

IOWA SOLAR ENERGY FACT SHEET

Updated: August 2023

SOLAR ENERGY IN IOWA IS GROWING

- As of April 2023, Iowa had at least 505 megawatts (MW) of total installed solar capacity. [1] This is up from approximately 2 MW of solar installed in 2012.
- Iowa is on track to exceed 2,500 MW of solar with the addition of approved and proposed utility-scale projects over the next few years.
- Approved projects include Invenenergy's Worthwhile Solar Farm East (149 MW), Worthwhile Solar Farm West (300 MW), Big Dave Solar Farm (300 MW), Coggon Solar (100 MW), Duane Arnold I (50 MW), Duane Arnold II (150 MW), Hawkeye (200 MW), Hatchling (50 MW), Grand Junction (100 MW), IPL Lee County (150 MW) and IPL Creston (50 MW). [2]
- Proposed projects with applications or requests for informational meetings have been filed with the Iowa Utilities Board for Duane Arnold III (230 MW) and Goldfinch (200 MW). [3]
- Every one of Iowa's 99 counties has solar projects installed that benefited from the Iowa upfront solar tax credit. [4] This includes 9,738 projects and counting.
- Linn, Dubuque, Winneshiek, and Johnson are the counties with the highest count of installations, each with more than 500. Farmers and rural businesses are leading the use of solar in many of these areas. [5]
- As of October 2021, Iowa had more small-scale distributed solar than most Midwest and Plains states. [6]

SOLAR ENERGY STRENGTHENS IOWA'S ECONOMY

- There were 886 jobs supported by the solar industry in Iowa in 2022. [7]
- Solar jobs declined in 2020, but started to rebound in the second half of the year. [8] Nationally, solar installers are the fourth fastest growing occupation (tied with nurses.) [9]
- There are 78 Iowa businesses involved in the solar energy supply chain. [10]
- Investments of \$439 million are associated with solar projects that benefited from the Iowa solar tax credit alone, meaning the total investment in solar is even higher. [11]
- The two Worthwhile and Big Dave Solar Farms combined will generate an estimated \$77.5 million in new local tax revenue and \$195 million in land lease payments over 35 years. [12]
- Solar lease payments range from \$600 - \$715 per acre while average cropland rents in 2022 were \$256. [13]

SOLAR ENERGY FACT SHEET: CONTINUED

SOLAR ENERGY COSTS ARE LOW

- Costs have come down significantly in recent years. Lazard recently reported that utility-scale solar's leveled costs utilizing the production tax credit under the inflation reduction act can be as low as \$0/Mwh. [14]
- Lazard's cost analysis shows that utility-scale solar has a lower leveled cost than conventional generation technologies like gas, coal and nuclear. [15] New utility-scale solar can even compete on cost with existing conventional generation. [16]
- According to data provided by the Iowa Department of Revenue, average residential solar costs per kilowatt in 2014 were \$3,701, falling to \$2,980 in 2022. Average business solar costs per kilowatt were \$3,288 in 2014, falling to \$1,994 in 2022. [17]

UTILITY SOLAR AND COMMUNITY SOLAR ARE PART OF IOWA'S SOLAR SUCCESS

- Ames Municipal Utilities and Cedar Falls Utilities have built the largest community solar projects in Iowa (2 MW and 1.5 MW respectively). Alliant Energy launched a community solar program in 2021

IOWA HAS THE POTENTIAL TO BE A SOLAR LEADER

- Iowa ranks 16th among U.S. states in the technical potential for solar energy production. This puts Iowa ahead of states such as Florida, Georgia, Missouri, North Carolina and South Carolina. [18]
- Iowa has the technical potential for over 4,000,000 MW of solar. The solar energy production potential in Iowa is 100 times more than the total Iowa retail load in 2018. [19]
- Iowa needs to add between 5,000 MW and as much as 46,000 MW to reach 100% renewable energy by 2050. [20]
- There are over 3,317 MW of potential solar projects in Iowa that are being studied for connection to the grid by the regional grid operator MISO. [21]

SOURCES

1. Energy Information Administration, Electric Power Monthly, Table 6.2B Net Summer Capacity Using Primarily Renewable Energy Sources by State (data from May 2023) at <http://www.eia.gov/electricity/monthly/?scr=email>. The EIA estimate of 508.8 MW as of May 2023 is consistent with available Iowa data on installed solar capacity from the Iowa Department of Revenue, Iowa Utilities Board, solar installers, multiple utilities, and may be conservative.
2. Iowa Utilities Board, GCU-2019-002, GCU-2019-003, GCU-2019-004, GCU-2020-0001, GCU-2021-0001 GCU-2021-001, GCU-2021-002, GCU-2021-003, GCU-2021-005, GCU-2021-006, GCU-2022-001, GCU-2022-0003, and GCU-2022-0004 available at <https://efs.iowa.gov/efs/ShowDocketSearch.do>.
3. Iowa Utilities Board, GCU-2021-0004 and GCU-2022-0002 available at <https://efs.iowa.gov/efs/ShowDocketSearch.do>.
4. Iowa Department of Revenue, Solar Energy System Tax Credit Annual Report for 2022 (released December 31, 2022) available at <https://tax.iowa.gov/reports>. The tax credit expired and only applications filed before May 1, 2023 may be eligible for a credit.
5. Id. at Figure 3, p. 8.
6. EIA, Electric Power Monthly, Table 6.2B. Iowa's 244.2 MW of estimated distributed/small-scale solar was higher than distributed solar estimates for Michigan, Minnesota, Nebraska, Wisconsin, Kansas, North Dakota and South Dakota.
7. Solar jobs reported at [State-By-State Map | SEIA](#).
8. The Clean Energy Trust, <https://www.cleanjobsmidwest.com/state/iowa>.
9. Bureau of Labor Statistics, Fastest Growing Occupations (for years 2019-2029) at <https://www.bls.gov/ooh/fastest-growing.htm>.
10. Solar jobs reported at [State-By-State Map | SEIA](#).
11. IA Dept. of Revenue, *Solar Energy System Tax Credit Annual Report for 2022*, Table 4, p. 7
12. Iowa Utilities Board, Applications for a Generating Certificate (September 2019) GCU-2019-002, GCU-2019-003 and GCU-2019-004 at <https://efs.iowa.gov/efs/ShowDocketSearch.do>
13. [Cash Rental Rates 2022, Cash Rental Rates for Iowa - 2022 Survey \(iastate.edu\)](#).
14. Lazard, *Levelized Cost of Energy Analysis – Version 16.0* (April 2023) at [2023 Levelized Cost Of Energy+ | Lazard](#) at 3.
15. Id. at 2.
16. Id. at 7.
17. Iowa Department of Revenue, *Solar Energy System Tax Credit Annual Report for 2022* at page 4 (IEC calculations for residential and business installations).
18. Iowa Environmental Council, *Real Potential, Ready Today: Solar Energy in Iowa*.
19. Iowa Environmental Council, *Iowa's Road to 100% Renewable* (2020).
20. Id.
21. Midcontinent Independent System Operator, Generator Interconnection Queue at https://www.misoenergy.org/planning/generator-interconnection/GI_Queue/ (last accessed July 19, 2023).