



# Iowa Department of **REVENUE**

## **Solar Energy System Tax Credit Annual Report for 2021 Released December 31, 2021**

### **Reporting Requirements**

Iowa Code section 422.11L requires that the Iowa Department of Revenue (IDR) submit an annual report to the Governor and the General Assembly on or before January 1 regarding the number and value of the Solar Energy System Tax Credits awarded and claimed during the previous calendar year and any other information IDR may deem relevant and appropriate. This report meets that requirement for 2021.

### **Tax Credit Eligibility**

A Solar Energy System Tax Credit is available for taxpayers who install a solar energy system on property located in Iowa. The tax credit is nonrefundable, but any tax credit in excess of tax liability can be carried forward up to ten tax years. The tax credit was enacted in May 2012 for individual and corporation income taxpayers, but was retroactive to solar energy systems placed in service on or after January 1, 2012. For tax years beginning on or after January 1, 2014, the tax credit can be claimed against franchise tax paid by banks; for tax years beginning on or after January 1, 2015, the tax credit can also be claimed against the moneys and credits tax paid by credit unions.

Effective January 1, 2016, The Iowa Solar Energy System Tax Credit equals 50 percent of the federal tax credits offered for solar energy systems. Federal tax credits are available for property placed in service before January 1, 2022. Currently, the federal credit equals 30 percent of installation costs. After December 31, 2019 and before January 1, 2021 the federal credit will decrease to 26 percent of costs. The federal credit rate will decrease to 22 percent for property placed in service after December 31, 2020 and before January 1, 2022; therefore, the Iowa tax credit is available for tax years 2012 through 2021. However, pursuant to Iowa Administrative Rule 701 – 42.48(4)'d', any residential tax credit request related to an installation prior to January 1, 2022 that did not receive a tax credit award before the 2021 aggregate award limitation was met, has expired and will not be carried over on the waitlist to any future year. Therefore, no additional residential applications will be approved. Taxpayers who claim this tax credit are not eligible to claim a Renewable Energy Tax Credit under Iowa Code Chapter 476C for the production of solar electricity.

### **Solar Energy System Tax Credit**

For residential installations, the amount of the Iowa Solar Energy System Tax Credit was determined by the federal Residential Energy Efficient Property Tax Credit related to solar systems provided in section 25D(a)(1) of the Internal Revenue Code for solar electric

property and section 25D(a)(2) of the Internal Revenue Code for solar water heating property. The federal tax credit can be claimed on federal form 5695, Residential Energy Credits for individuals. The Iowa tax credit for an individual could not exceed \$5,000.

For business installations, the amount of the Iowa Solar Energy System Tax Credit is determined by the federal energy credit as provided in sections 48(a)(2)(A)(i)(II) of the Internal Revenue Code for solar electric, heating, and cooling property. Through December 31, 2016, 48(a)(2)(A)(i)(III) of the Internal Revenue Code provided a credit for equipment using solar energy to illuminate structures using fiber-optic distributed sunlight. The federal tax credit is claimed on federal form 3468, Investment Credit, for corporations, banks, and credit unions. The Iowa tax credit for a business cannot exceed \$20,000.

The aggregate amount of Solar Energy System Tax Credits awarded to individuals, banks, credit unions, partnerships, limited liability companies, S corporations, and C corporations per calendar year was capped at \$5 million beginning calendar year 2015, up from \$4.5 million in calendar year 2014. In award years 2014 through 2021, \$1 million of the cap was reserved for residential installations. The calendar year cap in 2012 and 2013 was \$1.5 million each year. The tax credits are awarded on a first-come, first-served basis until the award cap is reached each year.

Although residential installations receive priority until the \$1 million reserve for residential installations is met, if IDR receives applications for tax credit awards in excess of the \$5 million available in a calendar year, approved applications are waitlisted for the next available year's allocation of tax credit awards.

## **Receiving an Award**

Taxpayers must submit an application to IDR to receive a tax credit award. At the end of September 2015, the paper application was replaced with an electronic application, available online through the Tax Credit Award, Claim & Transfer Administration System (CACTAS).

IDR awards the tax credit once the following information is provided:

- The completed application
- A copy of the invoice or other documentation showing the cost of the installed system
- A document verifying that the system qualifies for the federal tax credit
- The utility completion sheet
- Corporations, banks, and credit unions must also provide the date placed in service
- Verification of separate and distinct installations when multiple awards are requested
- The amount of the Iowa tax credit to be reserved
- A signed copy of the Tax Credit Applicant Certification form available within the CACTAS application

During the 2016 Legislative session, the due date for applications was extended for installations made in 2014 and 2015. Taxpayers with installations in 2016 or later must submit an application to IDR before May 1 of the year following the year of installation to be eligible for an award. An approved application is issued a tax credit certificate including

a unique tax credit certificate number, the taxpayer’s name, address, and the amount of the tax credit.

### Summary of Solar Energy System Tax Credit Awards

Solar Energy System Tax Credits have been awarded in each of the last eight years (see Table 1). Only in 2012 was the amount of tax credits awarded significantly below the available tax credit cap. Effective with the 2014 award year, any unused awards are rolled over to the following year, allowing additional awards in subsequent tax years. The total number of Solar Energy System Tax Credit awards for both residential and business installations jumped between 2013 and 2014 due to the Legislative increase in the maximum awards for installations in 2014 and later. Awards during the first ten years of the program have totaled \$41.6 million. The average residential award decreased from award year 2020 to 2021, although the average award for business installations increased.

