



Independent Statistics & Analysis
U.S. Energy Information
Administration

2021 Annual Solar Photovoltaic Module Shipments Report

July 2022



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Table 1. U.S. photovoltaic industry status, 2021
NOT PUBLISHED FOR 2021

Table 2. Value and average value of photovoltaic module shipments, 2021

Module value, total shipments (thousand dollars)	
Total modules	\$9,814,022
Module average value (dollars per peak watt)	
Total modules	\$0.34

Data source: U.S. Energy Information Administration, Form EIA-63B, *Annual and Monthly Photovoltaic Module Shipments Report*

Note: Dollars are not adjusted for inflation.

Table 3. Annual photovoltaic module shipments, 2006–21 (peak kilowatts)

Year	Modules
2006	320,208
2007	494,148
2008	920,693
2009	1,188,879
2010	2,644,498
2011	3,772,075
2012	4,655,005
2013	4,984,881
2014	6,237,524
2015	9,942,978
2016	13,451,187
2017	10,864,545
2018	7,971,622
2019	16,372,314
2020	21,770,903
2021	28,838,343

Data source: U.S. Energy Information Administration, Form EIA-63B, *Annual and Monthly Photovoltaic Module Shipments Report*

Note: Includes both U.S. shipments and exports.

Table 4. Average value of photovoltaic modules, 2006–21 (dollars per peak watt)

Year	Modules
2006	\$3.50
2007	\$3.37
2008	\$3.49
2009	\$2.79
2010	\$1.96
2011	\$1.59
2012	\$1.15
2013	\$0.75
2014	\$0.87
2015	\$0.71
2016	\$0.72
2017	\$0.48
2018	\$0.45
2019	\$0.41
2020	\$0.38
2021	\$0.34

Data source: U.S. Energy Information Administration, Form EIA-63B, *Annual and Monthly Photovoltaic Module Shipments Report*

Note: Dollars are not adjusted for inflation.

Table 5. Source and disposition of photovoltaic cell shipments, 2021
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Table 6. Source and disposition of photovoltaic module shipments, 2021
(peak kilowatts)

Module shipments	Total
Source	
Inventory, start-of-year	Q
Manufactured during reporting year	4,232,866
Imported during reporting year	22,971,066
Purchased from U.S. OEM	119,936
Total available for shipment	30,454,891
Disposition	
U.S. shipments and sales to U.S. OEM* for resale	27,647,716
Export shipments	1,190,627
Total shipments	28,838,343
Inventory, End-of-Year	Q

Data source: U.S. Energy Information Administration, Form EIA-63B, *Annual and Monthly Photovoltaic Module Shipments Report*

Note: OEM is Original Equipment Manufacturer. Q = poor data quality.

Table 7. Photovoltaic module import shipments by country, 2021
(peak kilowatts)

Country	Total
China, Singapore, Taiwan & Vietnam	11,305,849
Malaysia	3,217,522
South Korea, Thailand & United Arab Emirates	4,986,819
Other	3,460,876
Total	22,971,066

Data source: U.S. Energy Information Administration, Form EIA-63B, *Annual and Monthly Photovoltaic Module Shipments Report*

Note: Country-specific data are from monthly respondents only.

Table 8. Destination of photovoltaic module export shipments, 2021
NOT PUBLISHED FOR 2021

Table 9. U.S. photovoltaic module shipments by state/territory, 2021 (peak kilowatts)

State	Total
Alabama	W
Alaska	W
Arkansas	241,684
Arizona	388,905
California	5,093,259
Colorado	403,529
Connecticut	140,851
District of Columbia	3,067
Delaware	W
Florida	1,739,378
Georgia	1,147,733
Guam	W
Hawaii	W
Iowa	101,522
Idaho	17,896
Illinois	1,120,581
Indiana	356,968
Kansas	W
Kentucky	4,555
Louisiana	W
Massachusetts	303,834
Maryland	157,250
Maine	69,664
Michigan	W
Minnesota	34,101
Missouri	25,927
Mississippi	W
Montana	11,066
Nebraska	4,777
New Hampshire	W
New Jersey	698,515
New Mexico	56,569
New York	597,782
Nevada	1,056,625
North Carolina	933,832
North Dakota	W
Ohio	74,046
Oklahoma	13,696
Oregon	233,098
Pennsylvania	300,736
Puerto Rico	44,821
Rhode Island	78,099
South Carolina	W
South Dakota	W
Tennessee	W
Texas	4,305,215
Utah	W
Vermont	143,186
Virginia	20,224
Washington	764,657
Wisconsin	W
West Virginia	218,899
Wyoming	124,069

Data source: U.S. Energy Information Administration, Form EIA-63B, *Monthly Photovoltaic Module Shipments Report*

Note: State data collected from monthly respondents only. W = Withheld to protect sensitive data.