



Iowa Department of **REVENUE**

Solar Energy System Tax Credit Annual Report for 2023 Released December 14, 2023

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 2023.

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. For residential installations, federal tax credits are available for property placed in service before January 1, 2022; therefore, the Iowa tax credit is available for property placed in service from 2012 through 2021. During the 2022 Legislative session, the Solar Energy System Tax Credit was modified for residential installations completed prior to the 2022 calendar year. This allowed applications to be reviewed which may have previously expired under Iowa Administrative Rule 701 – 42.48(4)'d', in which residential tax credit requests that did not receive a tax credit award before the 2021 aggregate award limitation was met, expired and were not carried over on the waitlist to any future year. The application deadline was also extended for residential installations that occurred in 2021 to June 30, 2022. These applications were not subject the \$5 million annual cap.

For business installations, construction must begin before January 1, 2022. For property placed in service in tax years 2019 and earlier, the federal credit equaled 30 percent of installation costs. For tax year 2020, the federal credit decreased to 26 percent of costs. For property placed in service in tax year 2021, the federal credit rate decreased to 22 percent of installation costs. 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. The calendar year cap in 2012 and 2013 was \$1.5 million each year. Beginning with award year 2014, \$1 million of the cap was reserved for residential installations. 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). In November 2022, the process for submitting electronic applications online was changed from CACTAS to GovConnectIowa.

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 GovConnectIowa 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 twelve years (see Table 1). Only in 2012 and 2023 were 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 twelve years of the program have totaled \$52.8 million. The average business award increased between award years 2022 and 2023. No residential installations were awarded for 2023 because the tax credit program expired for residential installations in 2022.

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	409	\$1,438,195	\$3,516	429	\$3,507,132	\$8,175	838	\$4,945,327
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	\$2,941,204	\$10,813	906	\$5,006,703
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
2022	1,849	\$5,922,076	\$3,203	663	\$5,012,615	\$7,561	2,512	\$10,934,691
2023	0	\$0	\$0	34	\$283,124	\$8,327	34	\$283,124
Total	6,456	\$20,760,536		3,363	\$32,086,017		9,819	\$52,846,553

Note: Reflects applications awarded tax credits as of December 4, 2023
 Source: Iowa Department of Revenue CACTAS and IMPACT Award Databases

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 23 percent of residential awards were awarded the maximum amount of tax credits, while less than 16 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 increased every year until 2022, when it decreased somewhat. In 2020, the capacity of installed residential systems decreased slightly from the previous year, but increased in 2021 and 2022. The average installation costs of residential systems remained generally steady between 2017 and 2021 but increased nearly 21 percent in 2022. The average installation cost of business installations was relatively steady between 2017 and 2019, but increased over 33 percent in 2020. The average business installation cost increased only three percent in 2021 before decreasing 20 percent in 2022. The average business installation cost increased three percent between 2022 and 2023.