**Table 1. Solar Energy System Tax Credit Awards**

| Award Year | Residential Installations   |                                   |                          | Business Installations      |                                   |                          | Total                       |                                   |
|------------|-----------------------------|-----------------------------------|--------------------------|-----------------------------|-----------------------------------|--------------------------|-----------------------------|-----------------------------------|
|            | Number of Tax Credit Awards | Total Amount of Tax Credit Awards | Average Tax Credit Award | Number of Tax Credit Awards | Total Amount of Tax Credit Awards | Average Tax Credit Award | Number of Tax Credit Awards | Total Amount of Tax Credit Awards |
| 2012       | 158                         | \$292,263                         | \$1,850                  | 45                          | \$359,881                         | \$7,997                  | 203                         | \$652,144                         |
| 2013       | 167                         | \$355,287                         | \$2,127                  | 114                         | \$1,143,077                       | \$10,027                 | 281                         | \$1,498,364                       |
| 2014       | 320                         | \$1,002,419                       | \$3,133                  | 343                         | \$3,409,472                       | \$9,940                  | 663                         | \$4,411,891                       |
| 2015       | 397                         | \$1,402,779                       | \$3,533                  | 307                         | \$3,680,975                       | \$11,990                 | 704                         | \$5,083,754                       |
| 2016       | 437                         | \$1,437,860                       | \$3,290                  | 313                         | \$3,566,401                       | \$11,394                 | 750                         | \$5,004,261                       |
| 2017       | 410                         | \$1,443,195                       | \$3,520                  | 429                         | \$3,509,112                       | \$8,180                  | 839                         | \$4,952,307                       |
| 2018       | 473                         | \$1,441,009                       | \$3,047                  | 340                         | \$3,607,028                       | \$10,609                 | 813                         | \$5,048,037                       |
| 2019       | 634                         | \$2,065,499                       | \$3,258                  | 272                         | \$2,941,205                       | \$10,813                 | 906                         | \$5,006,704                       |
| 2020       | 784                         | \$2,740,828                       | \$3,496                  | 269                         | \$2,237,428                       | \$8,318                  | 1,053                       | \$4,978,256                       |
| 2021       | 828                         | \$2,662,321                       | \$3,215                  | 234                         | \$2,337,680                       | \$9,990                  | 1,062                       | \$5,000,001                       |
| Total      | 4,608                       | \$14,843,460                      |                          | 2,666                       | \$26,792,259                      |                          | 7,274                       | \$41,635,719                      |

Note: Reflects applications awarded tax credits as of December 16, 2021

Source: Iowa Department of Revenue CACTAS Award Database

The maximum award for a residential installation was \$3,000 for calendar years 2012 and 2013; the maximum is \$5,000 for 2014 and later. The maximum award for a business installation was \$15,000 in 2012 and 2013; the maximum is \$20,000 in 2014 and later. On average, a higher percentage of residential awards are awarded the maximum tax credit (see Table 2). Since 2014 when the maximum tax credit limits were increased, on average, nearly 27 percent of residential awards were awarded the maximum amount of tax credits, while less than 17 percent of business installations have been awarded the maximum tax credit. During the 2014 application year, IDR began collecting the total kilowatt capacity (KW) of each installed solar energy system. Of the tax credits awarded the maximum amount, the capacity of systems for business installations have increased over the last four years. However, in 2020 the capacity of installed residential systems decreased slightly from the previous year, but increased again in 2021. The average installation costs of residential systems have remained generally steady since 2017, although there has been a bit of an upward trend. The average installation cost of business installations was relatively steady between 2017 and 2019, but increased over

33 percent from 2019 to 2020. The average business installation cost increased only three percent between 2020 and 2021.

