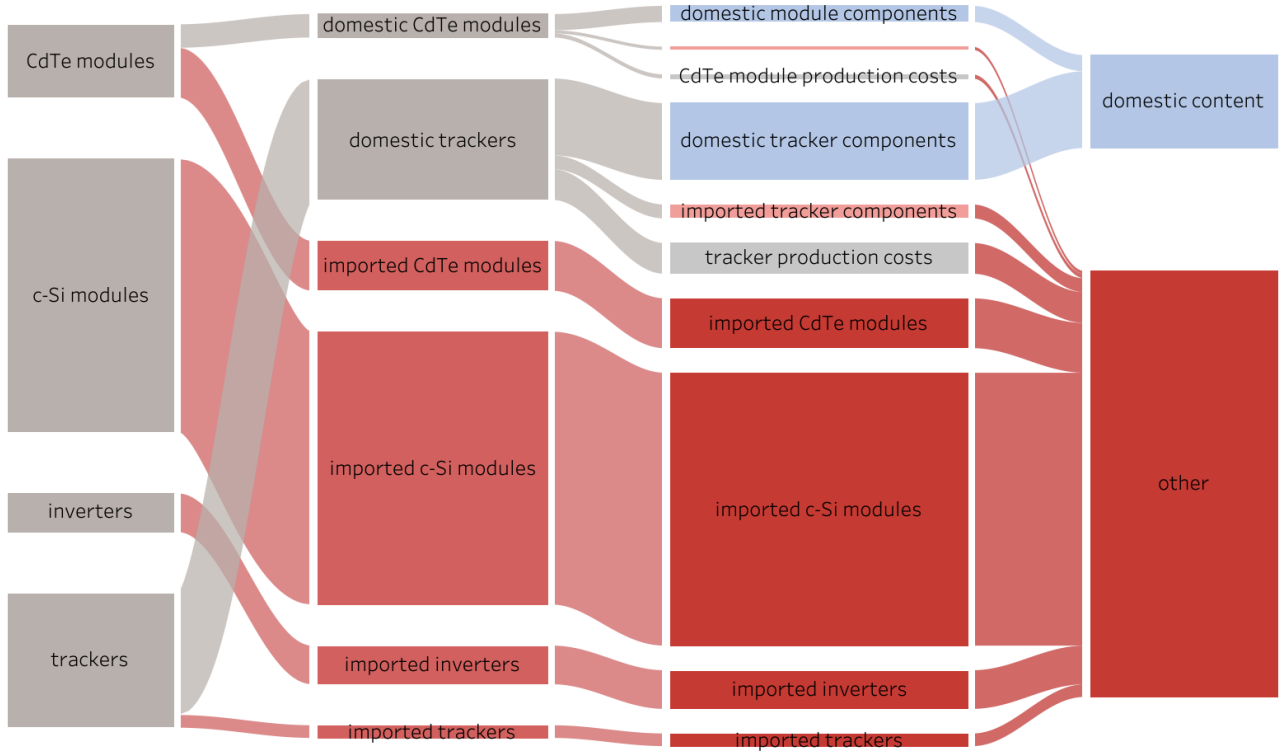
- Per watt costs for system components and services via WoodMac are combined with data from the Solar Energy Industries Association (SEIA) on installed capacity to estimate total expenditures by cost category.
- These expenditures, with employment estimates from the Solar Jobs Census are used as primary inputs and are coded as industry and commodity activity in the model.
- SEIA's Solar and Storage Supply Chain database provided data on the location and type of solar manufacturing facilities in the United States. These data were used to allocate inputs for spending on solar components made domestically.

Inputs and Assumptions

Domestic content assumptions:

- Labor and all soft costs assumed to be 100% domestic.
- Hardware domestic content assumptions were based on multiple data sources including NREL estimates of imports and domestic production of components.

2023 US Ground-Mount Tracker Systems (million USD)



Total U.S. ground-mounted tracker systems installed in 2023: 23.2 GWdc
(estimated from 2023 final-release Form EIA-860)

Source: NREL

Limitations of Analysis

- This analysis estimates the impact of *new* solar system installations for a single year (2023).
- Additionally, operations and maintenance employment data from the IREC Solar Jobs Census were used to estimate the impact of O&M activities on existing installed systems during the 2023 calendar year.
- Results are based on *estimates* of spending—calculated from average system cost and installed capacity—not actual expenditures.
- IMPLAN measures impacts for 528 industries and commodities. There is not always an industry or commodity that perfectly matches the economic activity being measured. Expenditure inputs were coded to event types that best fit the activities and components of the solar industry.
- The analysis measures the impacts of domestic manufacturing of solar components, but it *does not* capture economic activity from the construction of new manufacturing facilities.

Limitations of Analysis

- The available data on the domestic solar supply chain do not indicate which market segments (residential, commercial, utility) are served by a facility. As a result, an analysis of state-level economic impacts by market segment is not possible. Instead, state results are categorized by sector (project development & installation, manufacturing, wholesale trade and distribution, and operations and maintenance).
- The results for wholesale trade and distribution are for imported goods only. Wholesale and distribution activities for domestically-manufactured solar components are a second-order effect of manufacturing and installation and are thus incorporated as indirect impacts.

Interpreting IMPLAN Results

Direct Effects

- The immediate impacts from the initial economic activity (e.g., expenditure or job creation).
- Occur at the site of the economic activity and represent the “first round” of spending.

Indirect Effects

- Business-to-business transactions that happen because of the direct activity.
- Measures the supply chain impacts of an expenditure (i.e., purchases from other businesses)

Induced Effects

- Consumer spending that occurs when workers from directly and indirectly affected businesses spend the earnings associated with the direct and indirect economic impacts (e.g., rent, restaurants, groceries, gas, etc.).

Interpreting IMPLAN Results

Employment: Number of jobs

- **Direct:** Jobs created within the project/industry
- **Indirect:** Jobs created in supplier businesses
- **Induced:** Jobs created through household spending

Labor Income: All forms of employment income

- **Direct:** Wages paid to employees and proprietor's income in the project/industry
- **Indirect:** Wages paid to employees and proprietor's income at supplier business
- **Induced:** Wages paid to workers and proprietor's income supported by household spending

Value Added: Contribution to GDP

- **Direct:** GDP contribution from the project/industry
- **Indirect:** GDP contribution from supplier businesses
- **Induced:** GDP contribution from household spending

Output: Total economic activity or gross sales

- **Direct:** Revenue generated by the project/industry
- **Indirect:** Revenue generated by supplier businesses
- **Induced:** Revenue generated from household spending

National Results

National Results: All Impacts

All Segments - All Impacts				
Impact	**Employment**	**Labor Income ($M)**	**Value Added ($M)**	**Output ($M)**
Direct	276,100	$24,137.4	$29,178.5	$47,019.6
Indirect	128,200	$10,879.4	$18,040.8	$35,055.4
Induced	221,800	$15,278.3	$28,346.5	$47,604.7
Total	**626,100**	**$50,295.1**	**$ 75,565.7**	**$129,679.8**

- Total installed capacity: 41,232 MW
- Comparing to the Solar Jobs Census:
  - Installation & Project Development, Manufacturing, and All Other jobs are included in direct employment.
  - Wholesale Trade & Distribution jobs are counted as indirect employment.

National Results: Residential Impacts

Residential - All Impacts				
Impact	**Employment**	**Labor Income ($M)**	**Value Added ($M)**	**Output ($M)**
Direct	92,810	$8,767.9	$9,882.5	$14,860.5
Indirect	36,670	$3,024.8	$5,021.3	$9,447.8
Induced	75,040	$5,169.0	$9,589.6	$16,104.6
Total	**204,520**	**$16,961.6**	**$24,493.4**	**$40,412.9**

- Residential installed capacity: 6,896 MW
- Does not include operations & maintenance or wholesale activities for imported components

National Results: Commercial Impacts

Commercial - All Impacts				
Impact	**Employment**	**Labor Income ($M)**	**Value Added ($M)**	**Output ($M)**
Direct	21,660	$1,928.5	$1,902.9	$3,000.8
Indirect	7,520	$645.2	$1,048.6	$2,041.1
Induced	16,380	$1,128.0	$2,092.8	$3,514.6
Total	**45,560**	**$3,701.8**	**$5,044.2**	**$8,556.6**

- Commercial installed capacity: 3,240 MW
- Does not include operations & maintenance or wholesale activities for imported components

National Results: Utility Impacts

Utility - All Impacts				
Impact	**Employment**	**Labor Income ($M)**	**Value Added ($M)**	**Output ($M)**
Direct	115,750	$10,453.0	$12,141.1	$21,599.6
Indirect	57,480	$5,115.8	$8,655.4	$17,814.9
Induced	98,700	$6,798.2	$12,613.0	$21,182.1
Total	**271,930**	**$22,367.0**	**$33,409.5**	**$60,596.5**

- Utility installed capacity: 31,096 MW
- Does not include operations & maintenance or wholesale activities for imported components

National Results: Operations & Maintenance Impacts

Operations & Maintenance Impact				
Impact	**Employment**	**Labor Income ($M)**	**Value Added ($M)**	**Output ($M)**
Direct	20,570	$1,161.5	$1,668.1	$2,666.6
Indirect	6,590	$540.2	$953.0	$1,820.4
Induced	10,670	$734.7	$1,363.1	$2,289.2
Total	37,830	$2,436.4	$3,984.2	$6,776.1

- Based on IREC Solar Jobs Census estimate of 21,330 full time operations & maintenance positions.
- Results apply across all market segments.
- Output per MW of $20,169, at cumulative capacity of 144,500 MW.

National Results: Wholesale & Distribution of Imported Hardware

Imported Hardware: Wholesale & Distribution Activities (Imports-Only)				
Impact	**Employment**	**Labor Income ($M)**	**Value Added ($M)**	**Output ($M)**
Direct	26,246	$1,894.3	$3,732.6	$5,344.8
Indirect	19,967	$1,553.4	$2,362.5	$3,931.3
Induced	21,027	$1,448.5	$2,687.9	$4,514.2
Total	**67,240**	**$4,896.2**	**$8,783.0**	**$13,790.3**

- Results apply across all market segments.
- Impacts are based on wholesale trade & distribution jobs estimate from Solar Jobs Census and non-domestic share of hardware components spending.
- Market segment impact tables include domestic manufacturing of hardware. Wholesale trade and distribution activities for domestic components are considered indirect impacts.

Federal Tax and Tariff Revenues

Source	Revenue ($M)
Social Insurance Tax- Employee Contribution	$ 3,140.1
Social Insurance Tax- Employer Contribution	$ 2,560.3
Excise Taxes	$ 88.6
Custom Duty	$ 78.1
Corporate Profits Tax	$ 973.8
Personal Tax: Income Tax	$ 5,031.4
Tariff Revenues from Solar Cells and Modules*	$ 79.5
Total	$ 11,951.9

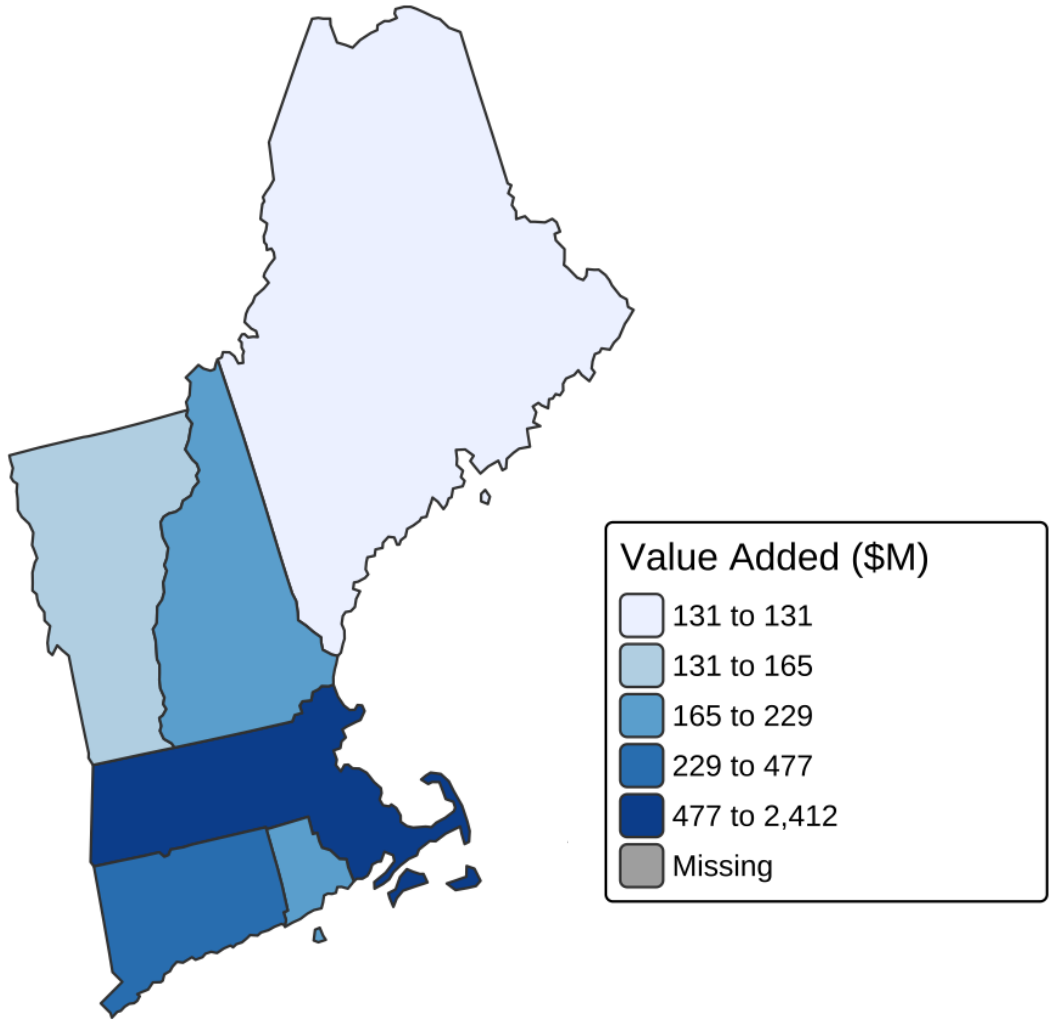
- This is federal revenue only. State revenues can be found in the State Results section.
- *Data on Tariff Revenues from Solar Cell & Modules via SEIA. Excise tax and customs duty lines reflect non module/cell revenues.

State Results

New England Region

In New England, Massachusetts leads the region in cumulative solar energy implementation and economic impact. Altogether the solar industry grossed $3.6b value added within this region, with Massachusetts contributing 66% of that total.