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

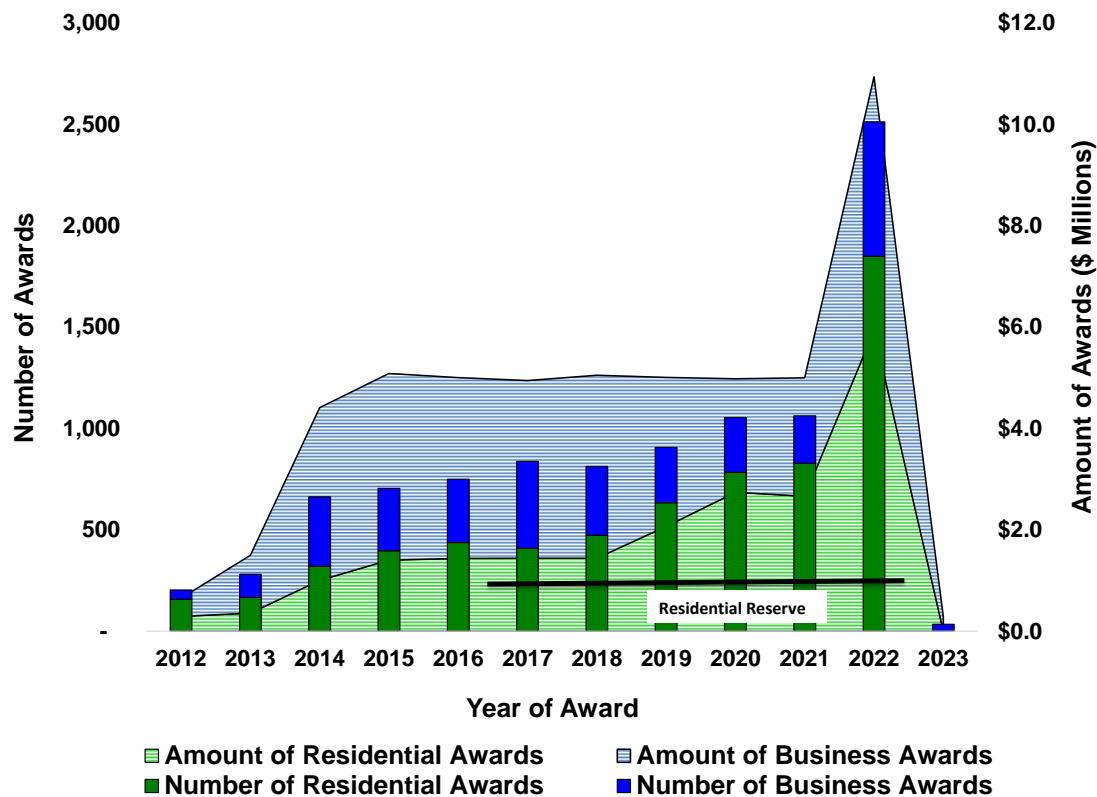
Award Year	Residential Installations					Business Installations				
	Maximum Award	Number of Maximum Awards	Percent of Number of Awards	Average Installation Cost	Average KW of Installation	Maximum Award	Number of Maximum Awards	Percent of Number of Awards	Average Installation Cost	Average KW of Installation
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	100	24.45%	\$47,011	16.3	\$20,000	49	11.42%	\$249,438	98.7
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
2022	\$5,000	304	16.44%	\$58,697	19.7	\$20,000	65	9.80%	\$278,412	142.8
2023	NA	0	NA	\$0	0.0	\$20,000	7	20.59%	\$286,619	138.0
Average since 2014		140	22.65%	\$48,037	16.0		45	15.32%	\$255,746	109.1

Note: Reflects applications awarded tax credits as of December 4, 2023

Source: Iowa Department of Revenue CACTAS and IMPACT Award Databases

Total awards for 2023 are \$0.3 million (see Figure 1).

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



Note: Reflects applications awarded tax credits as of December 4, 2023
 Source: Iowa Department of Revenue CACTAS and IMPACT Award Databases

While the 2012 cap was not fully utilized, applications for installations completed after 2012 have exceeded the cap in all other years until 2023 (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, 385 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, 57.1 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 58.3 percent of the cap. In 2018, 88.3 percent of awards reflect prior year installations. That percentage 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. In 2023, 47.9 percent of all awards 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	351	\$2,064,389	487	\$2,880,938	58.3%
2018	103	\$591,090	710	\$4,456,947	88.3%
2019	68	\$487,399	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%
2022	89	\$862,540	2,423	\$10,072,151	92.1%
2023	25	\$147,645	9	\$135,479	47.9%
Total	2,298	\$14,457,226	7,518	\$38,389,327	

* Fewer than 5 installations

Note: Reflects applications awarded tax credits as of December 4, 2023

Source: Iowa Department of Revenue CACTAS and IMPACT Award Databases

Awards made to-date reflect \$449 million in solar energy system investments on Iowa properties (see Table 4). The average reported residential installation costs increased from \$28,220 in 2020 to \$30,800 in 2021. The reported average cost of a business solar energy system installation increased from \$75,717 in 2021 to \$120,089 in 2022, based on applications awarded to-date. The count of installations for which awards have been made increased from 998 systems installed in 2018 to 1,377 systems installed in 2019. Installations continued to increase to 1,523 systems installed in 2020 and 1,606 systems installed in 2021, before decreasing to 98 systems installed in 2022. Taxpayers have until May 1, 2024 to submit their applications for 2023 business installations.

