

# Iowa Solar Energy Fact Sheet

## Solar energy in Iowa is growing

- As of October 2018, Iowa had at least 96 megawatts (MW) of total installed solar capacity.<sup>1</sup> This is up from approximately 2 MW of solar installed in 2012.
- Annual solar installations in Iowa have averaged 15-20 MW per year in recent years. Iowa is on track to reach 100 MW once the remainder of 2018 installations are added.<sup>2</sup>
- Central Iowa Power Cooperative (CIPCO) has announced Iowa's largest solar project at 100 MW in Louisa County, scheduled to be complete by the end of 2020.<sup>3</sup>
- Every one of Iowa's 99 counties has solar projects installed that benefited from the Iowa upfront solar tax credit.<sup>4</sup> This includes 3,395 projects and counting.
- Rural counties such as Washington County and Winneshiek County are solar hot spots with more solar installed than other counties.<sup>5</sup> Farmers and rural businesses are leading the use of solar in such areas.
- As of October 2018, Iowa had more small-scale distributed solar than most Midwest and Plains states.<sup>6</sup>

## Solar energy strengthens Iowa's economy

- There were over 800 jobs supported by the solar industry in Iowa in 2017, the most recent year data is available.<sup>7</sup>
- Renewable energy jobs are growing much faster than job growth in other sectors. Wind and solar jobs increased 14.5% between 2015 and 2016 in Iowa.<sup>8</sup> Nationally, solar installers are the fastest growing occupation.<sup>9</sup>
- There are nearly 100 Iowa businesses involved in the solar energy supply chain.<sup>10</sup>
- Investment of over \$209.5 million is associated with solar projects that benefited from the Iowa solar tax credit alone, meaning the total investment in solar is even higher.<sup>11</sup>

## Solar energy costs are declining

- Costs have come down significantly in recent years. Lazard recently reported that utility-scale solar's levelized costs declined 88% between 2009-2018.<sup>12</sup>
- According to data provided by the Iowa Department of Revenue, average residential solar costs per kilowatt in 2014 were \$3,387, falling to \$2,719 in 2018. Average business solar costs per kilowatt were \$3,143 in 2014, falling to \$2,226 in 2018.<sup>13</sup>

## Utility solar and community solar are part of Iowa's solar success

- In addition to its 100 MW announcement, CIPCO recently completed a 5.5 MW solar project that is sited at multiple locations of its member cooperatives around Iowa.<sup>14</sup>
- Cedar Falls Utilities has built the largest community solar project in Iowa at 1.5 MW.
- In 2017, Alliant Energy built the largest solar project at a single site in Iowa, at 5 MW, in Dubuque.<sup>15</sup>
- Many consumer-owned utilities have developed solar projects supported by Iowa's 476C production tax credit, including 3 municipal utilities (over 3.8 MW) and 10 electric coops (11 projects at over 3.1 MW).<sup>16</sup>
- Farmers Electric Cooperative in Kalona has more solar per customer than any other utility in Iowa and one of the highest amounts of solar per customer of any utility in the

U.S.<sup>17</sup>

## Iowa has the potential to be a solar leader

- Iowa ranks 16<sup>th</sup> 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.<sup>18</sup>
- Iowa has the potential to add enough solar PV to meet annual electric needs more than 150 times over.<sup>19</sup>
- Alliant Energy recently filed testimony regarding resource planning that shows significant additions of solar, including 100-200 MW by 2024 and as much as 900 MW over the 20 year planning horizon.<sup>20</sup>
- There are over 1,500 MW of potential solar projects in Iowa that are being studied for connection to the grid by the regional grid operator MISO.<sup>21</sup>
- SEIA projects nearly 300 MW of solar capacity growth in the next 5 years.<sup>22</sup>

<sup>1</sup>Energy Information Administration, *Electric Power Monthly*, Table 6.2B Net Summer Capacity Using Primarily Renewable Energy Sources by State (data from October 2018 as reported in December 2018) at <http://www.eia.gov/electricity/monthly/?scr=email>. The EIA estimate of 96.1 MW as of October 2018 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.