**Table 2. Solar Energy System Tax Credits Awarded the Maximum Amount**

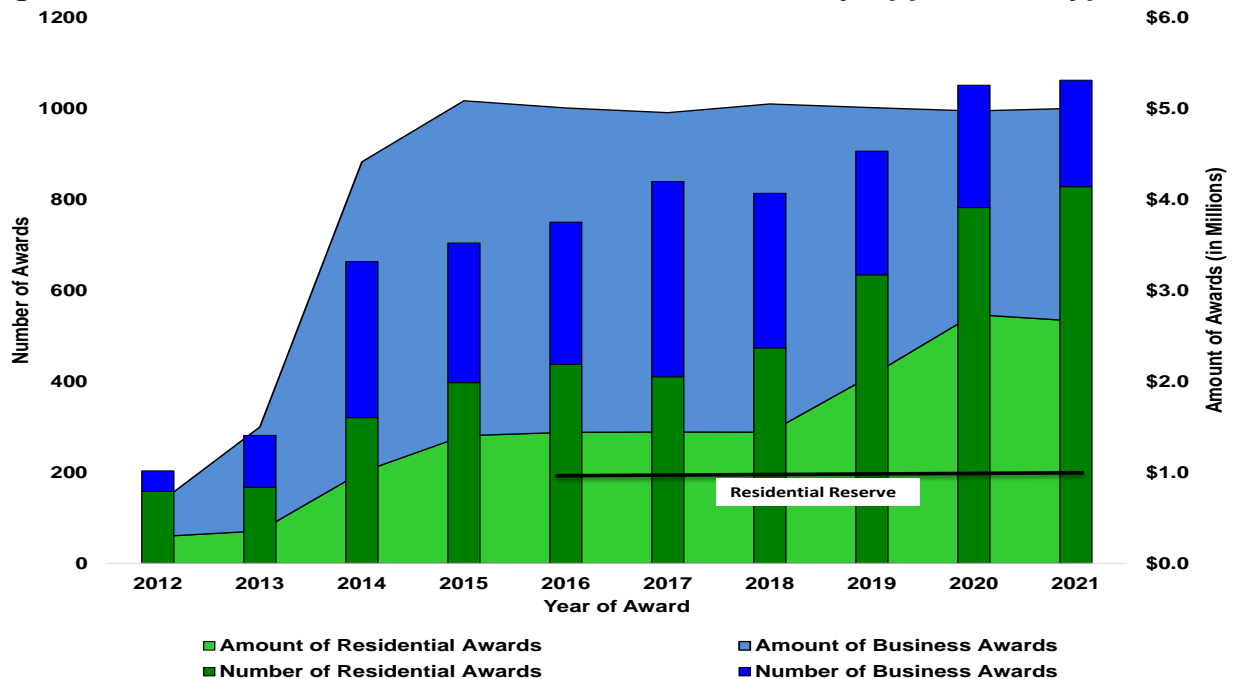
| Award Year         | Residential Installations |                          |                             |                           |                            | Business Installations |                          |                             |                           |                            |
|--------------------|---------------------------|--------------------------|-----------------------------|---------------------------|----------------------------|------------------------|--------------------------|-----------------------------|---------------------------|----------------------------|
|                    | Maximum Award             | Number of Maximum Awards | Percent of Number of Awards | Average Installation Cost | Average KW of Installation | Maximum Award          | Number of Maximum Awards | Percent of Number of Awards | Average Installation Cost | Average KW of Installation |
| 2012               | \$3,000                   | 55                       | 34.81%                      | \$34,147                  | NA                         | \$15,000               | 8                        | 17.78%                      | \$182,249                 | NA                         |
| 2013               | \$3,000                   | 74                       | 44.31%                      | \$33,413                  | NA                         | \$15,000               | 31                       | 27.19%                      | \$161,722                 | NA                         |
| 2014               | \$5,000                   | 90                       | 28.13%                      | \$49,958                  | 13.5                       | \$20,000               | 29                       | 8.45%                       | \$156,198                 | 47.5                       |
| 2015               | \$5,000                   | 121                      | 30.48%                      | \$44,188                  | 13.1                       | \$20,000               | 70                       | 22.80%                      | \$162,212                 | 51.2                       |
| 2016               | \$5,000                   | 117                      | 26.77%                      | \$43,731                  | 13.5                       | \$20,000               | 59                       | 18.85%                      | \$224,625                 | 84.5                       |
| 2017               | \$5,000                   | 101                      | 24.63%                      | \$47,438                  | 16.5                       | \$20,000               | 48                       | 11.19%                      | \$252,758                 | 99.9                       |
| 2018               | \$5,000                   | 82                       | 17.34%                      | \$47,717                  | 17.4                       | \$20,000               | 63                       | 18.53%                      | \$262,383                 | 118.7                      |
| 2019               | \$5,000                   | 130                      | 20.50%                      | \$46,996                  | 17.4                       | \$20,000               | 43                       | 15.81%                      | \$252,450                 | 121.0                      |
| 2020               | \$5,000                   | 183                      | 23.34%                      | \$45,379                  | 16.1                       | \$20,000               | 30                       | 11.15%                      | \$337,870                 | 123.6                      |
| 2021               | \$5,000                   | 136                      | 16.43%                      | \$48,658                  | 17.0                       | \$20,000               | 37                       | 15.81%                      | \$347,253                 | 164.8                      |
| Average since 2014 |                           | 120                      | 26.67%                      | \$46,758                  | 15.6                       |                        | 47                       | 16.76%                      | \$249,469                 | 101.4                      |

Note: Reflects applications awarded tax credits as of December 16, 2021

Source: Iowa Department of Revenue CACTAS Award Database

Total awards for 2021 are \$5 million, with nearly \$2.7 million awarded for residential installations, meeting the \$1 million residential reserve (see Figure 1). With the higher installation costs and tax credit cap associated with business installations, the total tax credits awarded to business installations comprise two-thirds of total awards despite the count of residential awards exceeding business awards in every year except 2017.