Table 4. Installation Costs by Installation Year for Solar Energy System Tax Credit Awards through 2023

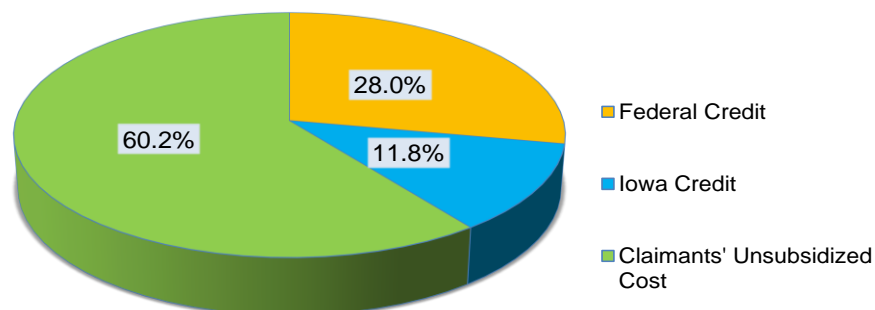
Installation Year	Residential Installations			Business Installations			Total	
	Number of Installations	Total Qualifying Project Costs	Average Project Cost	Number of Installations	Total Qualifying Project Costs	Average Project Cost	Number of Installations	Total Qualifying Project Costs
2012	159	\$2,749,004	\$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	400	\$9,948,402	\$24,871	457	\$33,436,052	\$73,164	857	\$43,384,454
2017	617	\$14,792,472	\$23,975	445	\$39,591,525	\$88,970	1,062	\$54,383,997
2018	687	\$16,611,395	\$24,180	311	\$31,465,387	\$101,175	998	\$48,076,782
2019	994	\$25,750,597	\$25,906	383	\$32,549,144	\$84,985	1,377	\$58,299,741
2020	1221	\$34,456,035	\$28,220	302	\$24,427,455	\$80,886	1,523	\$58,883,490
2021	1253	\$38,592,855	\$30,800	353	\$26,727,943	\$75,717	1,606	\$65,320,798
2022	0	\$0	\$0	98	\$11,768,689	\$120,089	98	\$11,768,689
2023	0	\$0	\$0	25	\$1,492,614	\$59,705	25	\$1,492,614
Total	6,456	\$170,851,670		3,363	\$278,135,998		9,819	\$448,987,668