State	Jobs	Labor Income	Value Added	Output	State Tax Total	Local Tax Total
Massachusetts	19,200	$1,821.7	$2,412.4	$3,592.5	$98.0	$47.0
Connecticut	3,900	$355.5	$476.8	$682.6	$20.0	$12.0
Rhode Island	2,300	$164.0	$229.0	$381.1	$11.0	$7.0
New Hampshire	1,900	$167.2	$221.8	$329.6	$3.8	$5.0
Vermont	1,800	$125.2	$165.5	$256.6	$11.0	$1.7
Maine	1,300	$89.7	$131.0	$239.4	$6.0	$3.9



Connecticut

- In 2023, 187.9 MW of PV systems were installed in Connecticut, bringing the state's full solar capacity to 1,498.3 MW.
- Connecticut ranked 27th nationally and 2nd in New England for value added from solar industry activities.
- The solar industry added $476.8m to the state's GDP of $345.9b, comparable to the impact of motor vehicles, bodies and trailers, and parts manufacturing.
- In Connecticut, 3,900 workers are supported by the solar industry, with an average labor income of $90,000.
- In 2023, the state derived tax revenues of $9m directly from solar activities and another $11 from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	162	$42.9
Commercial	26	$549.3
Utility	0	$-
Total	**188**	**$592.2**

Sector	Jobs Estimate
Installation, Project Dev. & Other	1,721
Manufacturing	104
Wholesale Trade & Distribution	454
Operations & Maintenance	136
Total	**2,415**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	2,400	$235.9	$267.5	$359.6
Indirect	500	$44.0	$70.2	$115.1
Induced	1,000	$75.4	$139.0	$207.7
Total	**3,900**	**$355.4**	**$476.8**	**$682.6**

Tax Impacts

Total State Taxes	Total Local Taxes
$20.0	$12.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	2,800	$265.5	$341.5	$504.6
Manufacturing	200	$18.0	$25.8	$52.1
Operations & Maintenance	200	$13.7	$21.3	$33.9
Wholesale Trade & Distribution (Imports)	700	$58.2	$88.2	$91.8
Total	**3,900**	**$355.4**	**$476.8**	**$682.6**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Maine

- In 2023, 392.7 MW of PV systems were installed in Maine, bringing the state's full solar capacity to 1,038.2 MW.
- Additionally, Maine ranked 38th nationally and 6th in New England for value added from solar industry activities.
- The solar industry added $130.9m to the state's GDP of $93.3b, comparable to the impact of transit and ground passenger transportation.
- In Maine, 1,300 workers are supported by the solar industry, with an average labor income of $68,000.
- In 2023, the state derived tax revenues of $3m directly from solar activities and another $3m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	24	$528.5
Commercial	324	$79.9
Utility	45	$52.4
Total	**393**	**$661.0**

Sector	Jobs Estimate
Installation, Project Dev. & Other	630
Manufacturing	16
Wholesale Trade & Distribution	50
Operations & Maintenance	12
Total	**708**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	700	$50.9	$64.5	$128.1
Indirect	300	$19.7	$29.4	$52.4
Induced	300	$18.9	$36.9	$58.7
Total	**1,300**	**$89.6**	**$130.9**	**$239.3**

Tax Impacts

Total State Taxes	Total Local Taxes
$6.0	$3.9

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	1,000	$67.4	$80.7	$133.7
Manufacturing	30	$1.8	$2.8	$6.7
Operations & Maintenance	20	$1.0	$1.5	$2.6
Wholesale Trade & Distribution (Imports)	300	$19.4	$45.9	$96.2
Total	**1,350**	**$89.6**	**$130.9**	**$239.3**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Massachusetts

- In 2023, 344.9 MW of PV systems were installed in Massachusetts, bringing the state's full solar capacity to 5,090.7 MW.
- Additionally, Massachusetts ranked 5th nationally and 1st in New England for value added from solar industry activities.
- The solar industry added $2,412.4m to the state's GDP of $736.3b, comparable to the impact of accommodation and food services.
- In Massachusetts, 19,200 workers are supported by the solar industry, with an average labor income of $95,000.
- In 2023, the state derived tax revenues of $49m directly from solar activities and another $49m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	194	$179.3
Commercial	110	$660.0
Utility	41	$47.2
Total	**345**	**$886.7**

Sector	Jobs Estimate
Installation, Project Dev. & Other	8,106
Manufacturing	1,105
Wholesale Trade & Distribution	1,147
Operations & Maintenance	1,317
Total	**11,674**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	11,700	$1,179.8	$1,344.4	$1,939.6
Indirect	2,200	$214.8	$333.2	$544.5
Induced	5,300	$426.9	$734.8	$1,108.2
Total	**19,200**	**$1,821.6**	**$2,412.4**	**$3,592.4**

Tax Impacts

Total State Taxes	Total Local Taxes
$98.0	$47.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	13,500	$1,325.1	$1,698.1	$2,458.2
Manufacturing	2,000	$199.4	$293.5	$600.8
Operations & Maintenance	2,000	$155.2	$228.1	$354.4
Wholesale Trade & Distribution (Imports)	1,700	$141.8	$192.7	$178.9
Total	**19,200**	**$1,821.6**	**$2,412.4**	**$3,592.4**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

New Hampshire

- In 2023, 57.7 MW of PV systems were installed in New Hampshire, bringing the state's full solar capacity to 265.7 MW.
- Additionally, New Hampshire ranked 34th nationally and 4th in New England for value added from solar industry activities.
- The solar industry added $221.7m to the state's GDP of $114.1b, comparable to the impact of mining except for oil and gas.
- In New Hampshire, the solar industry supported 1,900 workers, with an average labor income of $88,500.
- In 2023, the state derived $1m in tax revenues directly from solar activities and $2.8m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	52	$8.8
Commercial	5	$177.8
Utility	0	$-
Total	**58**	**$186.6**

Sector	Jobs Estimate
Installation, Project Dev. & Other	948
Manufacturing	45
Wholesale Trade & Distribution	138
Operations & Maintenance	42
Total	**1,172**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	1,200	$112.9	$129.2	$184.0
Indirect	200	$20.8	$31.6	$52.5
Induced	500	$33.3	$60.8	$92.9
Total	**1,900**	**$167.1**	**$221.7**	**$329.6**

Tax Impacts

Total State Taxes	Total Local Taxes
$3.8	$5.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	1,500	$138.6	$179.3	$267.1
Manufacturing	80	$7.0	$10.1	$25.0
Operations & Maintenance	60	$4.2	$6.6	$10.4
Wholesale Trade & Distribution (Imports)	200	$17.2	$25.7	$26.9
Total	**1,840**	**$167.2**	**$221.7**	**$329.6**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Rhode Island

- In 2023, 320.8 MW of PV systems were installed in Rhode Island, bringing the state's full solar capacity to 1,069.4 MW.
- Additionally, Rhode Island ranked 32nd nationally and 3rd in New England for value added from solar industry activities.
- The solar industry added $229m to the state's GDP of $77.6b comparable to the impact of natural resources and mining.
- In Rhode Island, the solar industry supported 2,300 workers, with an average labor income of $72,000.
- In 2023, the state derived tax revenues of $5m directly from solar activities and $6m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	39	$261.3
Commercial	160	$134.1
Utility	121	$140.0
Total	**321**	**$535.5**

Sector	Jobs Estimate
Installation, Project Dev. & Other	883
Manufacturing	97
Wholesale Trade & Distribution	131
Operations & Maintenance	285
Total	**1,396**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	1,400	$105.6	$127.4	$216.5
Indirect	400	$27.0	$42.1	$72.3
Induced	500	$31.2	$59.4	$92.2
Total	**2,300**	**$163.9**	**$228.9**	**$381.1**

Tax Impacts

Total State Taxes	Total Local Taxes
$11.0	$7.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	1,400	$100.3	$122.4	$194.7
Manufacturing	200	$12.7	$17.2	$39.9
Operations & Maintenance	400	$25.8	$40.4	$66.0
Wholesale Trade & Distribution (Imports)	300	$25.0	$49.0	$80.4
Total	**2,300**	**$163.9**	**$229.0**	**$381.1**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Vermont

- In 2023, 14.0 MW of PV systems were installed in Vermont, bringing the state's full solar capacity to 426.5 MW.
- Additionally, Vermont ranked 36th nationally and 5th in New England for value added from solar industry activities.
- The solar industry added $165.4m to the state's GDP of $43.5b, comparable to the impact of natural resources and mining.
- In Vermont, the solar industry supported 1,800 workers, with an average labor income of $71,000.
- In 2023, the state derived $4m in tax revenues directly from solar activities and $7m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	8	$15.4
Commercial	6	$198.1
Utility	0	$126.7
Total	**14**	**$340.3**

Sector	Jobs Estimate
Installation, Project Dev. & Other	706
Manufacturing	150
Wholesale Trade & Distribution	248
Operations & Maintenance	64
Total	**1,168**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	1,200	$87.7	$98.9	$145.1
Indirect	200	$13.5	$21.0	$39.0
Induced	400	$23.8	$45.5	$72.4
Total	**1,800**	**$125.1**	**$165.4**	**$256.6**

Tax Impacts

Total State Taxes	Total Local Taxes
$11.0	$1.7

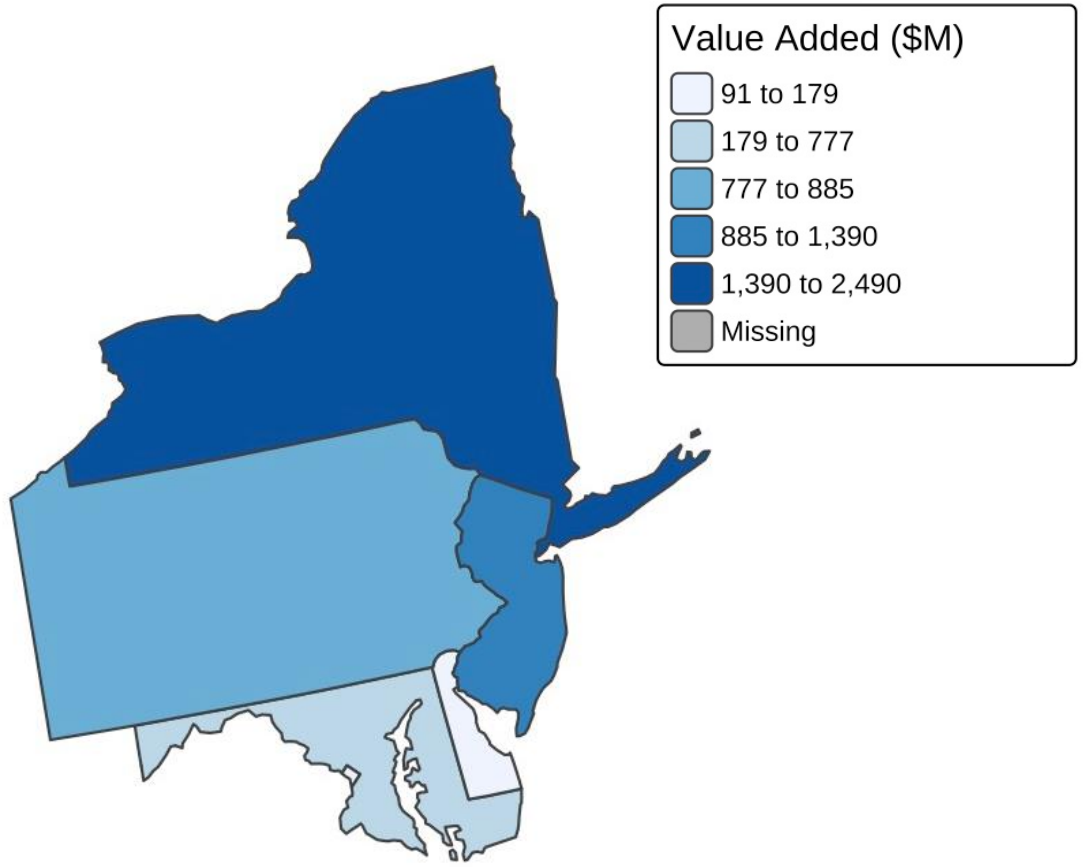
Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	1,100	$77.4	$102.1	$162.9
Manufacturing	200	$17.0	$24.2	$61.7
Operations & Maintenance	90	$4.8	$7.8	$13.3
Wholesale Trade & Distribution (Imports)	300	$25.9	$31.2	$18.5
Total	**1,690**	**$125.1**	**$165.4**	**$256.6**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Mid-Atlantic Region

In the Mid-Atlantic, New York led the region in new solar energy implementation and cumulative impacts. Altogether, the solar industry grossed $5.8b in added value within the region, with New York contributing 43% of that total.



State	Jobs	Labor Income	Value Added	Output	State Tax Total	Local Tax Total
New York	19,400	$1,886.7	$2,490.1	$3,670.7	$118.0	$114.0
New Jersey	11,100	$1,034.5	$1,389.9	$2,078.4	$64.0	$48.0
Pennsylvania	7,700	$619.6	$884.6	$1,587.4	$37.0	$25.0
Maryland	7,700	$577.4	$776.5	$1,192.0	$34.0	$26.0
District of Columbia	1,300	$158.2	$179.1	$241.0	$0.0	$7.0
Delaware	900	$68.4	$90.6	$148.7	$3.9	$1.1

District of Columbia

- In 2023, 36.7 MW of PV systems were installed in the District of Columbia, bringing the district's full solar capacity to 252.9 MW.
- Additionally, DC ranked 35th nationally and 5th in the Mid-Atlantic for value added from solar industry activities.
- The solar industry added $179.0m to DC's GDP of $176.5b, comparable to the impact of chemical manufacturing.
- In DC, the solar industry supported 1,300 workers, with an average labor income of $122,500.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	22	$23.4
Commercial	14	$76.0
Utility	0	$-
Total	**37**	**$99.4**

Sector	Jobs Estimate
Installation, Project Dev. & Other	865
Manufacturing	36
Wholesale Trade & Distribution	88
Operations & Maintenance	34
Total	**1,023**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	1,000	$129.3	$132.6	$174.8
Indirect	100	$16.5	$24.9	$36.3
Induced	100	$12.2	$21.4	$29.8
Total	**1,300**	**$158.1**	**$179.0**	**$241.0**

Tax Impacts

Total State Taxes	Total Local Taxes
N/A	$7.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	1,100	$140.6	$155.0	$209.8
Manufacturing	50	$5.6	$6.7	$13.9
Operations & Maintenance	40	$2.8	$4.3	$6.6
Wholesale Trade & Distribution (Imports)	100	$9.0	$13.0	$10.6
Total	**1,290**	**$158.1**	**$179.0**	**$241.0**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Delaware

- In 2023, the state of Delaware installed 22.5 MW of PV systems, bringing the state's full solar capacity to 277.8 MW.
- Additionally, Delaware ranked 44th nationally and 6th in the Mid-Atlantic for value added from solar industry activities.
- The solar industry added $90.6m to Delaware's GDP of $98.1b, comparable to the impact of fabricated metal product manufacturing.
- In Delaware, the solar industry supported 900 workers, with an average labor income of $75,000.
- In 2023, the state derived tax revenues of $2m directly from solar activities and $1.9m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	13	$5.2
Commercial	3	$45.4
Utility	6	$6.8
Total	**22**	**$57.5**