**Figure 1. Installations and Amount of Credits Awarded by Application Type**



Note: Reflects applications awarded tax credits as of December 16, 2021

Source: Iowa Department of Revenue CACTAS Award Database

While the 2012 cap was not fully utilized, applications for installations completed after 2012 have exceeded the cap in all other years (see Table 3). For the 2013 cap, the first 281 installations during calendar year 2013 used all of the cap, pushing the remaining 201 installations that were on the waitlist, under the 2014 cap. Likewise, for 2014 installations, 384 installations reviewed or amended after the \$4.5 million cap was met were pushed to the waitlist and issued tax credit awards under the 2015 cap. In 2014, 20.5 percent of the cap was awarded for prior year installations; in 2015, 57.0 percent of the cap was awarded for prior year installations; in 2016, prior year installations accounted for 51.1 percent of awards. Awards made under the 2017 cap include 487 installations completed in prior years, accounting for 58.2 percent of the cap. In 2018, 88.3 percent of awards reflect prior year installations. That percent continued to increase each year until 2021 when it finally reached 100 percent; all awards made in that year were for installations placed in service in a prior year.

**Table 3. Solar Energy System Tax Awards by Award Year and Installation Timing**

| Award Year   | Installations in Current Year |                     | Installations in Prior Years |                     | Percent of Cap Used by Installations from Prior Year |
|--------------|-------------------------------|---------------------|------------------------------|---------------------|--|
|              | Count of Awards               | Total Awards        | Count of Awards              | Total Awards        |  |
| 2012         | 203                           | \$652,144           | 0                            | \$0                 | 0.0%   |
| 2013         | 281                           | \$1,498,364         | 0                            | \$0                 | 0.0%   |
| 2014         | 462                           | \$3,506,113         | 201                          | \$905,778           | 20.5%  |
| 2015         | 319                           | \$2,183,039         | 385                          | \$2,900,715         | 57.1%  |
| 2016         | 397                           | \$2,446,567         | 353                          | \$2,557,694         | 51.1%  |
| 2017         | 352                           | \$2,071,369         | 487                          | \$2,880,938         | 58.2%  |
| 2018         | 103                           | \$591,090           | 710                          | \$4,456,947         | 88.3%  |
| 2019         | 68                            | \$487,400           | 838                          | \$4,519,304         | 90.3%  |
| 2020         | *                             | \$17,936            | 1,050                        | \$4,960,320         | 99.6%  |
| 2021         | 0                             | \$0                 | 1,062                        | \$5,000,001         | 100.0%   |
| <b>Total</b> | <b>2,185</b>                  | <b>\$13,454,022</b> | <b>5,086</b>                 | <b>\$28,181,697</b> |  |

\* Fewer than 5 installations

Note: Reflects applications awarded tax credits as of December 16, 2021

Source: Iowa Department of Revenue CACTAS Award Database

Awards made to-date reflect \$337.0 million in solar energy system investments on Iowa properties (see Table 4). The average reported residential installation costs increased from \$25,877 in 2019 to \$26,742 in 2020. The reported average cost of a business solar energy system installation increased from \$86,203 in 2019 to \$99,946 in 2020, based on applications awarded to-date. The count of installations for which awards have been made increased from 998 systems installed in 2018 to 1,351 systems installed in 2019. Installations for 2020 are incomplete as the count does not include applications on the 2022 waitlist. Installations completed in 2021 are not included because none of the installations will be issued tax credits until 2022. Taxpayers have until May 2, 2022 to submit their applications for 2021 installations. However, timely filed residential

applications will be denied due to the aforementioned Iowa Administrative Rule 701 – 42.48(4)'d'.

**Table 4. Installation Costs by Installation Year for Solar Energy System Tax Credit Awards through 2020**

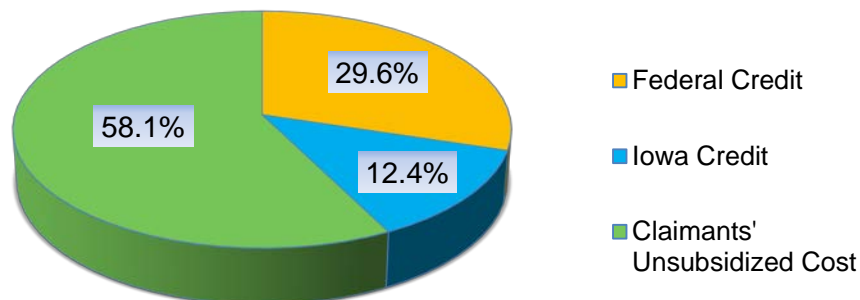
| Installation Year | Residential Installations |                                |                      | Business Installations  |                                |                      | Total                   |                                |
|-------------------|---------------------------|--------------------------------|----------------------|-------------------------|--------------------------------|----------------------|-------------------------|--------------------------------|
|                   | Number of Installations   | Total Qualifying Project Costs | Average Project Cost | Number of Installations | Total Qualifying Project Costs | Average Project Cost | Number of Installations | Total Qualifying Project Costs |
| 2012              | 159                       | \$2,749,004                    | \$17,289             | 45                      | \$3,057,192                    | \$67,938             | 204                     | \$5,806,196                    |
| 2013              | 312                       | \$6,219,981                    | \$19,936             | 190                     | \$14,556,940                   | \$76,615             | 502                     | \$20,776,921                   |
| 2014              | 415                       | \$11,626,428                   | \$28,015             | 461                     | \$34,116,964                   | \$74,006             | 876                     | \$45,743,392                   |
| 2015              | 398                       | \$10,104,501                   | \$25,388             | 293                     | \$24,946,093                   | \$85,140             | 691                     | \$35,050,594                   |
| 2016              | 401                       | \$10,038,492                   | \$25,034             | 456                     | \$33,345,962                   | \$73,127             | 857                     | \$43,384,454                   |
| 2017              | 617                       | \$14,792,472                   | \$23,975             | 446                     | \$39,638,055                   | \$88,875             | 1,063                   | \$54,430,527                   |
| 2018              | 687                       | \$16,611,395                   | \$24,180             | 311                     | \$31,465,387                   | \$101,175            | 998                     | \$48,076,782                   |
| 2019              | 988                       | \$25,587,092                   | \$25,898             | 365                     | \$31,463,964                   | \$86,203             | 1,353                   | \$57,051,056                   |
| 2020              | 631                       | \$16,874,031                   | \$26,742             | 99                      | \$9,894,614                    | \$99,946             | 730                     | \$26,768,645                   |
| Total             | 4,608                     | \$114,603,396                  |                      | 2,666                   | \$222,485,171                  |                      | 7,274                   | \$337,088,567                  |