Note: Reflects applications awarded tax credits as of December 4, 2023

Source: Iowa Department of Revenue CACTAS and IMPACT Award Databases

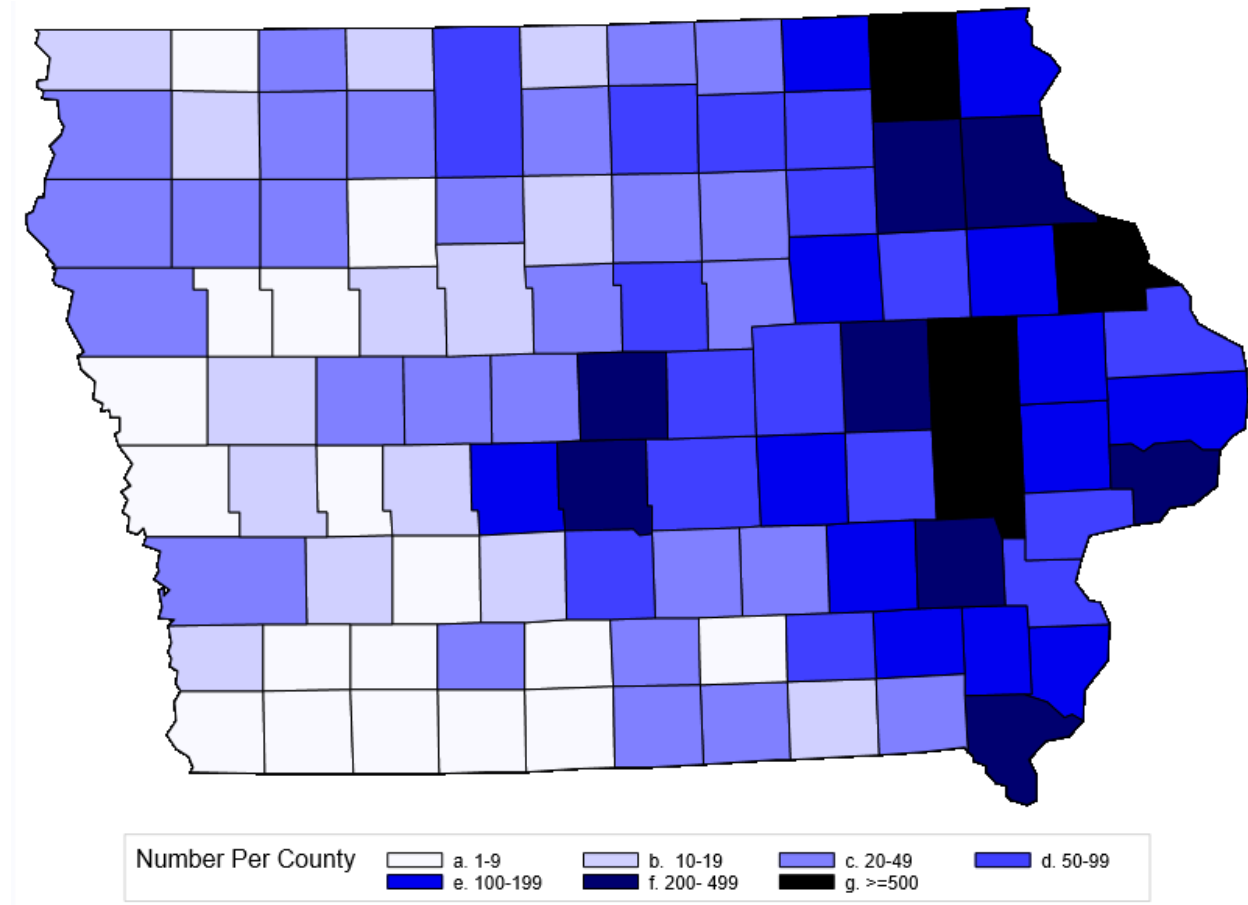
Of the \$449 million in installation costs for qualifying solar projects incurred by taxpayers, federal tax credits have subsidized 28 percent and the Iowa Solar Energy System Tax Credits have subsidized another 11.8 percent (see Figure 2). Iowa residents and businesses will have \$270.3 million in unreimbursed costs (60.2%), 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 2012-2023



Awards in the first twelve years of the Solar Energy System Tax Credit have been issued for 9,819 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. Dubuque, Johnson, Linn and Winneshiek counties all have had over 500 installations

Figure 3. Solar Energy System Tax Credit Awards by County, Award Years 2012-2023



Note: Reflects applications awarded tax credits as of December 4, 2023
 Source: Iowa Department of Revenue CACTAS and IMPACT Award Databases

During the 2014 application year, IDR began collecting the total kilowatt (KW) capacity of each solar energy system installed (see Table 5). By 2015, 100 percent of applications for business installations included KW capacity. Some residential applications are for solar fans, for which capacity is not applicable, therefore shares reporting KW capacity may be less than 100 percent. The residential applications reporting KW capacity accounted for nearly 100 percent for approved installations from 2018 to 2021. The average capacity of a residential solar energy system was 10.4 KW for 2021 installations, which was down slightly from 11.1 KW in 2020; the average capacity of a business solar

energy system was 44.2 KW for 2021 installations and increased to 61 KW for 2022 installations.