Sector	Jobs Estimate
Installation, Project Dev. & Other	355
Manufacturing	100
Wholesale Trade & Distribution	88
Operations & Maintenance	57
Total	**600**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	600	$49.5	$53.2	$88.9
Indirect	100	$7.7	$15.0	$25.5
Induced	200	$11.0	$22.2	$34.2
Total	**900**	**$68.4**	**$90.6**	**$148.7**

Tax Impacts

Total State Taxes	Total Local Taxes
$3.9	$1.1

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	500	$41.5	$54.0	$83.4
Manufacturing	200	$12.6	$16.0	$41.7
Operations & Maintenance	80	$4.8	$7.8	$12.7
Wholesale Trade & Distribution (Imports)	100	$9.4	$12.7	$10.8
Total	**880**	**$68.3**	**$90.6**	**$148.7**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Maryland

- In 2023, the state of Maryland installed 225.2 MW of PV systems, bringing the state's full solar capacity to 2,156.6 MW.
- Additionally, Maryland ranked 20th nationally and 4th in the Mid-Atlantic for value added from solar industry activities.
- The solar industry added $776.5m to Maryland's GDP of $515.6b, comparable to the impact of nonmetallic mineral product manufacturing.
- In Maryland, the solar industry supported 7,700 workers, yielding an average labor income of $75,000.
- In 2023, the state derived $15m in tax revenues directly from solar activities and $19m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	82	$162.3
Commercial	99	$279.6
Utility	44	$50.2
Total	**225**	**$492.2**

Sector	Jobs Estimate
Installation, Project Dev. & Other	3,920
Manufacturing	273
Wholesale Trade & Distribution	503
Operations & Maintenance	277
Total	**4,973**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	5,000	$399.0	$452.3	$670.6
Indirect	1,100	$75.9	$122.4	$208.8
Induced	1,600	$102.4	$201.7	$312.5
Total	**7,700**	**$577.4**	**$776.5**	**$1,192.0**

Tax Impacts

Total State Taxes	Total Local Taxes
$34.0	$26.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	6,000	$453.9	$594.2	$920.4
Manufacturing	500	$40.6	$58.2	$123.3
Operations & Maintenance	400	$23.5	$37.5	$62.0
Wholesale Trade & Distribution (Imports)	800	$59.3	$86.5	$86.2
Total	**7,700**	**$577.3**	**$776.5**	**$1,192.0**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

New Jersey

- In 2023, the state of New Jersey installed 419.4 MW of PV systems, bringing the state's full solar capacity to 5,242.0 MW.
- Additionally, New Jersey ranked 9th nationally and 2nd in the Mid-Atlantic for value added from solar industry activities.
- The solar industry added $1,389.8m to New Jersey's GDP of $806.6b, comparable to the impact of agriculture, forestry, fishing and hunting.
- In New Jersey, the solar industry supported 11,100 workers, with an average labor income of $93,000.
- In 2023, the state gained tax revenues of $30m directly from solar activities and $36 from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	188	$357.2
Commercial	219	$639.7
Utility	12	$14.3
Total	**419**	**$1,011.3**

Sector	Jobs Estimate
Installation, Project Dev. & Other	4,643
Manufacturing	574
Wholesale Trade & Distribution	808
Operations & Maintenance	603
Total	**6,628**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	6,600	$684.5	$789.8	$1,132.9
Indirect	1,600	$138.2	$215.2	$357.4
Induced	2,900	$211.6	$384.7	$587.9
Total	**11,100**	**$1,034.4**	**$1,389.8**	**$2,078.4**

Tax Impacts

Total State Taxes	Total Local Taxes
$64.0	$48.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	7,800	$756.5	$968.9	$1,417.2
Manufacturing	1,100	$105.2	$160.8	$324.7
Operations & Maintenance	900	$64.2	$101.4	$159.4
Wholesale Trade & Distribution (Imports)	1,300	$108.5	$158.6	$176.9
Total	**11,100**	**$1,034.4**	**$1,389.8**	**$2,078.4**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

New York

- In 2023, 943.6 MW of PV systems were installed in New York, bringing the state's full solar capacity to 4,960.3 MW.
- Additionally, New York ranked 4th nationally and 1st in the Mid-Atlantic for value added from solar industry activities.
- The solar industry added $2,490.1m to the state's GDP of $2.2t, comparable to the impact of transit and ground passenger transportation.
- In New York, 19,400 workers are supported by the solar industry, yielding an average labor income of $97,000.
- In 2023, the state derived $60m in tax revenues directly from solar activities and $58m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	235	$966.7
Commercial	592	$797.6
Utility	117	$134.9
Total	**944**	**$1,899.3**

Sector	Jobs Estimate
Installation, Project Dev. & Other	8,438
Manufacturing	832
Wholesale Trade & Distribution	1,087
Operations & Maintenance	1,756
Total	**12,114**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	12,100	$1,260.5	$1,375.3	$2,011.5
Indirect	2,500	$240.0	$398.4	$620.9
Induced	4,800	$386.1	$716.3	$1,038.3
Total	**19,400**	**$1,886.7**	**$2,490.1**	**$3,670.7**

Tax Impacts

Total State Taxes	Total Local Taxes
$118.0	$114.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	13,600	$1,417.3	$1,760.5	$2,503.8
Manufacturing	1,400	$130.2	$178.2	$393.9
Operations & Maintenance	2,500	$180.3	$298.1	$455.0
Wholesale Trade & Distribution (Imports)	1,900	$158.8	$253.1	$317.9
Total	**19,400**	**$1,886.7**	**$2,490.0**	**$3,670.7**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Pennsylvania

- In 2023, 855.9 MW of PV systems were installed in Pennsylvania, bringing the state's full solar capacity to 1,945.5 MW.
- Additionally, Pennsylvania ranked 17th nationally and 3rd in the Mid-Atlantic for value added from solar industry activities.
- The solar industry added $884.6m to the state's GDP of $976.4b, comparable to the impact of furniture and related product manufacturing.
- In Pennsylvania, 7,700 workers are supported by the solar industry, with an average labor income of $80,000.
- In 2023, the state gained tax revenues of $15m directly from solar activities and $22m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	164	$77.9
Commercial	48	$555.9
Utility	645	$744.5
Total	**856**	**$1,378.4**

Sector	Jobs Estimate
Installation, Project Dev. & Other	2,282
Manufacturing	1,283
Wholesale Trade & Distribution	559
Operations & Maintenance	164
Total	**4,287**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	4,300	$370.3	$464.2	$871.0
Indirect	1,300	$109.7	$171.9	$320.5
Induced	2,100	$139.5	$248.3	$395.7
Total	**7,700**	**$619.6**	**$884.5**	**$1,587.3**

Tax Impacts

Total State Taxes	Total Local Taxes
$37.0	$25.0

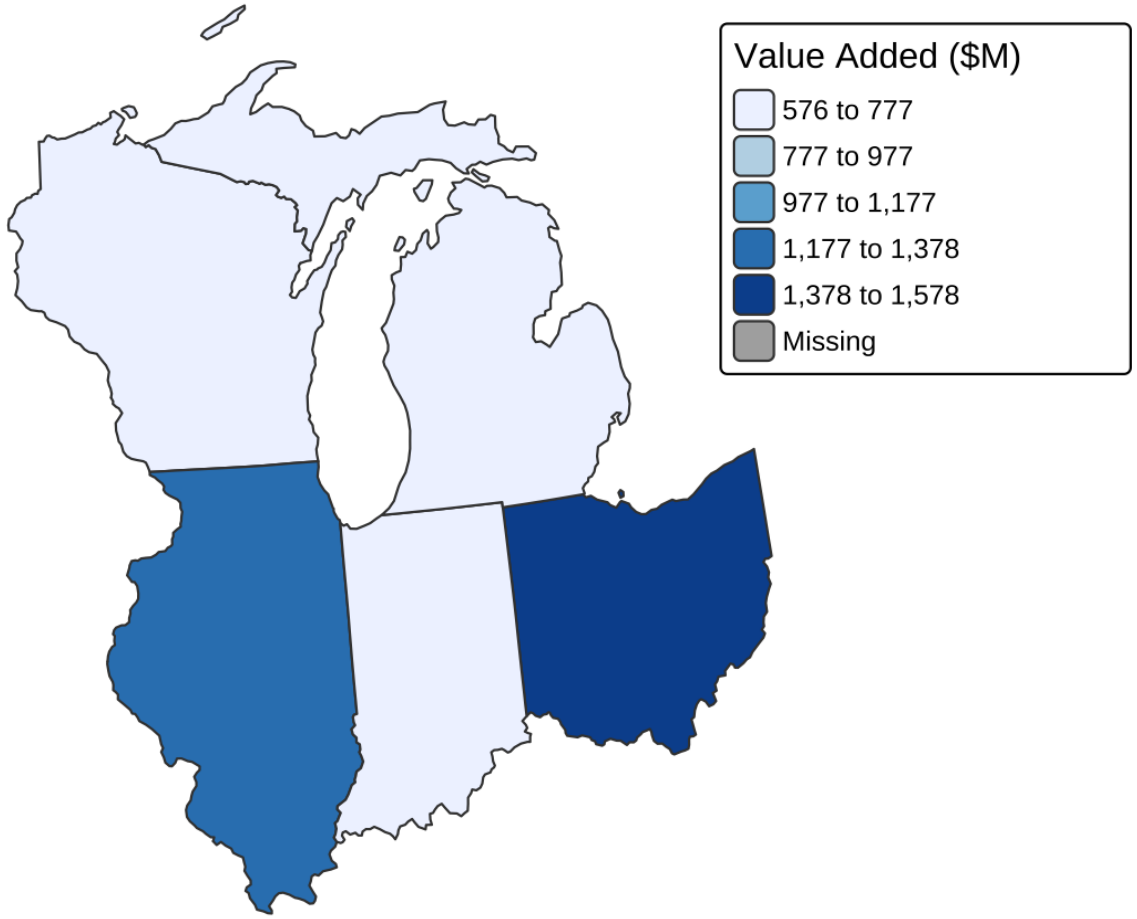
Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	3,800	$303.1	$381.4	$601.3
Manufacturing	2,500	$207.0	$316.7	$710.2
Operations & Maintenance	200	$15.4	$23.3	$39.2
Wholesale Trade & Distribution (Imports)	1,200	$94.0	$163.0	$236.6
Total	**7,700**	**$619.6**	**$884.5**	**$1,587.3**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Great Lakes Region

In the Great Lakes region, Ohio led in installing solar energy and generated the greatest economic value. Altogether, the solar industry in the Great Lakes grossed $4.2b in added value, with Ohio contributing 33% of that total.



State	Jobs	Labor Income	Value Added	Output	State Tax Total	Local Tax Total
Ohio	15,200	$1,138.4	$1,578.1	$3,404.5	$67.0	$54.0
Illinois	10,700	$914.8	$1,247.1	$1,951.2	$52.0	$36.0
Michigan	7,500	$558.9	$745.8	$1,302.2	$32.0	$15.0
Indiana	6,600	$478.6	$652.7	$1,089.4	$35.0	$15.0
Wisconsin	5,600	$405.5	$576.4	$1,013.5	$25.0	$13.0

Illinois

- In 2023, the state of Illinois installed 835.3 MW of PV systems, bringing the state's full solar capacity to 2,903.0 MW.
- Additionally, Illinois ranked 12th nationally and 2nd in the Great Lakes for value added from solar industry activities.
- The solar industry added $1.25b to Illinois' GDP of $1.1t, comparable to the impact of motion picture and sound recording industries.
- In Illinois, the solar industry supported 10,700 workers, with an average labor income of $85,500.
- In 2023, the state derived tax revenues of $21m directly from solar activities and $31m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	248	$317.8
Commercial	195	$843.1
Utility	393	$453.4
Total	**835**	**$1,614.4**

Sector	Jobs Estimate
Installation, Project Dev. & Other	4,156
Manufacturing	538
Wholesale Trade & Distribution	829
Operations & Maintenance	452
Total	**5,975**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	6,000	$573.7	$653.6	$986.3
Indirect	1,600	$133.1	$209.8	$358.0
Induced	3,100	$207.9	$383.6	$606.8
Total	**10,700**	**$914.7**	**$1,247.1**	**$1,951.2**

Tax Impacts

Total State Taxes	Total Local Taxes
$52.0	$36.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	7,300	$653.5	$826.3	$1,261.9
Manufacturing	1,100	$88.6	$137.2	$293.2
Operations & Maintenance	700	$45.2	$71.4	$117.1
Wholesale Trade & Distribution (Imports)	1,600	$127.3	$212.0	$278.9
Total	**10,700**	**$914.7**	**$1,247.0**	**$1,951.2**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Indiana

- In 2023, the state of Indiana installed 679.9 MW of PV systems, bringing the state's full solar capacity to 1,909.8 MW.
- Additionally, Indiana ranked 23rd nationally and 4th in the Great Lakes for value added from solar industry activities.
- The solar industry added $652.7m to Indiana's GDP of $499.5b, comparable to the impact of air transportation.
- In Indiana, the solar industry supported 6,600 workers, at an average labor income of $72,000.
- In 2023, the state derived $17m in tax revenues directly from solar activities and $18m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	12	$52.3
Commercial	32	$40.2
Utility	636	$734.5
Total	**680**	**$827.1**

Sector	Jobs Estimate
Installation, Project Dev. & Other	3,368
Manufacturing	255
Wholesale Trade & Distribution	345
Operations & Maintenance	135
Total	**4,103**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	4,100	$315.7	$375.2	$615.6
Indirect	1,000	$70.0	$107.5	$198.2
Induced	1,500	$92.8	$169.9	$275.5
Total	**6,600**	**$478.5**	**$652.7**	**$1,089.4**

Tax Impacts

Total State Taxes	Total Local Taxes
$35.0	$15.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	5,200	$377.4	$485.6	$780.5
Manufacturing	500	$33.6	$54.7	$129.1
Operations & Maintenance	200	$11.2	$17.1	$29.7
Wholesale Trade & Distribution (Imports)	800	$56.3	$95.1	$149.9
Total	**6,700**	**$478.6**	**$652.7**	**$1,089.4**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Michigan

- In 2023, the state of Michigan installed 555.4 MW of PV systems, bringing the state's full solar capacity to 1,425.9 MW.
- Additionally, Michigan ranked 21st nationally and 3rd in the Great Lakes for value added from solar industry activities.
- The solar industry added $745.8m to Michigan's GDP of $673.8b, comparable to the impact of forestry, fishing, and related activities.
- In Michigan, the solar industry supported 7,500 workers, yielding an average labor income of $74,500.
- In 2023, the state derived $12m of tax revenues directly from solar activities and $20m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	28	$13.4
Commercial	8	$93.6
Utility	520	$600.2
Total	**555**	**$707.2**