Note: Reflects applications awarded tax credits as of December 16, 2021

Source: Iowa Department of Revenue CACTAS Award Database

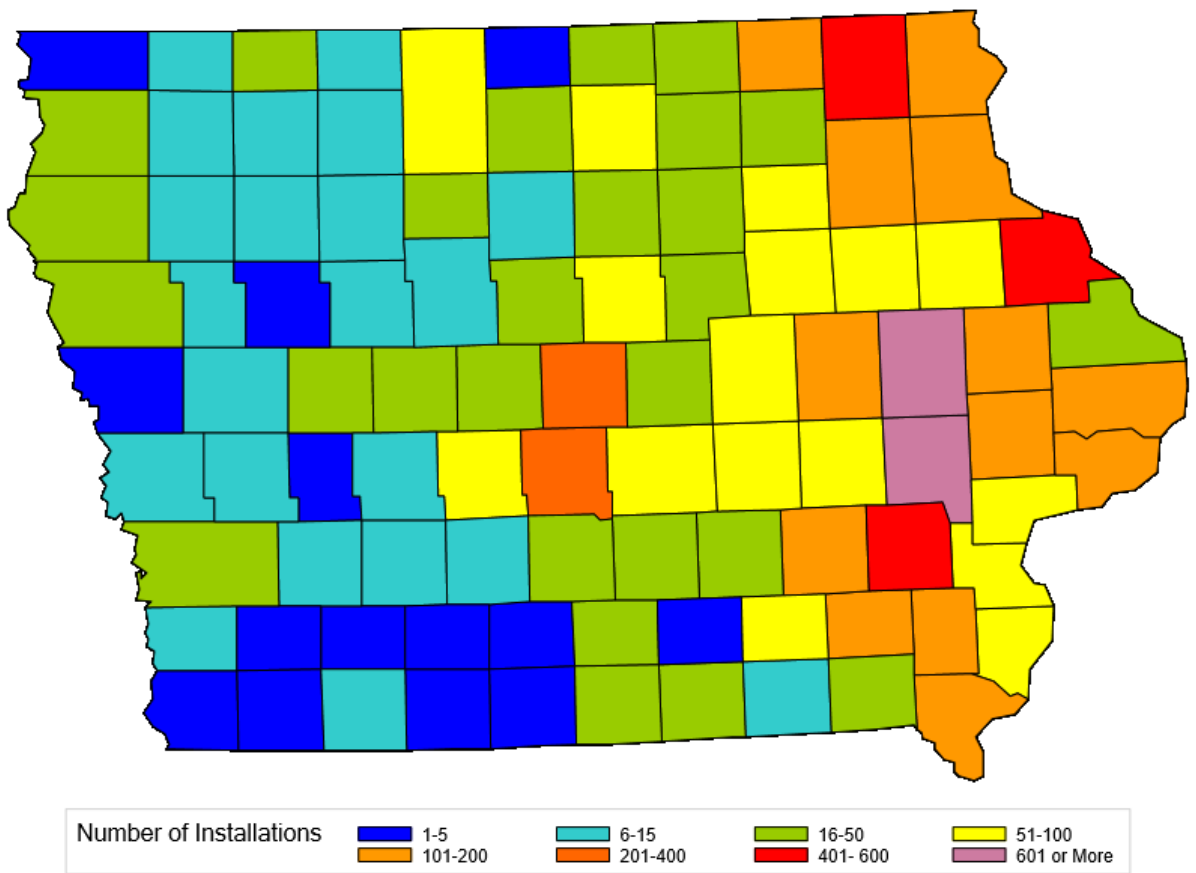
Of the \$337.0 million in installation costs for qualifying solar projects incurred by taxpayers, federal tax credits have subsidized 29.6 percent and the Iowa Solar Energy System Tax Credits have subsidized another 12.4 percent (see Figure 2). Iowa residents and businesses will have \$195.7 million in unreimbursed costs (58.1%), assuming they will be able to fully utilize both nonrefundable tax credits to offset federal and Iowa tax liability.