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

Installation Year	Application Type	Number of Installations that Reported KW Capacity	Total Cost of Systems Reporting KW Capacity	Total KW Capacity	Average KW Capacity	Percent of Installation Costs with KW Capacity Reported	Percent of Installations Reporting KW Capacity
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	455	\$33,427,052	12,467.4	27.4	100.0%	99.6%
	Residential	382	\$9,876,620	3,345.9	8.8	99.3%	95.5%
2017	Business	445	\$39,591,525	17,310.4	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	383	\$32,549,144	14,761.3	38.5	100.0%	100.0%
	Residential	987	\$25,727,719	9,733.7	9.9	99.9%	99.3%
2020	Business	300	\$24,327,136	12,854.2	42.9	99.6%	99.3%
	Residential	1218	\$34,408,396	13,499.4	11.1	99.9%	99.8%
2021	Business	353	\$26,727,943	15,599.7	44.2	100.0%	100.0%
	Residential	1252	\$38,589,265	13,018.7	10.4	100.0%	99.9%
2022	Business	98	\$11,768,689	5,976.6	61.0	100.0%	100.0%
2023	Business	25	\$1,492,614	570.3	22.8	100.0%	100.0%
Total		8,815	\$413,675,465	167,286.1	19.0		

Note: Reflects applications awarded tax credits as of December 4, 2023
Source: Iowa Department of Revenue CACTAS and IMPACT Award Databases

At the time of this report, the Department has awarded tax credits for 25 business installations for 2023. Business applications for 2023 installations can continue to be filed until May 1, 2024.

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 eleven tax years for which claims could be made, \$44.6 million of Solar Energy System Tax Credits have been reported on the IA 148 Tax Credit Schedule, with \$39.1 million of those credits used to offset Iowa tax liability (see Table 6). Based on tax year 2022 claims verified to-date, new claims totaled \$7.2 million and claims carried forward from prior year awards totaled \$2.5 million, for a total of \$9.6 million of claims available. Taxpayers have applied \$6.7 million against tax liability and carried forward \$3.6 million in tax credits to be claimed in tax years 2023 or later.

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	435	\$187,822	\$1,541,614	\$1,729,436	\$1,000,995	\$741,518
2014	1,087	\$674,641	\$4,019,791	\$4,694,432	\$2,415,780	\$2,283,812
2015	1,507	\$2,171,201	\$4,694,641	\$6,865,842	\$3,179,572	\$3,698,587
2016	1,738	\$3,408,245	\$4,723,466	\$8,131,711	\$4,205,189	\$3,951,638
2017	1,942	\$3,610,882	\$4,438,826	\$8,064,898	\$3,719,359	\$4,379,910
2018	2,084	\$3,771,513	\$4,474,206	\$8,249,002	\$4,200,762	\$4,190,663
2019	2,223	\$3,812,085	\$4,520,727	\$8,328,963	\$4,155,859	\$4,308,860
2020	2,323	\$3,662,570	\$4,199,138	\$7,860,778	\$4,397,335	\$3,650,437
2021	2,570	\$3,561,822	\$4,108,367	\$7,652,756	\$4,693,357	\$3,689,512
2022	3,141	\$2,461,093	\$7,179,217	\$9,626,445	\$6,667,943	\$3,569,760
Total	19,293		\$44,579,624		\$39,094,141	

Note: Claim collection and verification is incomplete for tax year 2022. In this table, “total amount of tax credits applied to tax liability” includes unverified claims; otherwise the table excludes unverified claims.