Sector	Jobs Estimate
Installation, Project Dev. & Other	2,973
Manufacturing	616
Wholesale Trade & Distribution	384
Operations & Maintenance	357
Total	**4,329**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	4,300	$351.5	$391.6	$690.2
Indirect	1,200	$87.9	$133.3	$246.9
Induced	2,000	$119.4	$220.7	$365.0
Total	**7,500**	**$558.9**	**$745.8**	**$1,302.1**

Tax Impacts

Total State Taxes	Total Local Taxes
$32.0	$15.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	4,900	$369.1	$461.3	$756.5
Manufacturing	1,200	$97.8	$135.3	$321.2
Operations & Maintenance	600	$33.3	$50.9	$87.1
Wholesale Trade & Distribution (Imports)	800	$58.6	$98.2	$137.3
Total	**7,500**	**$558.9**	**$745.8**	**$1,302.1**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Ohio

- In 2023, the state of Ohio installed 1,263.2 MW of PV systems, bringing the state's full solar capacity to 2,284.7 MW.
- Additionally, Ohio ranked 8th nationally and 1st in the Great Lakes for value added from solar industry activities.
- The solar industry added $1.6b to Ohio's GDP of $884.8b, comparable to the impact of wood product manufacturing.
- In Ohio, the solar industry supported 15,200 workers, with an average labor income of $75,000.
- In 2023, the state gained tax revenues of $26m directly from solar activities and $41m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	48	$43.6
Commercial	27	$164.0
Utility	1,188	$1,372.3
Total	**1,263**	**$1,580.0**

Sector	Jobs Estimate
Installation, Project Dev. & Other	4,824
Manufacturing	2,006
Wholesale Trade & Distribution	787
Operations & Maintenance	171
Total	**7,788**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	7,800	$657.8	$707.4	$1,884.1
Indirect	3,200	$239.2	$409.4	$768.0
Induced	4,100	$241.3	$461.3	$752.3
Total	**15,200**	**$1,138.4**	**$1,578.1**	**$3,404.5**

Tax Impacts

Total State Taxes	Total Local Taxes
$67.0	$54.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	8,000	$576.7	$755.9	$1,228.3
Manufacturing	5,100	$420.5	$583.5	$1,816.3
Operations & Maintenance	300	$14.8	$24.4	$41.5
Wholesale Trade & Distribution (Imports)	1,800	$126.4	$214.2	$318.3
Total	**15,200**	**$1,138.4**	**$1,578.1**	**$3,404.5**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Wisconsin

- In 2023, the state of Wisconsin installed 960.7 MW of PV systems, bringing the state's full solar capacity to 2,133.1 MW.
- Additionally, Wisconsin ranked 24th nationally and 5th in the Great Lakes for value added from solar industry activities.
- The solar industry added $576.4m to Wisconsin's GDP of $428.5b, comparable to the impact of air transportation.
- In Wisconsin, the solar industry supported 5,600 workers, at an average labor income of $72,500.
- In 2023, the state derived tax revenues of $11m directly from solar activities and $14m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	27	$2.2
Commercial	41	$27.1
Utility	892	$-
Total	**961**	**$29.4**

Sector	Jobs Estimate
Installation, Project Dev. & Other	2,077
Manufacturing	443
Wholesale Trade & Distribution	418
Operations & Maintenance	315
Total	**3,253**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	3,300	$254.5	$313.0	$563.0
Indirect	1,000	$69.0	$108.9	$198.5
Induced	1,400	$81.8	$154.3	$251.9
Total	**5,600**	**$405.4**	**$576.4**	**$1,013.5**

Tax Impacts

Total State Taxes	Total Local Taxes
$25.0	$13.0

Total Impact by Sector

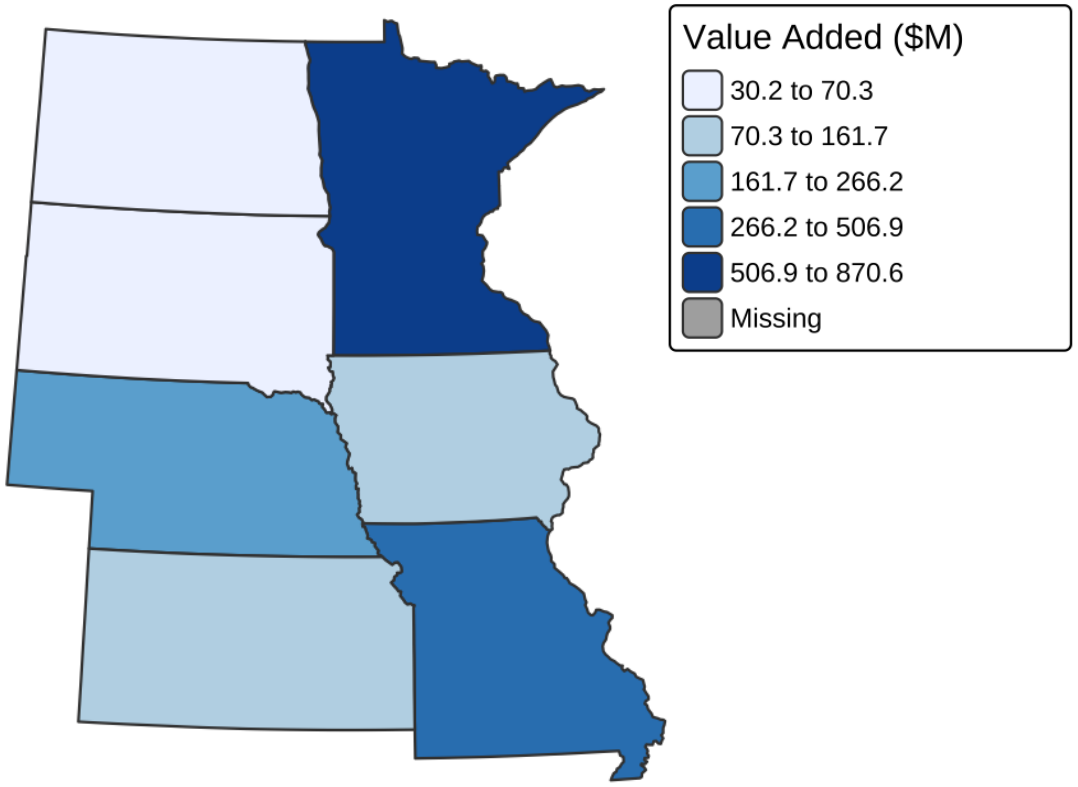
Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	3,300	$243.1	$309.7	$503.2
Manufacturing	800	$62.6	$95.1	$221.3
Operations & Maintenance	500	$26.6	$41.9	$71.7
Wholesale Trade & Distribution (Imports)	1,000	$73.1	$129.6	$217.1
Total	**5,600**	**$405.5**	**$576.4**	**$1,013.5**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Plains Region

In the Plains region, the solar industry grossed $2b in value added. Minnesota led the region, contributing 43% of the total added value.

State	Jobs	Labor Income	Value Added	Output	State Tax Total	Local Tax Total
Minnesota	8,100	$674.3	$870.6	$1,356.8	$48.0	$17.0
Missouri	5,100	$388.4	$506.9	$804.7	$16.0	$13.0
Nebraska	2,800	$189.3	$266.2	$433.6	$10.0	$7.0
Kansas	1,700	$117.5	$161.7	$258.1	$6.0	$3.5
Iowa	1,400	$95.3	$126.7	$221.2	$5.9	$2.6
South Dakota	800	$53.1	$70.3	$122.4	$2.0	$1.6
North Dakota	400	$25.0	$30.2	$51.6	$0.7	$0.2



Iowa

- In 2023, the state of Iowa installed 56.1 MW of PV systems, bringing the state's full solar capacity to 592.5 MW.
- Additionally, Iowa ranked 39th nationally and 5th in the Plains for value added from solar industry activities.
- The solar industry added $126.7m to Iowa's GDP of $254b, comparable to the impact of pipeline transportation.
- In Iowa, the solar industry supported 1,400 workers, with an average labor income of $69,000.
- In 2023, the state gained tax revenues of $3m directly from solar activities and $2.9m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	33	$37.8
Commercial	23	$111.9
Utility	0	$-
Total	**56**	**$149.8**

Sector	Jobs Estimate
Installation, Project Dev. & Other	672
Manufacturing	130
Wholesale Trade & Distribution	76
Operations & Maintenance	19
Total	**898**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	900	$67.4	$76.1	$133.3
Indirect	200	$12.4	$20.2	$38.0
Induced	300	$15.3	$30.3	$49.8
Total	**1,400**	**$95.3**	**$126.7**	**$221.1**

Tax Impacts

Total State Taxes	Total Local Taxes
$5.9	$2.6

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	1,000	$70.0	$88.3	$144.4
Manufacturing	200	$14.0	$20.9	$52.4
Operations & Maintenance	30	$1.3	$2.1	$3.8
Wholesale Trade & Distribution (Imports)	100	$9.9	$15.3	$20.5
Total	**1,330**	**$95.3**	**$126.7**	**$221.1**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Kansas

- In 2023, the state of Kansas installed 25.7 MW of PV systems, bringing the state's full solar capacity to 152.7 MW.
- Additionally, Kansas ranked 37th nationally and 4th in the Plains for value added from solar industry activities.
- The solar industry added $161.6m to Kansas' GDP of $178.6b, comparable to the impact of air transportation.
- In Kansas, the solar industry supported 1,700 workers, with an average labor income of $70,500.
- In 2023, the state derived tax revenues $3m directly from solar activities and $3m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	20	$6.1
Commercial	4	$66.7
Utility	2	$1.9
Total	**26**	**$74.8**

Sector	Jobs Estimate
Installation, Project Dev. & Other	784
Manufacturing	61
Wholesale Trade & Distribution	116
Operations & Maintenance	120
Total	**1,082**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	1,100	$81.5	$98.2	$147.7
Indirect	200	$15.5	$24.9	$45.4
Induced	400	$20.3	$38.5	$64.8
Total	**1,700**	**$117.4**	**$161.6**	**$258.0**

Tax Impacts

Total State Taxes	Total Local Taxes
$6.0	$3.5

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	1,200	$87.9	$118.5	$191.2
Manufacturing	100	$7.0	$10.1	$25.0
Operations & Maintenance	200	$9.6	$16.0	$27.2
Wholesale Trade & Distribution (Imports)	200	$12.8	$17.0	$14.7
Total	**1,700**	**$117.4**	**$161.7**	**$258.0**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Minnesota

- In 2023, the state of Minnesota installed 241.2 MW of PV systems, bringing the state's full solar capacity to 2,336.9 MW.
- Additionally, Minnesota ranked 18th nationally and 1st in the Plains for value added from solar industry activities.
- The solar industry added $870.6m to Minnesota's GDP of $483.2b, comparable to the impact of furniture and related product manufacturing.
- In Minnesota, the solar industry supported 8,100 workers, with an average labor income of $83,000.
- In 2023, the state derived $20m in tax revenues directly from solar activities and $28m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	40	$95.3
Commercial	58	$135.2
Utility	143	$165.1
Total	**241**	**$395.7**

Sector	Jobs Estimate
Installation, Project Dev. & Other	3,527
Manufacturing	316
Wholesale Trade & Distribution	717
Operations & Maintenance	235
Total	**4,795**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	4,800	$435.4	$465.1	$683.2
Indirect	1,000	$85.2	$130.1	$230.6
Induced	2,300	$153.5	$275.1	$442.9
Total	**8,100**	**$674.2**	**$870.5**	**$1,356.8**

Tax Impacts

Total State Taxes	Total Local Taxes
$48.0	$17.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	6,000	$507.2	$628.0	$983.4
Manufacturing	600	$55.9	$89.7	$204.5
Operations & Maintenance	400	$23.5	$36.1	$59.9
Wholesale Trade & Distribution (Imports)	1,100	$87.5	$116.7	$108.8
Total	**8,100**	**$674.2**	**$870.5**	**$1,356.8**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Missouri

- In 2023, the state of Missouri installed 124.7 MW of PV systems, bringing the state's full solar capacity to 614.7 MW.
- Additionally, Missouri ranked 25th nationally and 2nd in the Plains for value added from solar industry activities.
- The solar industry added $506.8m to Missouri's GDP of $430.1b, comparable to the impact of furniture and related product manufacturing.
- In Missouri, the solar industry supported 5,100 workers, with an average labor income of $76,000.
- In 2023, the state gained tax revenues of $8m directly from solar activities and $8m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	81	$71.5
Commercial	44	$274.2
Utility	0	$0.3
Total	**125**	**$346.0**

Sector	Jobs Estimate
Installation, Project Dev. & Other	2,264
Manufacturing	223
Wholesale Trade & Distribution	391
Operations & Maintenance	195
Total	**3,073**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	3,100	$262.0	$285.1	$425.8
Indirect	700	$49.8	$78.3	$141.9
Induced	1,300	$76.4	$143.4	$236.9
Total	**5,100**	**$388.4**	**$506.8**	**$804.7**

Tax Impacts

Total State Taxes	Total Local Taxes
$16.0	$13.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	3,800	$286.3	$357.3	$575.3
Manufacturing	400	$39.3	$59.2	$120.4
Operations & Maintenance	300	$15.8	$25.1	$43.6
Wholesale Trade & Distribution (Imports)	600	$46.9	$65.1	$65.3
Total	**5,100**	**$388.3**	**$506.8**	**$804.7**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

North Dakota

- In 2023, the state of North Dakota installed 0.1 MW of PV systems, bringing the state's full solar capacity to 1.9 MW.
- Additionally, North Dakota ranked 49th nationally and 7th in the Plains for value added from solar industry activities.
- The solar industry added $30.1m to North Dakota's GDP of $76b, comparable to the impact of motion picture and sound recording industries.
- In North Dakota, the solar industry supported 400 workers, with an average labor income of $64,500.
- In 2023, the state derived $300k in tax revenues directly from solar activities and $400k from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	0	$-
Commercial	0	$0.3
Utility	0	$-
Total	**0**	**$0.3**

Sector	Jobs Estimate
Installation, Project Dev. & Other	239
Manufacturing	12
Wholesale Trade & Distribution	20
Operations & Maintenance	2
Total	**273**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	300	$18.0	$19.0	$31.0
Indirect	50	$2.8	$4.3	$8.7
Induced	70	$4.0	$6.8	$11.8
Total	**400**	**$24.9**	**$30.1**	**$51.5**