**Figure 2. Distribution of Solar Energy System Tax Credit Installation Costs from Award Years 2012-2021**



Awards in the first ten years of the Solar Energy System Tax Credit have been issued for 7,272 separate and distinct installations in Iowa. There has been at least one installation receiving an award in each of the Iowa counties (see Figure 3). Although installations have been widespread, the prevalence is geographically concentrated in Eastern Iowa. Johnson and Linn counties have had over 601 installations receiving tax credit awards, while Dubuque, Washington, and Winneshiek counties have all had between 401 and 600 installations.

**Figure 3. Solar Energy System Tax Credit Awards by County, Award Years 2012-2021**



Note: Reflects applications awarded tax credits as of December 16, 2021  
 Source: Iowa Department of Revenue CACTAS Award Database

During the 2014 application year, IDR began collecting the total kilowatt capacity (KW) of each solar energy system installed (see Table 5). By 2015, 99.0 to 100 percent of installations for business applications included KW. Some residential applications are for solar fans, for which capacity is not applicable, therefore shares reporting KW may be less than 100 percent. The residential applications reporting KW accounted for nearly 100 percent for approved 2019 and 2020 installations. The average capacity of a residential solar energy system was 9.8 KW for 2020 installations, which was down slightly from 9.9 KW in 2019; the average capacity of a business solar energy system was 38.6 KW for 2019 installations and increased to 52.9 KW for 2020 installations.

**Table 5. Total KW of the Solar Energy Systems by Installation Year and Application Type**

| Installation Year | Application Type | Number of Installations that Reported KW | Total Cost of Systems Reporting KW | Total KW  | Average KW | Percent of Installation Costs with KW Reported | Percent of Installations Reporting KW |
|-------------------|------------------|--|------------------------------------|-----------|------------|--|---------------------------------------|
| 2014              | Business         | 396                                      | \$29,254,932                       | 9,308.0   | 23.5       | 85.7%  | 85.9%                                 |
|                   | Residential      | 281                                      | \$8,287,308                        | 2,447.5   | 8.7        | 71.3%  | 67.7%                                 |
| 2015              | Business         | 293                                      | \$24,946,093                       | 8,331.3   | 28.4       | 100.0%   | 100.0%                                |
|                   | Residential      | 352                                      | \$9,907,914                        | 3,139.5   | 8.9        | 98.1%  | 88.4%                                 |
| 2016              | Business         | 454                                      | \$33,336,962                       | 12,426.4  | 27.4       | 100.0%   | 99.6%                                 |
|                   | Residential      | 383                                      | \$9,966,710                        | 3,386.9   | 8.8        | 99.3%  | 95.5%                                 |
| 2017              | Business         | 446                                      | \$39,638,055                       | 17,330.2  | 38.9       | 100.0%   | 100.0%                                |
|                   | Residential      | 602                                      | \$14,750,595                       | 5,574.7   | 9.3        | 99.7%  | 97.6%                                 |
| 2018              | Business         | 310                                      | \$31,447,090                       | 12,980.3  | 41.9       | 99.9%  | 99.7%                                 |
|                   | Residential      | 683                                      | \$16,595,430                       | 6,367.4   | 9.3        | 99.9%  | 99.4%                                 |
| 2019              | Business         | 365                                      | \$31,463,964                       | 14,073.8  | 38.6       | 100.0%   | 100.0%                                |
|                   | Residential      | 981                                      | \$25,564,214                       | 9,683.7   | 9.9        | 99.9%  | 99.3%                                 |
| 2020              | Business         | 98                                       | \$9,892,914                        | 5,181.0   | 52.9       | 100.0%   | 99.0%                                 |
|                   | Residential      | 628                                      | \$16,826,392                       | 6,154.5   | 9.8        | 99.7%  | 100.0%                                |
| Total             |                  | 6,272                                    | \$301,878,573                      | 116,385.0 | 22.6       |  |                                       |

Note: Reflects applications awarded tax credits as of December 16, 2021  
Source: Iowa Department of Revenue CACTAS Award Database

At the time of this report, the Department has reviewed applications for 167 installations that have been placed on the waitlist for 2022 awards. Those on the waitlist total \$1.56 million in 2022 tax credits; business applications that have not been reviewed or are pending approval once additional information is received have requested an additional \$1.9 million. There have been 1,409 residential applications that have been denied. Those applications were requesting \$4.5 million of tax credits. Applications for 2021 installations can continue to be filed until May 2, 2022.

### Claiming the Solar Energy System Tax Credit

Taxpayers receiving tax credit awards claim the Solar Energy System Tax Credit using the IA 148 Tax Credits Schedule. They must include the tax credit certificate number on the IA 148. Business tax credit awards received by pass-through entities or sole proprietors, such as farmers, can be claimed by the owners, partners, or shareholders on their individual income tax returns. Therefore, the number and amount of claims made by individuals is greater than the number of awards issued for residential installations.

The Solar Energy System Tax Credit is nonrefundable, meaning that it can only be used to offset Iowa tax liability; any tax credit amount in excess of tax liability may be credited to the tax liability for the following ten tax years or until depleted, whichever is earlier.