<sup>2</sup> Iowa Environmental Council estimates based on data available from EIA, Iowa Dept. of Revenue, Iowa Utilities Board, the Iowa Solar Energy Trade Association, and utilities.

<sup>3</sup> CIPCO, *Plans for Iowa's Largest Solar Project Announced by Central Iowa Power Cooperative* (Dec. 2018) at

<https://www.cipco.net/content/plans-iowa%E2%80%99s-largest-solar-project-announced-central-iowa-power-cooperative>.

<sup>4</sup> Iowa Department of Revenue, *Solar Energy System Tax Credit Annual Report for 2017* (released January 2, 2018) available at <https://tax.iowa.gov/report/Reports>.

<sup>5</sup> *Id.* at Figure 1, p. 5.

<sup>6</sup> EIA, *Electric Power Monthly*, Table 6.2B. Iowa's 88.4 MW of estimated distributed/small-scale solar was higher than distributed solar estimates for Illinois, Indiana, Michigan, Minnesota, Nebraska, Wisconsin, Kansas, North Dakota and South Dakota.

<sup>7</sup> The Solar Foundation, *Solar Jobs Census 2017* at <https://www.solarstates.org/#state/iowa/counties/solar-jobs/2017>. See also Clean Energy Trust et al, *Clean Jobs Midwest* at <https://www.cleanjobsmidwest.com/state/iowa>.

<sup>8</sup> *Id.*

<sup>9</sup> Bureau of Labor Statistics, *Fastest Growing Occupations* (for years 2016-2026) at <https://www.bls.gov/ooh/fastest-growing.htm>.

<sup>10</sup> IEC estimate based on IEC research on Iowa solar businesses as well as past publications by the Solar Energy Industries Association and the Environmental Law & Policy Center.

<sup>11</sup> IA Dept. of Revenue, *Solar Energy System Tax Credit Annual Report for 2018*.

<sup>12</sup> Lazard, *Levelized Cost of Energy Analysis – Version 12* (November 2018) at <https://www.lazard.com/perspective/levelized-cost-of-energy-and-levelized-cost-of-storage-2018/>.

<sup>13</sup> Iowa Department of Revenue, *Solar Energy System Tax Credit Annual Report for 2017* at page 8.

<sup>14</sup> Central Iowa Power Cooperative, *CIPCO launches Iowa's largest utility based solar project* (March 2016) at

<http://www.cipco.net/content/cipco-launches-iowas-largest-utility-based-solar-project>.

<sup>15</sup> Alliant Energy, *Solar Generation* (accessed January 2018) at

<https://www.alliantenergy.com/InnovativeEnergySolutions/SustainableEnergyChoices/SolarGeneration>.

<sup>16</sup> Iowa Utilities Board, *Renewable Energy Tax Credits* (updated 12.28.18) at <https://iub.iowa.gov/document/renewable-energy-tax-credits-0>.

<sup>17</sup> See, e.g., Farmers Electric Cooperative, *Our Renewable Energy Story* at <http://www.feckalona.net/renewable-energy-story.html>.

<sup>18</sup> Iowa Environmental Council, *Real Potential, Ready Today: Solar Energy in Iowa*.

<sup>19</sup> *Id.*

<sup>20</sup> Iowa Utilities Board, Docket No RPU-2017-0002, Direct Testimony of Brent R. Kitchen (filed Aug. 3, 2017) at Schedules D and E.

<sup>21</sup> Midcontinent Independent System Operator, Generator Interconnection Queue at

[https://www.misoenergy.org/planning/generator-interconnection/GI\\_Queue/](https://www.misoenergy.org/planning/generator-interconnection/GI_Queue/) (last accessed Jan. 2, 2019).

<sup>22</sup> SEIA, *Iowa Solar* (updated Q3 2018) at <https://www.seia.org/state-solar-policy/iowa-solar>.