Tax Impacts

Total State Taxes	Total Local Taxes
$0.7	$0.2

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	300	$21.9	$26.4	$46.1
Manufacturing	20	$1.0	$1.4	$4.3
Operations & Maintenance	0	$0.0	$0.1	$0.1
Wholesale Trade & Distribution (Imports)	20	$1.9	$2.1	$0.9
Total	**340**	**$24.9**	**$30.1**	**$51.5**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Nebraska

- In 2023, the state of Nebraska installed 114.1 MW of PV systems, bringing the state's full solar capacity to 202.5 MW.
- Additionally, Nebraska ranked 31st nationally and 3rd in the Plains for value added from solar industry activities.
- The solar industry added $266.2m to Nebraska's GDP of $181.3b, comparable to the impact of mining, quarrying, and oil and gas extraction.
- In Nebraska, the solar industry supported 2,800 workers, with an average labor income of $67,000.
- In 2023, the state earned tax revenues of $5m directly from solar activities and $5m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	5	$1.2
Commercial	1	$18.6
Utility	108	$124.6
Total	**114**	**$144.4**

Sector	Jobs Estimate
Installation, Project Dev. & Other	1,326
Manufacturing	53
Wholesale Trade & Distribution	120
Operations & Maintenance	344
Total	**1,843**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	1,800	$129.5	$155.7	$246.2
Indirect	400	$25.8	$43.9	$78.9
Induced	600	$33.8	$66.4	$108.4
Total	**2,800**	**$189.2**	**$266.2**	**$433.6**

Tax Impacts

Total State Taxes	Total Local Taxes
$10.0	$7.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	2,000	$142.0	$188.7	$307.0
Manufacturing	90	$5.9	$9.2	$23.1
Operations & Maintenance	500	$25.8	$43.8	$74.5
Wholesale Trade & Distribution (Imports)	200	$15.4	$24.3	$28.9
Total	**2,790**	**$189.3**	**$266.2**	**$433.6**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

South Dakota

- In 2023, the state of South Dakota installed 99.3 MW of PV systems, bringing the state's full solar capacity to 101.8 MW.
- Additionally, South Dakota ranked 46th nationally and 6th in the Plains for value added from solar industry activities.
- The solar industry added $70.2m to South Dakota's GDP of $74b, comparable to the impact of paper manufacturing.
- In South Dakota, the solar industry supported 800 workers, with an average labor income of $69,000.
- In 2023, the state derived tax revenues of $900k directly from solar activities and $1.1m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	0	$0.0
Commercial	0	$1.6
Utility	99	$114.1
Total	**99**	**$115.8**

Sector	Jobs Estimate
Installation, Project Dev. & Other	402
Manufacturing	37
Wholesale Trade & Distribution	60
Operations & Maintenance	21
Total	**520**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	500	$36.3	$41.5	$71.5
Indirect	100	$7.2	$11.5	$21.7
Induced	200	$9.5	$17.1	$29.0
Total	**800**	**$53.1**	**$70.2**	**$122.4**

Tax Impacts

Total State Taxes	Total Local Taxes
$2.0	$1.6

Total Impact by Sector

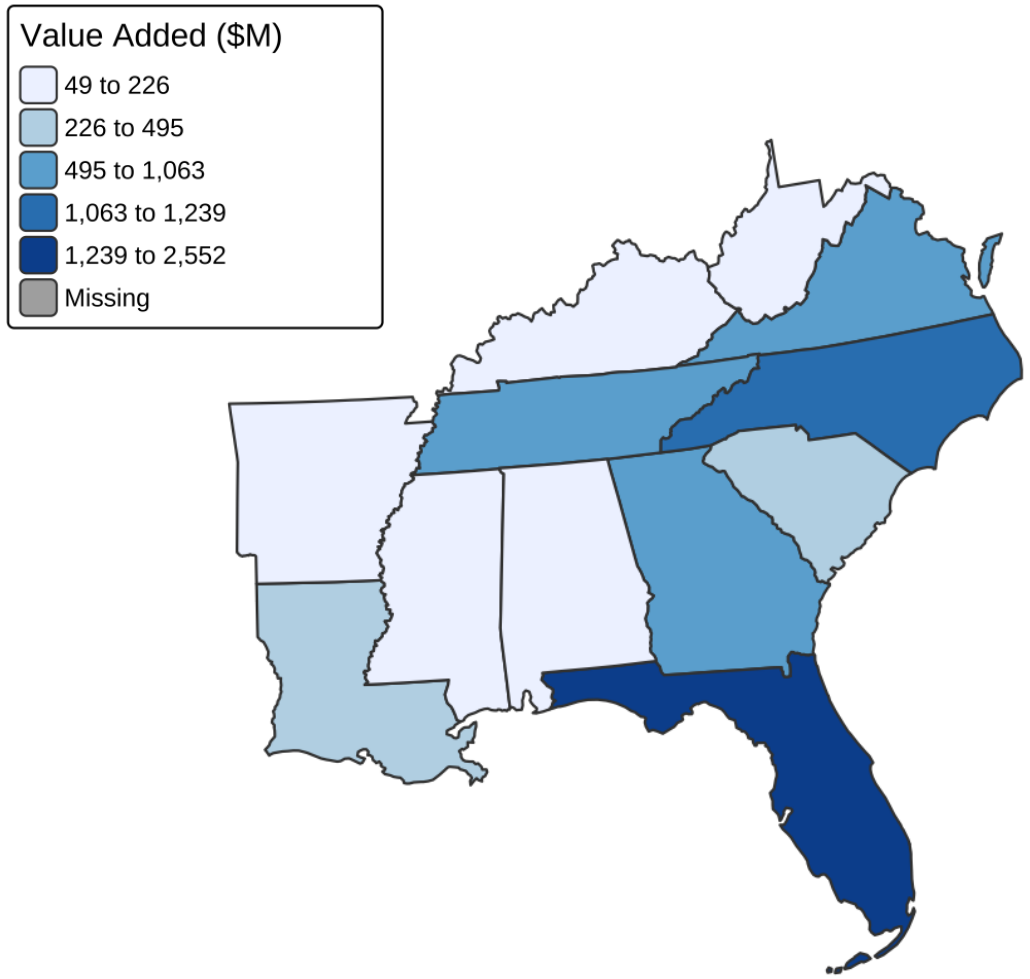
Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	600	$39.7	$49.6	$84.0
Manufacturing	60	$3.4	$4.5	$13.2
Operations & Maintenance	30	$1.4	$2.3	$4.1
Wholesale Trade & Distribution (Imports)	100	$8.4	$13.7	$21.0
Total	**790**	**$53.0**	**$70.2**	**$122.4**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Southeast Region

In the Southeast region, Florida led in implementing solar energy and in its cumulative economic impact. Altogether the solar industry grossed $8.3b value added within this region, with Florida contributing 31% of that total.

State	Jobs	Labor Income	Value Added	Output	State Tax Total	Local Tax Total
Florida	25,900	$1,691.1	$2,552.4	$4,475.7	$74.0	$69.0
North Carolina	12,200	$885.9	$1,239.2	$2,048.5	$51.0	$27.0
Georgia	9,900	$705.3	$1,063.0	$1,891.3	$37.0	$30.0
Virginia	8,300	$708.6	$1,015.6	$1,590.4	$40.0	$28.0
Tennessee	8,700	$666.5	$900.4	$1,638.0	$34.0	$16.0
South Carolina	5,500	$354.8	$494.8	$854.4	$19.0	$13.0
Louisiana	5,100	$319.4	$441.5	$741.3	$17.0	$10.0
Kentucky	2,600	$174.4	$226.4	$397.8	$11.0	$4.9
Alabama	1,200	$78.8	$118.0	$220.1	$5.0	$2.3
Mississippi	1,500	$79.4	$110.4	$229.1	$5.0	$2.6
Arkansas	800	$47.3	$87.7	$162.4	$5.0	$1.5
West Virginia	600	$38.2	$48.6	$91.7	$2.3	$1.0



Alabama

- In 2023, the state of Alabama installed 235.0 MW of PV systems, bringing the state's full solar capacity to 823.2 MW.
- Additionally, Alabama ranked 41st nationally and 9th in the Southeast for value added from solar industry activities.
- The solar industry added $117.9m to Alabama's GDP of $304.9b, comparable to the impact of apparel, leather, and allied product manufacturing.
- In Alabama, the solar industry supported 1,200 workers, with an average labor income of $64,000.
- In 2023, the state derived tax revenues of $2m directly from solar activities and $3m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	0	$-
Commercial	0	$-
Utility	235	$271.4
Total	**235**	**$271.4**

Sector	Jobs Estimate
Installation, Project Dev. & Other	368
Manufacturing	175
Wholesale Trade & Distribution	133
Operations & Maintenance	80
Total	**757**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	800	$52.5	$70.0	$133.1
Indirect	200	$13.3	$21.8	$43.4
Induced	300	$12.8	$26.0	$43.4
Total	**1,200**	**$78.7**	**$117.9**	**$220.0**

Tax Impacts

Total State Taxes	Total Local Taxes
$5.0	$2.3

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	500	$33.5	$43.2	$74.2
Manufacturing	300	$21.4	$33.2	$82.3
Operations & Maintenance	100	$5.3	$8.0	$15.3
Wholesale Trade & Distribution (Imports)	300	$18.4	$33.4	$48.2
Total	**1,200**	**$78.7**	**$118.0**	**$220.0**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Arkansas

- In 2023, the state of Arkansas installed 447.3 MW of PV systems, bringing the state's full solar capacity to 1,116.0 MW.
- Additionally, Arkansas ranked 45th nationally and 11th in the Southeast for value added from solar industry activities.
- The solar industry added $87.7m to Arkansas's GDP of $178.6b, comparable to the impact of apparel, leather, and allied product manufacturing.
- In Arkansas, the solar industry supported 800 workers, with an average labor income of $59,500.
- In 2023, the state derived $3m in tax revenues directly from solar activities and $2m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	40	$58.7
Commercial	36	$136.8
Utility	371	$428.5
Total	**447**	**$624.0**

Sector	Jobs Estimate
Installation, Project Dev. & Other	240
Manufacturing	22
Wholesale Trade & Distribution	95
Operations & Maintenance	58
Total	**416**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	400	$26.3	$50.9	$97.1
Indirect	200	$13.2	$21.0	$38.7
Induced	200	$7.7	$15.7	$26.5
Total	**800**	**$47.3**	**$87.7**	**$162.4**

Tax Impacts

Total State Taxes	Total Local Taxes
$5.0	$1.5

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	400	$20.7	$28.0	$48.2
Manufacturing	40	$2.2	$3.7	$10.0
Operations & Maintenance	80	$3.7	$6.4	$11.6
Wholesale Trade & Distribution (Imports)	300	$20.6	$49.5	$92.5
Total	**820**	**$47.3**	**$87.7**	**$162.4**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Florida

- In 2023, the state of Florida installed 3,219.7 MW of PV systems, bringing the state's full solar capacity to 13,817.6 MW.
- Additionally, Florida ranked 3rd nationally and 1st in the Southeast for value added from solar industry activities.
- The solar industry added $2.6b to Florida's GDP of $1.6t, comparable to the impact of petroleum and coal products manufacturing.
- In Florida, the solar industry supported 25,900 workers, yielding an average labor income of $65,000.
- In 2023, the state derived tax revenues $20m directly from solar activities and $54m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	609	$48.8
Commercial	30	$2,070.8
Utility	2,581	$2,980.8
Total	**3,220**	**$5,100.4**

Sector	Jobs Estimate
Installation, Project Dev. & Other	9,391
Manufacturing	1,204
Wholesale Trade & Distribution	1,104
Operations & Maintenance	2,409
Total	**14,108**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	14,100	$966.2	$1,276.3	$2,257.4
Indirect	5,300	$343.1	$534.9	$990.5
Induced	6,500	$381.6	$741.0	$1,227.7
Total	**25,900**	**$1,691.0**	**$2,552.3**	**$4,475.6**

Tax Impacts

Total State Taxes	Total Local Taxes
$74.0	$69.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	16,100	$1,080.1	$1,488.1	$2,458.2
Manufacturing	2,400	$159.1	$244.6	$581.7
Operations & Maintenance	3,800	$202.4	$322.2	$573.6
Wholesale Trade & Distribution (Imports)	3,600	$249.4	$497.2	$862.0
Total	**25,900**	**$1,691.0**	**$2,552.3**	**$4,475.6**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Georgia

- In 2023, the state of Georgia installed 679.9 MW of PV systems, bringing the state's full solar capacity to 5,906.1 MW.
- Additionally, Georgia ranked 14th nationally and 3rd in the Southeast for value added from solar industry activities.
- The solar industry added $1.1b to Georgia's GDP of $831.8b, comparable to the impact of furniture and related product manufacturing.
- In Georgia, the solar industry supported 9,900 workers, with an average labor income of $71,000.
- In 2023, the state derived tax revenues of $16m directly from solar activities and $21m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	18	$128.2
Commercial	79	$61.9
Utility	583	$673.6
Total	**680**	**$863.7**

Sector	Jobs Estimate
Installation, Project Dev. & Other	3,469
Manufacturing	1,493
Wholesale Trade & Distribution	568
Operations & Maintenance	108
Total	**5,639**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	5,600	$432.4	$557.0	$1,041.4
Indirect	1,700	$124.0	$210.5	$373.0
Induced	2,600	$148.8	$295.4	$476.8
Total	**9,900**	**$705.3**	**$1,062.9**	**$1,891.3**

Tax Impacts

Total State Taxes	Total Local Taxes
$37.0	$30.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	5,700	$384.8	$530.9	$855.9
Manufacturing	2,900	$230.2	$377.0	$831.23
Operations & Maintenance	200	$8.8	$14.4	$25.0
Wholesale Trade & Distribution (Imports)	1,100	$81.5	$140.7	$179.2
Total	**9,900**	**$705.3**	**$1,062.9**	**$1,891.3**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Kentucky

- In 2023, the state of Kentucky installed 95.9 MW of PV systems, bringing the state's full solar capacity to 257.1 MW.
- Additionally, Kentucky ranked 33rd nationally and 8th in the Southeast for value added from solar industry activities.
- The solar industry added $226.4m to Kentucky's GDP of $279.7b, comparable to the impact of support activities for mining.
- In Kentucky, the solar industry supported 2,600 workers, with an average labor income of $66,000.
- In 2023, the state derived tax revenues of $5m directly from solar activities and $6m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	15	$3.4
Commercial	2	$50.1
Utility	79	$91.3
Total	**96**	**$144.8**

Sector	Jobs Estimate
Installation, Project Dev. & Other	1,294
Manufacturing	148
Wholesale Trade & Distribution	113
Operations & Maintenance	146
Total	**1,701**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	1,700	$117.8	$130.2	$228.1
Indirect	400	$24.7	$37.8	$72.1
Induced	600	$31.9	$58.3	$97.5
Total	**2,600**	**$174.4**	**$226.4**	**$397.7**