## Summary of Solar Energy System Tax Credit Claims

During the first nine tax years for which claims could be made, \$33.0 million of Solar Energy System Tax Credits have been reported on the IA 148 Tax Credit Schedule, with \$28.1 million of those credits used to offset Iowa tax liability (see Table 6). Based on tax year 2020 claims verified to-date, new claims totaled \$4.1 million and claims carried forward from prior year awards totaled \$3.3 million, for a total of \$7.3 million of claims available. Taxpayers have applied \$4.5 million against tax liability and carried forward \$3.3 million in tax credits to be claimed in tax years 2021 or later. The applied amount includes claims made by taxpayers not reporting a tax credit certificate and no award is in the system awarded to that taxpayer. Until the validity of the claim can be verified, the current year and total available amount recorded in the database are set to zero.

**Table 6. Solar Energy System Tax Claims by Tax Year**

| Tax Year | Number of Tax Credit Claims | Total Amount of Tax Credits Carried Forward from Previous Year | Total Current Year Amount of Tax Credits | Total Amount of Tax Credits Available | Total Amount of Tax Credits Applied to Tax Liability | Total Amount of Tax Credits Carried Forward |
|----------|-----------------------------|--|--|---------------------------------------|--|---|
| 2012     | 243                         | \$0  | \$679,631                                | \$679,631                             | \$457,990  | \$225,373                                   |
| 2013     | 433                         | \$187,822  | \$1,541,614                              | \$1,729,436                           | \$1,000,992  | \$741,518                                   |
| 2014     | 1,088                       | \$674,641  | \$4,030,743                              | \$4,705,384                           | \$2,420,163  | \$2,291,284                                 |
| 2015     | 1,500                       | \$2,192,477  | \$4,694,437                              | \$6,886,914                           | \$3,189,031  | \$3,714,711                                 |
| 2016     | 1,718                       | \$3,416,229  | \$4,708,015                              | \$8,122,804                           | \$4,231,995  | \$3,920,019                                 |
| 2017     | 1,900                       | \$3,603,155  | \$4,423,646                              | \$8,041,991                           | \$3,717,269  | \$4,369,586                                 |
| 2018     | 1,997                       | \$3,753,813  | \$4,455,598                              | \$8,212,139                           | \$4,207,446  | \$4,150,116                                 |
| 2019     | 2,260                       | \$3,760,814  | \$4,425,041                              | \$8,182,006                           | \$4,362,855  | \$4,224,312                                 |
| 2020     | 2,294                       | \$3,280,459  | \$4,050,187                              | \$7,329,716                           | \$4,488,317  | \$3,343,018                                 |
| Total    | 13,433                      |  | \$33,008,912                             |                                       | \$28,076,058   |   |

Note: Claim collection and verification is incomplete for tax year 2020

Source: Iowa Department of Revenue CACTAS Claim Database

Note that the total amount of tax credits applied to tax liability and the total amount of tax credits carried forward in a tax year can exceed the amount of tax credits awarded for installations completed for that same year, which is seen for tax years 2012 and 2013. A fiscal year filer may claim the tax credit on the previous tax year's return if the installation was completed in the part of the following calendar year that falls within the fiscal year. For example, a taxpayer could have a 2013 tax year that began May 1, 2013 and extended through April 30, 2014. If the 2014 installation was completed prior to April 30, 2014, the 2014 award could be claimed on the 2013 tax return.

Tax year 2020 claims include both those credits awarded for 2019 and credits carried forward from tax year 2018 claims. IDR is in the process of verifying or billing for tax years 2018 through 2020 claims for 624 taxpayers that failed to include a valid tax credit certificate number or claimed more than awarded. The claims will be denied if an award cannot be identified or if amounts claimed exceed the award amount. These claims total \$1,165,967 in applied claims which are included in the numbers above. All other claims

have been matched to tax credit awards; however, ongoing tax compliance efforts and amended returns can result in slight changes to historical counts and amounts.

For tax years 2014 through 2020, current year credits reported are below awards issued for those years. Attempts were made to determine if taxpayers incorrectly reported the Solar Energy System Tax Credit as a different tax credit on the return; this is straightforward for residential applications but more difficult for business applications because, as noted above, many claims are made by business owners on individual income tax returns.

Some awardees appear to have failed to make any claim on their award, totaling almost \$2.1 million over the first nine years (see Table 7). Almost \$0.4 million of those credits that have never been reported on a return were issued to C corporations. In addition, nearly \$0.4 million of those awards were issued to individual taxpayers. The largest portion of unreported tax credit awards were issued to pass-through entities (LLCs, partnerships, S corporations, and sole proprietorships). The awards to those entity types account for \$1.1 million of the unreported tax credit award totals. The amount of unreported tax credits decreases as each additional tax year passes. For 2012 and 2013, the amount of unreported tax credits is less than three percent of all tax credits awarded. For the most recent award year, the amount of tax credits that have not yet been reported is almost 20 percent. This is most likely due to returns that have not yet been filed. The unreported tax credits awarded in 2012 will expire if not claimed before the 2022 tax year.