Tax Impacts

Total State Taxes	Total Local Taxes
$11.0	$4.9

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	2,000	$133.3	$164.5	$278.9
Manufacturing	200	$15.6	$23.1	$62.1
Operations & Maintenance	200	$11.0	$16.9	$30.2
Wholesale Trade & Distribution (Imports)	200	$14.4	$21.8	$26.4
Total	**2,600**	**$174.3**	**$226.4**	**$397.7**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Louisiana

- In 2023, the state of Louisiana installed 300.9 MW of PV systems, bringing the state's full solar capacity to 610.8 MW.
- Additionally, Louisiana ranked 28th nationally and 7th in the Southeast for value added from solar industry activities.
- The solar industry added $441.5m to Louisiana's GDP of $315b, comparable to the impact of motion picture and sound recording industries.
- In Louisiana, the solar industry supported 5,100 workers, with an average labor income of $62,000.
- In 2023, the state derived tax revenues of $7m directly from solar activities and $10m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	9	$10.9
Commercial	7	$31.2
Utility	285	$329.1
Total	**301**	**$371.3**

Sector	Jobs Estimate
Installation, Project Dev. & Other	2,596
Manufacturing	193
Wholesale Trade & Distribution	385
Operations & Maintenance	133
Total	**3,308**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	3,300	$220.1	$258.9	$417.5
Indirect	700	$41.6	$69.1	$133.0
Induced	1,100	$57.5	$113.3	$190.7
Total	**5,100**	**$319.4**	**$441.4**	**$741.3**

Tax Impacts

Total State Taxes	Total Local Taxes
$17.0	$10.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	4,000	$237.3	$316.9	$541.1
Manufacturing	300	$27.2	$41.7	$95.4
Operations & Maintenance	200	$8.4	$13.9	$26.0
Wholesale Trade & Distribution (Imports)	600	$46.4	$68.8	$78.7
Total	**5,100**	**$319.4**	**$441.4**	**$741.3**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Mississippi

- In 2023, the state of Mississippi installed 250.2 MW of PV systems, bringing the state's full solar capacity to 689.0 MW.
- Additionally, Mississippi ranked 43rd nationally and 10th in the Southeast for value added from solar industry activities.
- The solar industry added $110.4m to Mississippi's GDP of $151.1b, comparable to the impact of air transportation.
- In Mississippi, the solar industry supported 1,500 workers, with an average labor income of $52,500.
- In 2023, the state derived tax revenues of $2m directly from solar activities and $3m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	2	$0.3
Commercial	0	$5.2
Utility	248	$286.9
Total	**250**	**$292.6**

Sector	Jobs Estimate
Installation, Project Dev. & Other	617
Manufacturing	144
Wholesale Trade & Distribution	146
Operations & Maintenance	56
Total	**963**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	1,000	$53.7	$62.2	$137.7
Indirect	300	$14.0	$23.4	$48.3
Induced	300	$11.6	$24.7	$42.9
Total	**1,500**	**$79.3**	**$110.4**	**$229.0**

Tax Impacts

Total State Taxes	Total Local Taxes
$5.0	$2.6

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	900	$42.9	$54.9	$104.0
Manufacturing	200	$13.5	$17.3	$62.1
Operations & Maintenance	80	$3.0	$5.0	$10.0
Wholesale Trade & Distribution (Imports)	300	$19.8	$33.1	$52.8
Total	**1,480**	**$79.3**	**$110.3**	**$229.0**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

North Carolina

- In 2023, the state of North Carolina installed 908.7 MW of PV systems, bringing the state's full solar capacity to 9,472.4 MW.
- Additionally, North Carolina ranked 13th nationally and 2nd in the Southeast for value added from solar industry activities.
- The solar industry added $1.2b to North Carolina's GDP of $788.1b, comparable to the impact of printing and related support activities.
- In North Carolina, the solar industry supported 12,200 workers, with an average labor income of $72,500.
- In 2023, the state derived tax revenues of $23m directly from solar activities and $28m from indirect and induced.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	83	$19.7
Commercial	12	$283.8
Utility	813	$939.1
Total	**909**	**$1,242.7**

Sector	Jobs Estimate
Installation, Project Dev. & Other	4,904
Manufacturing	938
Wholesale Trade & Distribution	1,132
Operations & Maintenance	383
Total	**7,356**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	7,400	$569.0	$682.7	$1,102.7
Indirect	2,000	$141.6	$221.5	$400.2
Induced	2,900	$175.2	$334.9	$545.5
Total	**12,200**	**$885.9**	**$1,239.2**	**$2,048.5**

Tax Impacts

Total State Taxes	Total Local Taxes
$51.0	$27.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	7,900	$560.2	$732.7	$1,194.3
Manufacturing	1,800	$145.9	$234.5	$503.2
Operations & Maintenance	600	$31.1	$49.2	$86.0
Wholesale Trade & Distribution (Imports)	2,000	$148.6	$222.7	$264.9
Total	**12,300**	**$885.9**	**$1,239.1**	**$2,048.5**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

South Carolina

- In 2023, the state of South Carolina installed 227.7 MW of PV systems, bringing the state's full solar capacity to 2,518.4 MW.
- Additionally, South Carolina ranked 26th nationally and 6th in the Southeast for value added from solar industry activities.
- The solar industry added $494.8m to South Carolina's GDP of $327.4b, comparable to the impact of petroleum and coal products manufacturing.
- In South Carolina, the solar industry supported 5,500 workers, with an average labor income of $62,000.
- In 2023, the state derived tax revenues of $8m directly from solar activities and $11m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	35	$5.9
Commercial	4	$119.4
Utility	189	$218.1
Total	**228**	**$343.6**

Sector	Jobs Estimate
Installation, Project Dev. & Other	2,637
Manufacturing	345
Wholesale Trade & Distribution	348
Operations & Maintenance	143
Total	**3,472**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	3,500	$242.1	$285.7	$486.1
Indirect	900	$53.8	$84.9	$165.3
Induced	1,200	$58.8	$124.1	$203.0
Total	**5,500**	**$354.8**	**$494.7**	**$854.4**

Tax Impacts

Total State Taxes	Total Local Taxes
$19.0	$13.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	4,100	$257.5	$340.0	$572.9
Manufacturing	600	$45.7	$76.8	$184.5
Operations & Maintenance	200	$10.1	$16.1	$29.2
Wholesale Trade & Distribution (Imports)	600	$41.3	$61.7	$67.8
Total	**5,500**	**$354.8**	**$494.7**	**$854.4**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Tennessee

- In 2023, the state of Tennessee installed 206.7 MW of PV systems, bringing the state's full solar capacity to 900.3 MW.
- Additionally, Tennessee ranked 16th nationally and 5th in the Southeast for value added from solar industry activities.
- The solar industry added $900.4m to Tennessee's GDP of $523b, comparable to the impact of air transportation.
- In Tennessee, the solar industry supported 8,700 workers, with an average labor income of $77,000.
- In 2023, the state derived tax revenues of $9m directly from solar activities and $25m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	0	$-
Commercial	0	$0.7
Utility	207	$238.5
Total	**207**	**$239.2**

Sector	Jobs Estimate
Installation, Project Dev. & Other	2,605
Manufacturing	1,339
Wholesale Trade & Distribution	366
Operations & Maintenance	889
Total	**5,199**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	5,200	$419.2	$480.7	$923.6
Indirect	1,300	$102.9	$160.1	$298.8
Induced	2,200	$144.2	$259.4	$415.4
Total	**8,700**	**$666.4**	**$900.3**	**$1,637.9**

Tax Impacts

Total State Taxes	Total Local Taxes
$34.0	$16.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	4,300	$341.6	$413.2	$670.8
Manufacturing	2,500	$199.1	$299.7	$691.9
Operations & Maintenance	1,300	$80.0	$123.8	$210.6
Wholesale Trade & Distribution (Imports)	600	$45.7	$63.5	$64.5
Total	**8,700**	**$666.4**	**$900.4**	**$1,637.9**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Virginia

- In 2023, the state of Virginia installed 1,134.5 MW of PV systems, bringing the state's full solar capacity to 5,345.2 MW.
- Additionally, Virginia ranked 15th nationally and 4th in the Southeast for value added from solar industry activities.
- The solar industry added $1b to Virginia's GDP of $719.8b, comparable to the impact of rail transportation.
- In Virginia, the solar industry supported 8,300 workers, with an average labor income of $85,000.
- In 2023, the state derived tax revenues of $19m directly from solar activities and $21m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	100	$10.4
Commercial	32	$25.8
Utility	1,003	$-
Total	**1,134**	**$36.3**

Sector	Jobs Estimate
Installation, Project Dev. & Other	4,089
Manufacturing	261
Wholesale Trade & Distribution	321
Operations & Maintenance	267
Total	**4,938**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	4,900	$477.7	$597.5	$920.9
Indirect	1,400	$106.8	$169.9	$283.0
Induced	2,000	$124.0	$248.1	$386.4
Total	**8,300**	**$708.6**	**$1,015.5**	**$1,590.4**

Tax Impacts

Total State Taxes	Total Local Taxes
$40.0	$28.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	6,600	$580.1	$779.7	$1,162.6
Manufacturing	400	$34.7	$46.5	$116.8
Operations & Maintenance	400	$24.2	$38.1	$62.4
Wholesale Trade & Distribution (Imports)	900	$69.5	$151.1	$248.5
Total	**8,300**	**$708.6**	**$1,015.5**	**$1,590.4**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

West Virginia

- In 2023, the state of West Virginia installed 9.4 MW of PV systems, bringing the state's full solar capacity to 38.1 MW.
- Additionally, West Virginia ranked 48th nationally and 12th in the Southeast for value added from solar industry activities.
- The solar industry added $48.6m to West Virginia's GDP of $102.2b, comparable to the impact of water transportation.
- In West Virginia, the solar industry supported 600 workers, with an average labor income of $64,500.
- In 2023, the state derived tax revenues of $1m directly from solar activities and $1.3m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	8	$7.9
Commercial	1	$276.7
Utility	0	$-
Total	**9**	**$284.6**

Sector	Jobs Estimate
Installation, Project Dev. & Other	306
Manufacturing	54
Wholesale Trade & Distribution	26
Operations & Maintenance	10
Total	**395**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	400	$27.1	$29.6	$58.0
Indirect	80	$4.9	$7.6	$14.9
Induced	100	$6.0	$11.3	$18.6
Total	**600**	**$38.2**	**$48.6**	**$91.6**

Tax Impacts

Total State Taxes	Total Local Taxes
$2.3	$1.0

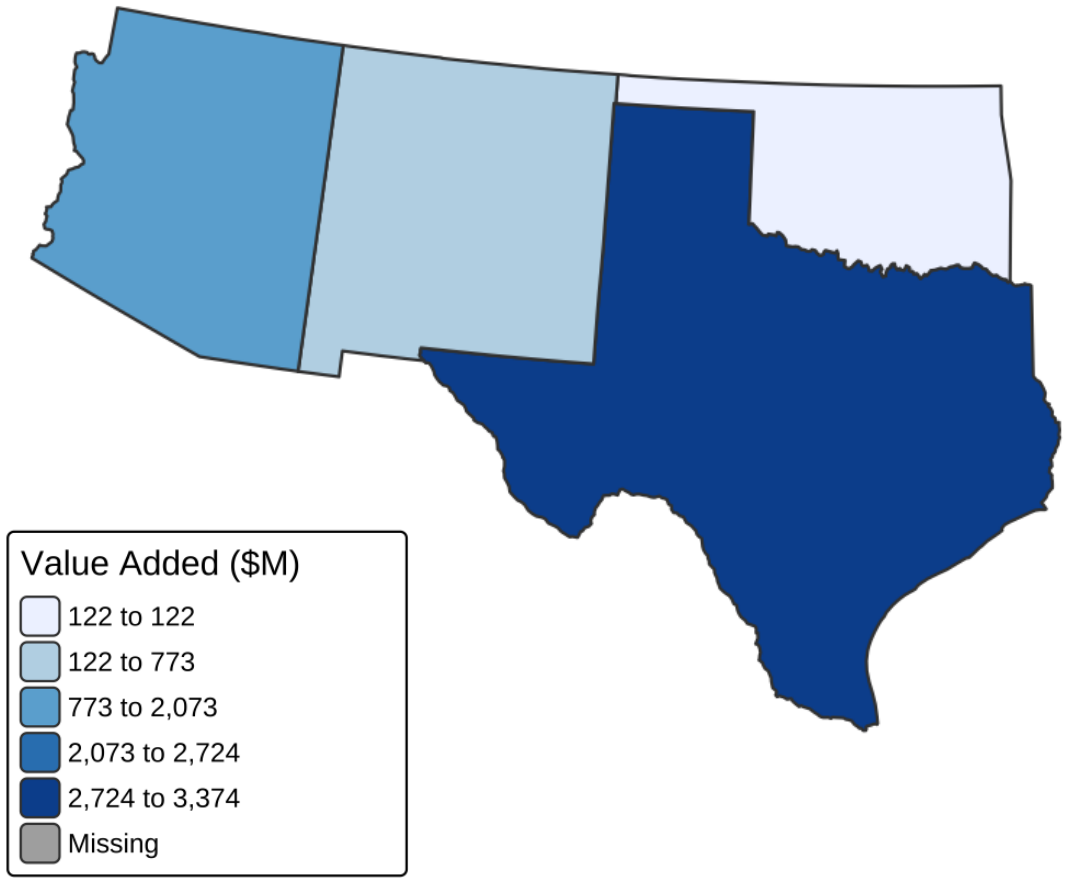
Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	400	$29.3	$35.9	$60.8
Manufacturing	90	$5.1	$7.3	$24.5
Operations & Maintenance	20	$0.8	$1.2	$2.1
Wholesale Trade & Distribution (Imports)	40	$2.9	$4.1	$4.1
Total	**550**	**$38.2**	**$48.6**	**$91.6**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Southwest Region

In the Southwest region, Texas led in implementing solar energy. Altogether, the solar industrygrossed $5.7b value added within this region, with Texas contributing 60% of that total.