**Table 7. Unreported Solar Energy System Tax Credit Awards by Entity Type**

| Entity Type               | Award Year |          |           |           |           |           |           |           |           | Total by Entity Type |
|---------------------------|------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------------------|
|                           | 2012       | 2013     | 2014      | 2015      | 2016      | 2017      | 2018      | 2019      | 2020      |                      |
| Bank                      | \$0        | \$0      | \$0       | \$40,000  | \$74,342  | \$0       | \$0       | \$85,798  | \$4,500   | \$200,140            |
| C Corporation             | \$17,113   | \$33,543 | \$82,938  | \$28,719  | \$50,297  | \$60,760  | \$36,867  | \$76,729  | \$87,543  | \$386,966            |
| Individual                | \$522      | \$5,544  | \$27,171  | \$31,961  | \$50,533  | \$26,734  | \$91,329  | \$157,208 | \$368,671 | \$391,002            |
| Limited Liability Company | \$0        | \$0      | \$15,000  | \$3,045   | \$42,864  | \$98,070  | \$110,201 | \$84,130  | \$228,768 | \$353,310            |
| Partnership               | \$0        | \$0      | \$0       | \$78,001  | \$0       | \$0       | \$51,479  | \$22,076  | \$4,639   | \$151,556            |
| S Corporation             | \$0        | \$0      | \$9,720   | \$47,649  | \$14,069  | \$45,003  | \$217,939 | \$107,661 | \$87,656  | \$442,041            |
| Sole Proprietorship       | \$0        | \$0      | \$16,200  | \$0       | \$31,688  | \$32,601  | \$30,537  | \$61,930  | \$175,521 | \$172,956            |
| Total by Year             | \$17,635   | \$39,087 | \$151,029 | \$229,375 | \$263,793 | \$263,168 | \$538,352 | \$595,532 | \$957,298 | \$2,097,971          |
| Percent of Total Awards   | 2.70%      | 2.61%    | 3.42%     | 4.51%     | 5.27%     | 5.31%     | 10.66%    | 11.89%    | 19.23%    |                      |

Source: Iowa Department of Revenue CACTAS Award and Claim Databases

In tax year 2019, the average amount of tax credits applied against corporation income tax liability was \$3,261 (see Table 8) The average tax credit amounts applied against individual income tax liability and franchise tax liability were \$1,867 and \$8,544, respectively, on 2019 tax returns filed and verified to-date. Over the last nine tax years, \$25.9 million (92.3%) has been claimed against individual income tax liability; \$1.9 million has been claimed against corporation income tax, and \$0.2 million has been claimed against franchise tax liability. No claims have been made against moneys and credits tax.

**Table 8. Solar Energy System Tax Credit Claims Applied by Tax Type**

| Tax Year | Tax Type          | Total Amount of Tax Credits Applied to Tax Liability | Distribution of Tax Credits Applied | Average Amount of Tax Credits Applied to Tax Liability |
|----------|-------------------|--|-------------------------------------|--|
| 2012     | Corporate         | \$49,291   | 10.8%                               | \$5,477  |
|          | Individual Income | \$408,699  | 89.2%                               | \$1,747  |
| 2013     | Corporate         | \$140,274  | 14.0%                               | \$3,897  |
|          | Individual Income | \$860,718  | 86.0%                               | \$2,168  |
| 2014     | Corporate         | \$177,816  | 7.3%                                | \$2,577  |
|          | Franchise         | \$67,027   | 2.8%                                | \$16,757   |
|          | Individual Income | \$2,175,320  | 89.9%                               | \$2,143  |
| 2015     | Corporate         | \$191,525  | 6.0%                                | \$2,280  |
|          | Franchise         | \$9,691  | 0.3%                                | \$9,691  |
|          | Individual Income | \$2,987,815  | 93.7%                               | \$2,112  |
| 2016     | Corporate         | \$326,348  | 7.7%                                | \$3,231  |
|          | Franchise         | \$0  | 0.0%                                | \$0  |
|          | Individual Income | \$3,905,647  | 92.3%                               | \$2,415  |
| 2017     | Corporate         | \$306,977  | 8.3%                                | \$3,449  |
|          | Franchise         | \$64,555   | 1.7%                                | \$7,173  |
|          | Individual Income | \$3,345,737  | 90.0%                               | \$1,857  |
| 2018     | Corporate         | \$280,726  | 6.7%                                | \$3,051  |
|          | Franchise         | \$93,415   | 2.2%                                | \$13,345   |
|          | Individual Income | \$3,833,305  | 91.1%                               | \$2,020  |
| 2019     | Corporate         | \$319,546  | 7.3%                                | \$3,261  |
|          | Franchise         | \$8,544  | 0.2%                                | \$8,544  |
|          | Individual Income | \$4,034,765  | 92.5%                               | \$1,867  |
| 2020     | Corporate         | \$125,291  | 2.8%                                | \$2,364  |
|          | Franchise         | \$0  | 0.0%                                | \$0  |
|          | Individual Income | \$4,363,026  | 97.2%                               | \$1,947  |
| Total    | Corporate         | \$1,917,794  | 6.8%                                | \$3,039  |
|          | Franchise         | \$243,232  | 0.9%                                | \$11,056   |
|          | Individual Income | \$25,915,032   | 92.3%                               | \$2,028  |

Source: Iowa Department of Revenue CACTAS Claim Database