State	Jobs	Labor Income	Value Added	Output	State Tax Total	Local Tax Total
Texas	26,700	$1,973.9	$3,373.9	$6,081.6	$78.0	$81.0
Arizona	17,700	$1,274.2	$1,889.0	$3,395.0	$72.0	$48.0
New Mexico	3,200	$197.2	$281.6	$532.2	$16.0	$4.9
Oklahoma	1,500	$93.6	$122.2	$182.4	$4.8	$2.3

Arizona

- In 2023, the state of Arizona installed 1,526.7 MW of PV systems, bringing the state's full solar capacity to 7,671.7 MW.
- Additionally, Arizona ranked 6th nationally and 2nd in the Southwest for value added from solar industry activities.
- The solar industry added $1.9b to Arizona's GDP of $522.8b, comparable to the impact of farms.
- In Arizona, the solar industry supported 17,700 workers, with an average labor income of $72,000.
- In 2023, the state derived tax revenues of $27m directly from solar activities and $45m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	373	$81.9
Commercial	50	$1,266.9
Utility	1,104	$1,274.9
Total	**1,527**	**$2,623.8**

Sector	Jobs Estimate
Installation, Project Dev. & Other	5,356
Manufacturing	2,543
Wholesale Trade & Distribution	912
Operations & Maintenance	915
Total	**9,726**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	9,700	$747.5	$962.6	$1,813.3
Indirect	3,400	$235.9	$366.9	$679.3
Induced	4,600	$290.6	$559.3	$902.3
Total	**17,700**	**$1,274.1**	**$1,888.9**	**$3,395.0**

Tax Impacts

Total State Taxes	Total Local Taxes
$72.0	$48.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	9,100	$667.7	$911.5	$1,462.5
Manufacturing	4,900	$360.6	$552.7	$1,252.0
Operations & Maintenance	1,400	$83.9	$137.5	$230.5
Wholesale Trade & Distribution (Imports)	2,200	$161.8	$287.2	$450.0
Total	**17,600**	**$1,274.1**	**$1,889.0**	**$3,395.0**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

New Mexico

- In 2023, the state of New Mexico installed 327.9 MW of PV systems, bringing the state's full solar capacity to 1,921.2 MW.
- Additionally, New Mexico ranked 30th nationally and 3rd in the Southwest for value added from solar industry activities.
- The solar industry added $281.6m to New Mexico's GDP of $135b, comparable to the impact of warehousing and storage.
- In New Mexico, the solar industry supported 3,200 workers, with an average labor income of $61,500.
- In 2023, the state derived tax revenues of $7m directly from solar activities and $9m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	63	$8.6
Commercial	5	$214.6
Utility	259	$299.7
Total	**328**	**$523.0**

Sector	Jobs Estimate
Installation, Project Dev. & Other	1,129
Manufacturing	561
Wholesale Trade & Distribution	309
Operations & Maintenance	100
Total	**2,099**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	2,100	$138.5	$172.7	$339.3
Indirect	500	$27.3	$45.0	$87.2
Induced	600	$31.4	$63.7	$105.6
Total	**3,200**	**$197.2**	**$281.6**	**$532.1**

Tax Impacts

Total State Taxes	Total Local Taxes
$16.0	$4.9

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	1,700	$107.5	$146.2	$239.7
Manufacturing	800	$44.9	$65.4	$190.2
Operations & Maintenance	100	$6.4	$10.7	$19.2
Wholesale Trade & Distribution (Imports)	600	$38.4	$59.2	$83.0
Total	**3,200**	**$197.2**	**$281.6**	**$532.1**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Oklahoma

- In 2023, the state of Oklahoma installed 46.0 MW of PV systems, bringing the state's full solar capacity to164.0 MW.
- Additionally, Oklahoma ranked 40th nationally and 4th in the Southwest for value added from solar industry activities.
- The solar industry added $122.2m to Oklahoma's GDP of $256.7b, comparable to the impact of furniture and related product manufacturing.
- In Oklahoma, the solar industry supported 1,500 workers, with an average labor income of $64,000.
- In 2023, the state derived tax revenues of $2m directly from solar activities and $2.8m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	43	$5.2
Commercial	3	$145.4
Utility	0	$-
Total	**46**	**$150.7**

Sector	Jobs Estimate
Installation, Project Dev. & Other	603
Manufacturing	28
Wholesale Trade & Distribution	283
Operations & Maintenance	33
Total	**947**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	900	$65.6	$72.1	$91.2
Indirect	200	$11.5	$18.3	$35.9
Induced	300	$16.4	$31.7	$55.2
Total	**1,500**	**$93.5**	**$122.2**	**$182.4**

Tax Impacts

Total State Taxes	Total Local Taxes
$4.8	$2.3

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	900	$56.6	$73.0	$129.0
Manufacturing	50	$3.6	$5.5	$12.7
Operations & Maintenance	50	$2.4	$3.8	$7.0
Wholesale Trade & Distribution (Imports)	400	$30.9	$39.8	$33.6
Total	**1,400**	**$93.6**	**$122.2**	**$182.4**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Texas

- In 2023, the state of Texas installed 11,728.3 MW of PV systems—more than any other state—bringing the state's full solar capacity to 29,832.5 MW.
- Additionally, Texas ranked 2nd nationally and 1st in the Southwest for value added from solar industry activities.
- The solar industry added $3.4b to Texas's GDP of $2.6, comparable to the impact of wood product manufacturing.
- In Texas, the solar industry supported 26,700 workers, with an average labor income of $73,500.
- In 2023, the state derived tax revenues of $22m directly from solar activities and $56m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	440	$104.
Commercial	64	$1,496.
Utility	11,224	$12,963.
Total	**11,728**	**$14,565.**

Sector	Jobs Estimate
Installation, Project Dev. & Other	6,370
Manufacturing	2,155
Wholesale Trade & Distribution	2,209
Operations & Maintenance	1,687
Total	**12,421**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	12,400	$1,011.0	$1,731.4	$3,214.9
Indirect	7,200	$527.0	$817.8	$1,490.4
Induced	7,100	$435.7	$824.5	$1,376.1
Total	**26,700**	**$1,973.9**	**$3,373.8**	**$6,081.5**

Tax Impacts

Total State Taxes	Total Local Taxes
$78.0	$81.0

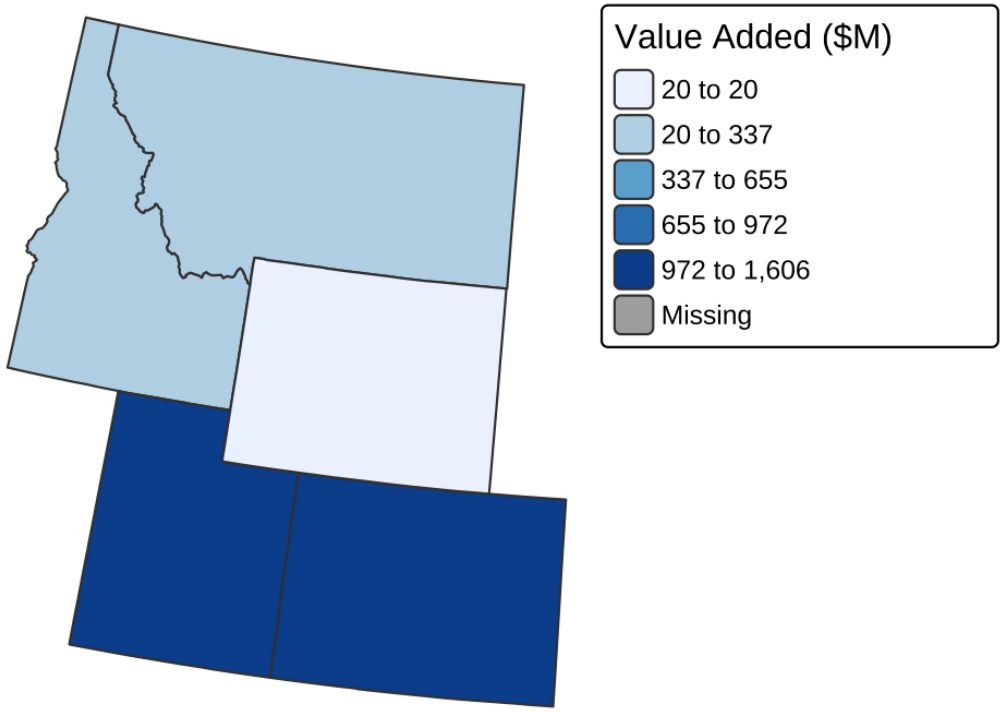
Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	10,900	$828.7	$1,114.2	$1,802.5
Manufacturing	4,600	$370.0	$582.5	$1,303.5
Operations & Maintenance	2,700	$157.6	$259.3	$440.9
Wholesale Trade & Distribution (Imports)	8,500	$617.4	$1,417.8	$2,534.5
Total	**26,700**	**$1,973.9**	**$3,373.9**	**$6081.5**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Rocky Mountain Region

In the Rocky Mountain region, Colorado led in implementing solar energy. Altogether, the solar industry grossed $3.1b value added within this region, with Colorado contributing 52% of that total.



State	Jobs	Labor Income	Value Added	Output	State Tax Total	Local Tax Total
Colorado	14,400	$1,155.5	$1,606.3	$2,652.6	$49.0	$45.0
Utah	12,700	$898.8	$1,273.4	$1,972.0	$50.0	$24.0
Idaho	1,200	$78.0	$116.5	$189.8	$6.0	$1.9
Montana	700	$44.1	$67.4	$132.0	$3.4	$1.5
Wyoming	200	$15.6	$20.1	$30.8	$0.7	$0.2

Colorado

- In 2023, the state of Colorado installed 1,656.7 MW of PV systems, bringing the state's full solar capacity to 4,084.3 MW.
- Additionally, Colorado ranked 7th nationally and 1st in the Rocky Mountain region for value added from solar industry activities.
- The solar industry added $1.6b to Colorado's GDP of $529.6b, comparable to the impact of petroleum and coal products manufacturing.
- In Colorado, the solar industry supported 14,400 workers, with an average labor income of $80,500.
- In 2023, the state derived tax revenues of $21m directly from solar activities and $28m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	180	$102.2
Commercial	63	$611.7
Utility	1,414	$1,633.3
Total	**1,657**	**$2,347.2**

Sector	Jobs Estimate
Installation, Project Dev. & Other	6,189
Manufacturing	670
Wholesale Trade & Distribution	691
Operations & Maintenance	627
Total	**8,177**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	8,200	$708.0	$834.3	$1,363.8
Indirect	2,400	$198.0	$297.7	$531.3
Induced	3,800	$249.4	$474.2	$757.4
Total	**14,400**	**$1,155.4**	**$1,606.3**	**$2,652.6**

Tax Impacts

Total State Taxes	Total Local Taxes
$49.0	$45.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	10,300	$859.9	$1,120.0	$1,744.9
Manufacturing	1,300	$96.0	$138.6	$331.2
Operations & Maintenance	1,000	$62.4	$95.1	$158.6
Wholesale Trade & Distribution (Imports)	1,800	$137.1	$252.5	$417.8
Total	**14,400**	**$1,155.4**	**$1,606.3**	**$2,652.6**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Idaho

- In 2023, the state of Idaho installed 250.9 MW of PV systems, bringing the state's full solar capacity to 829.6 MW.
- Additionally, Idaho ranked 42nd nationally and 3rd in the Rocky Mountain region for value added from solar industry activities.
- The solar industry added $116.5m to Idaho's GDP of $121b, comparable to the impact of printing and related support activities.
- In Idaho, the solar industry supported 1,200 workers, with an average labor income of $65,500.
- In 2023, the state derived tax revenues of $3m directly from solar activities and $3m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	41	$4.1
Commercial	3	$138.0
Utility	208	$240.0
Total	**251**	**$382.1**

Sector	Jobs Estimate
Installation, Project Dev. & Other	442
Manufacturing	10
Wholesale Trade & Distribution	156
Operations & Maintenance	121
Total	**728**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	700	$51.3	$69.9	$107.5
Indirect	200	$12.6	$19.6	$37.5
Induced	200	$13.9	$26.9	$44.7
Total	**1,200**	**$77.9**	**$116.5**	**$189.7**

Tax Impacts

Total State Taxes	Total Local Taxes
$6.0	$1.9

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	700	$45.0	$60.0	$100.0
Manufacturing	20	$1.0	$1.4	$3.7
Operations & Maintenance	200	$9.2	$14.8	$26.0
Wholesale Trade & Distribution (Imports)	300	$22.7	$40.2	$59.9
Total	**1,220**	**$77.9**	**$116.5**	**$189.7**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Montana

- In 2023, the state of Montana 230.8 installed MW of PV systems, bringing the state's full solar capacity to 294.9 MW.
- Additionally, Montana ranked 47th nationally and 4th in the Rocky Mountain region for value added from solar industry activities.
- The solar industry added $67.4m to Montana's GDP of $73.3b, comparable to the impact of other transportation equipment manufacturing.
- In Montana, the solar industry supported 700 workers, with an average labor income of $66,000.
- In 2023, the state derived tax revenues of $2m directly from solar activities and $1.4m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	20	$3.4
Commercial	2	$67.1
Utility	209	$241.2
Total	**231**	**$311.8**

Sector	Jobs Estimate
Installation, Project Dev. & Other	268
Manufacturing	31
Wholesale Trade & Distribution	43
Operations & Maintenance	32
Total	**374**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	400	$26.9	$38.9	$80.8
Indirect	100	$8.7	$13.3	$25.5
Induced	100	$8.4	$15.0	$25.6
Total	**700**	**$44.1**	**$67.3**	**$132.0**

Tax Impacts

Total State Taxes	Total Local Taxes
$3.4	$1.5

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	400	$28.2	$34.7	$59.0
Manufacturing	50	$3.3	$6.8	$20.3
Operations & Maintenance	50	$2.4	$3.4	$6.4
Wholesale Trade & Distribution (Imports)	200	$10.1	$22.3	$46.1
Total	**700**	**$44.1**	**$67.4**	**$132.0**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Utah

- In 2023, the state of Utah installed 177.5 MW of PV systems, bringing the state's full solar capacity to 2,731.0 MW.
- Additionally, Utah ranked 11th nationally and 2nd in the Rocky Mountain region for value added from solar industry activities.
- The solar industry added $1.3b to Utah's GDP of $281.3b, comparable to the impact of farms.
- In Utah, the solar industry supported 12,700 workers, with an average labor income of $70,500.
- In 2023, the state derived tax revenues of $22m directly from solar activities and $28m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	58	$5,289.6
Commercial	9	$23,447.5
Utility	110	$35,921.7
Total	**177**	**$64,658.9**

Sector	Jobs Estimate
Installation, Project Dev. & Other	6,317
Manufacturing	191
Wholesale Trade & Distribution	909
Operations & Maintenance	218
Total	**7,634**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	7,600	$602.4	$702.4	$988.5
Indirect	1,900	$116.7	$198.3	$369.3
Induced	3,200	$179.6	$372.5	$614.1
Total	**12,700**	**$898.7**	**$1,273.3**	**$1,971.9**

Tax Impacts

Total State Taxes	Total Local Taxes
$50.0	$24.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	10,600	$752.7	$1,066.6	$1,708.7
Manufacturing	400	$26.8	$42.4	$100.5
Operations & Maintenance	300	$17.8	$30.0	$51.8
Wholesale Trade & Distribution (Imports)	1,400	$101.3	$134.2	$110.9
Total	**12,700**	**$898.7**	**$1,273.3**	**$1,971.9**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Wyoming

- In 2023, the state of Wyoming installed 3.4 MW of PV systems, bringing the state's full solar capacity to 139.5 MW.
- Additionally, Wyoming ranked 50th nationally and 5th in the Rocky Mountain region for value added from solar industry activities.
- The solar industry added $20.1 to Wyoming's GDP of $52b, comparable to the impact of motor vehicles, bodies and trailers, and parts manufacturing.
- In Wyoming, the solar industry supported 200 workers, with an average labor income of $63,500.
- In 2023, the state derived tax revenues of $300k directly from solar activities and $400k from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	3	$66.9
Commercial	0	$93.0
Utility	0	$1,030.6
Total	**3**	**$1,190.6**

Sector	Jobs Estimate
Installation, Project Dev. & Other	133
Manufacturing	1
Wholesale Trade & Distribution	30
Operations & Maintenance	12
Total	**177**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	200	$12.4	$14.1	$19.4
Indirect	30	$1.5	$2.4	$5.1
Induced	40	$1.6	$3.5	$6.3
Total	**200**	**$15.6**	**$20.0**	**$30.8**

Tax Impacts

Total State Taxes	Total Local Taxes
$0.7	$0.2

Total Impact by Sector

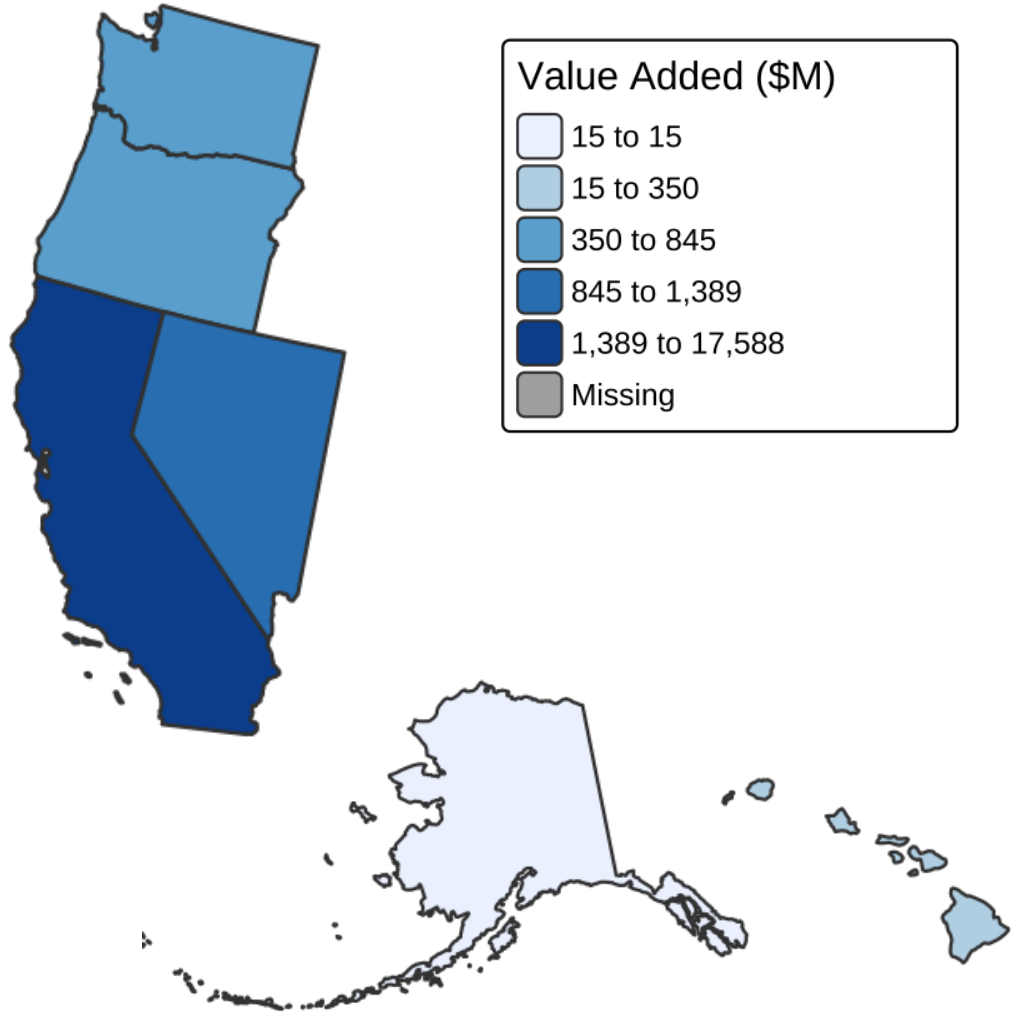
Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	200	$11.8	$15.3	$26.1
Manufacturing	0	$0.0	$0.0	$0.2
Operations & Maintenance	20	$0.7	$1.2	$2.2
Wholesale Trade & Distribution (Imports)	40	$2.9	$3.5	$2.2
Total	**260**	**$15.6**	**$20.1**	**$30.8**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

West Region

In the West region, California led in implementing solar energy. Altogether, the solar industry grossed $20.9b value added within this region, with California contributing 84% of the regional total.

State	Jobs	Labor Income	Value Added	Output	State Tax Total	Local Tax Total
California	136,700	$12,333.2	$17,588.4	$26,910.5	$847.0	$481.0
Nevada	13,800	$977.4	$1,388.8	$2,226.8	$55.0	$26.0
Washington	6,500	$599.4	$845.4	$1,306.1	$31.0	$17.0
Oregon	7,000	$542.4	$708.9	$1,217.7	$37.0	$19.0
Hawaii	3,800	$257.4	$350.2	$565.9	$22.0	$7.0
Alaska	200	$10.2	$15.2	$25.4	$0.3	$0.2



Alaska

- In 2023, the state of Alaska installed 11.9 MW of PV systems, bringing the state's full solar capacity to 29.8 MW.
- Additionally, Alaska ranked 51st nationally and 6th in the West region for value added from solar industry activities.
- The solar industry added $15.2m to Alaska's GDP of $68.1b, comparable to the impact of machinery manufacturing.
- In Alaska, the solar industry supported 200 workers, with an average labor income of $66,000.
- In 2023, the state derived tax revenues of $90k directly from solar activities and $180k from indirect and induced activity.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	3	$0.9
Commercial	1	$9.5
Utility	9	$9.8
Total	**12**	**$20.3**

Sector	Jobs Estimate
Installation, Project Dev. & Other	65
Manufacturing	1
Wholesale Trade & Distribution	3
Operations & Maintenance	37
Total	**107**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	100	$7.0	$9.6	$16.1
Indirect	20	$1.2	$2.1	$3.7
Induced	30	$1.8	$3.4	$5.4
Total	**200**	**$10.2**	**$15.2**	**$25.4**

Tax Impacts

Total State Taxes	Total Local Taxes
$0.2	$0.2

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	90	$6.7	$9.3	$14.6
Manufacturing	0	$0.1	$0.1	$0.4
Operations & Maintenance	50	$2.7	$4.5	$7.6
Wholesale Trade & Distribution (Imports)	10	$0.6	$1.2	$2.6
Total	**150**	**$10.2**	**$15.2**	**$25.4**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

California

- In 2023, the state of California installed 6,554.1 MW of PV systems, bringing the state's full solar capacity to 45,679.3 MW.
- Additionally, California ranked 1st nationally and within the West region for value added from solar industry activities.
- The solar industry added $17.6b to California's GDP of $3.9t, comparable to the impact of forestry, fishing, and related activities.
- In California, the solar industry supported 136,700 workers, with an average labor income of $90,000.
- In 2023, the state derived tax revenues of $378m directly from solar activities and $469m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	2,277	$1,069.1
Commercial	655	$7,743.2
Utility	3,622	$4,183.1
Total	**6,554**	**$12,995.5**

Sector	Jobs Estimate
Installation, Project Dev. & Other	55,481
Manufacturing	9,530
Wholesale Trade & Distribution	10,841
Operations & Maintenance	4,205
Total	**80,056**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	80,000	$7,743.7	$9,376.7	$13,862.2
Indirect	19,700	$1,846.8	$3,006.5	$5,055.9
Induced	36,900	$2,742.6	$5,205.1	$7,992.3
Total	**136,700**	**$12,333.1**	**$17,588.4**	**$26,910.5**

Tax Impacts

Total State Taxes	Total Local Taxes
$847.0	$481.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	92,700	$8,478.6	$11,564.4	$17,077.3
Manufacturing	19,500	$1,921.8	$3,065.8	$6,155.2
Operations & Maintenance	6,400	$451.3	$714.1	$1,142.0
Wholesale Trade & Distribution (Imports)	18,000	$1,481.2	$2,243.9	$2,535.9
Total	**136,600**	**$12,333.1**	**$17,588.3**	**$26,910.5**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Hawaii

- In 2023, Hawaii installed 300.0 MW of PV systems, bringing the state's full solar capacity to1,888.5 MW.
- Additionally, Hawaii ranked 29th nationally and 5th within the West region for value added from solar industry activities.
- The solar industry added $350.2m to Hawaii's GDP of $110.3b, comparable to the impact of motion picture and sound recording industries.
- In Hawaii, the solar industry supported 3,800 workers, with an average labor income of $68,500.
- In 2023, the state derived tax revenues of $9m directly from solar activities and $13m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	59	$105.2
Commercial	78	$201.5
Utility	163	$188.3
Total	**300**	**$495.0**

Sector	Jobs Estimate
Installation, Project Dev. & Other	1,917
Manufacturing	81
Wholesale Trade & Distribution	294
Operations & Maintenance	138
Total	**2,430**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	2,400	$172.0	$190.9	$307.1
Indirect	500	$35.8	$57.6	$101.7
Induced	800	$49.4	$101.5	$157.0
Total	**3,800**	**$257.3**	**$350.1**	**$565.9**

Tax Impacts

Total State Taxes	Total Local Taxes
$22.0	$7.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	2,900	$197.0	$257.9	$416.6
Manufacturing	100	$8.1	$11.3	$29.9
Operations & Maintenance	200	$11.1	$17.6	$30.0
Wholesale Trade & Distribution (Imports)	500	$41.1	$63.3	$89.3
Total	**3,700**	**$257.3**	**$350.2**	**$565.9**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Nevada

- In 2023, the state of Nevada installed 963.6 MW of PV systems, bringing the state's full solar capacity to 6,176.1 MW.
- Additionally, Nevada ranked 10th nationally and 2nd within the West region for value added from solar industry activities.
- The solar industry added $1.4b to Nevada's GDP of $246b, comparable to the impact of educational services.
- In Nevada, the solar industry supported 13,800 workers, with an average labor income of $70,500.
- In 2023, the state derived tax revenues of $18m directly from solar activities and $37m from indirect and induced.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	179	$7.2
Commercial	4	$609.8
Utility	780	$900.6
Total	**964**	**$1,517.7**

Sector	Jobs Estimate
Installation, Project Dev. & Other	6,814
Manufacturing	312
Wholesale Trade & Distribution	844
Operations & Maintenance	621
Total	**8,592**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	8,600	$652.1	$775.6	$1,213.9
Indirect	2,200	$146.3	$246.7	$433.5
Induced	3,000	$178.9	$366.4	$579.4
Total	**13,800**	**$977.4**	**$1,388.8**	**$2,226.8**

Tax Impacts

Total State Taxes	Total Local Taxes
$55.0	$26.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	10,700	$765.4	$1,056.4	$1,666.5
Manufacturing	500	$37.3	$53.6	$140.6
Operations & Maintenance	900	$50.8	$80.9	$138.0
Wholesale Trade & Distribution (Imports)	1,700	$123.8	$197.9	$281.7
Total	**13,800**	**$977.4**	**$1,388.8**	**$2,226.8**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Oregon

- In 2023, the state of Oregon installed 390.0 MW of PV systems, bringing the state's full solar capacity to 1,787.9 MW.
- Additionally, Oregon ranked 22nd nationally and 4th within the West region for value added from solar industry activities.
- The solar industry added $708.9m to Oregon's GDP of $318.9b, comparable to the impact of the military.
- In Oregon, the solar industry supported 7,000 workers, with an average labor income of $77,500.
- In 2023, the state derived tax revenues of $20m directly from solar activities and $17m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	95	$35.7
Commercial	22	$323.3
Utility	273	$315.3
Total	**390**	**$674.4**

Sector	Jobs Estimate
Installation, Project Dev. & Other	2,709
Manufacturing	865
Wholesale Trade & Distribution	524
Operations & Maintenance	79
Total	**4,177**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	4,200	$347.3	$382.5	$661.5
Indirect	1,100	$84.5	$127.6	$241.1
Induced	1,700	$110.4	$198.7	$315.0
Total	**7,000**	**$542.3**	**$708.9**	**$1,217.7**

Tax Impacts

Total State Taxes	Total Local Taxes
$37.0	$19.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	4,400	$345.2	$426.7	$678.7
Manufacturing	1,600	$120.6	$167.8	$398.6
Operations & Maintenance	100	$7.4	$11.1	$18.6
Wholesale Trade & Distribution (Imports)	900	$69.1	$103.2	$121.7
Total	**7,000**	**$542.4**	**$708.8**	**$1,217.7**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.

Washington

- In 2023, the state of Washington installed 86.2 MW of PV systems, bringing the state's full solar capacity to 684.6 MW.
- Additionally, Washington ranked 19th nationally and 3rd within the West region for value added from solar industry activities.
- The solar industry added $845.4m to Washington's GDP of $807.9b, comparable to the impact of plastics and rubber products manufacturing.
- In Washington, the solar industry supported 6,500 workers, with an average labor income of $92,000.
- In 2023, the state derived tax revenues of $10m directly from solar activities and $11m from indirect and induced activities.

INPUTS

Market segment	Installed Capacity	Cost Estimate
Residential	81	$52.2
Commercial	5	$338.8
Utility	0	$1,158.2
Total	**86**	**$1,549.3**

Sector	Jobs Estimate
Installation, Project Dev. & Other	3,191
Manufacturing	493
Wholesale Trade & Distribution	269
Operations & Maintenance	196
Total	**4,149**

RESULTS

Impact Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	4,100	$395.7	$480.0	$734.0
Indirect	900	$88.3	$131.1	$221.1
Induced	1,500	$115.3	$234.2	$350.8
Total	**6,500**	**$599.3**	**$845.4**	**$1,306.0**

Tax Impacts

Total State Taxes	Total Local Taxes
$31.0	$17.0

Total Impact by Sector

Sector	Employment	Labor Income	Value Added	Output
Installation & Project Development	5,000	$469.7	$635.1	$927.2
Manufacturing	900	$77.0	$129.7	$281.3
Operations & Maintenance	300	$19.3	$32.3	$50.7
Wholesale Trade & Distribution (Imports)	400	$33.2	$48.3	$46.8
Total	**6,600**	**$599.4**	**$845.4**	**$1,306.0**

Note: Dollar amounts and installed capacity are reported in millions and megawatts respectively. Summing the results rows may not be equal to the totals rows due to rounding.