Source: Iowa Department of Revenue CACTAS and IMPACT Claim Databases

Note that the total amount of current year credits reported can exceed the amount of tax credits awarded for installations 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 2022 claims include both those credits awarded for 2022 and credits carried forward from tax year 2021 claims. IDR is in the process of verifying or billing for tax years

2020 through 2022 claims for 1,041 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 \$1,774,512 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 2022, 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 \$7.3 million over the first eleven years (see Table 7). \$0.9 million of those credits that have never been reported on a return were issued to C corporations. In addition, nearly \$2.7 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 \$3.6 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 34.3 percent. This is most likely due to returns that have not yet been filed. The unreported tax credits awarded in 2013 will expire if not claimed before the 2023 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	2021	2022	
Bank	.	.	.	\$40,000	\$74,342	.	.	\$65,798	\$4,500	.	\$37,219	\$221,859
C Corporation	\$17,113	\$33,543	\$82,938	\$28,719	\$50,297	\$60,760	\$36,867	\$76,729	\$53,637	\$45,918	\$376,797	\$863,318
Individual	\$522	\$5,544	\$27,171	\$31,961	\$49,851	\$26,734	\$87,339	\$145,782	\$218,616	\$362,381	\$1,706,690	\$2,662,591
Limited Liability Company	.	.	\$15,000	\$3,045	\$36,114	\$98,070	\$110,201	\$84,130	\$127,985	\$366,627	\$665,203	\$1,506,375
Partnership	.	.	.	\$78,001	.	.	\$51,479	\$22,076	\$4,639	.	\$159,692	\$315,887
S Corporation	.	.	\$9,720	\$47,649	\$14,069	\$45,003	\$217,939	\$98,751	\$68,289	\$95,578	\$407,230	\$1,004,228
Sole Proprietorship	.	.	\$16,200	.	\$21,422	\$32,601	\$30,537	\$61,930	\$85,443	\$96,702	\$398,814	\$743,649
Total by Year	\$17,635	\$39,087	\$151,029	\$229,375	\$246,095	\$263,168	\$534,362	\$555,196	\$563,109	\$967,206	\$3,751,645	\$7,317,907
Percent of Total Awards	2.70%	2.61%	3.42%	4.51%	4.92%	5.32%	10.59%	11.09%	11.31%	19.34%	34.31%	

Source: Iowa Department of Revenue CACTAS and IMPACT Award and Claim Databases

In tax year 2022, the average amount of tax credits applied against corporation income tax liability was \$4,381 (see Table 8). The average tax credit amounts applied against individual income tax liability and franchise tax liability were \$2,100 and \$0, respectively, on 2022 tax returns filed and verified to-date. Over the last eleven tax years, \$36.5 million

(93.4%) has been claimed against individual income tax liability; \$2.3 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	\$860,721	86.0%	\$2,157
2014	Corporate	\$177,010	7.3%	\$2,603
	Franchise	\$67,027	2.8%	\$16,757
	Individual Income	\$2,171,743	89.9%	\$2,140
2015	Corporate	\$192,042	6.0%	\$2,286
	Franchise	\$0	0.0%	\$0
	Individual Income	\$2,987,530	94.0%	\$2,101
2016	Corporate	\$326,534	7.8%	\$3,201
	Franchise	\$0	0.0%	\$0
	Individual Income	\$3,878,655	92.2%	\$2,371
2017	Corporate	\$306,977	8.3%	\$3,449
	Franchise	\$64,555	1.7%	\$7,173
	Individual Income	\$3,347,827	90.0%	\$1,816
2018	Corporate	\$280,726	6.7%	\$2,986
	Franchise	\$93,415	2.2%	\$13,345
	Individual Income	\$3,826,621	91.1%	\$1,930
2019	Corporate	\$358,874	8.6%	\$3,553
	Franchise	\$8,544	0.2%	\$8,544
	Individual Income	\$3,788,441	91.2%	\$1,786
2020	Corporate	\$185,688	4.2%	\$2,381
	Franchise	\$0	0.0%	\$0
	Individual Income	\$4,211,647	95.8%	\$1,876
2021	Corporate	\$181,210	3.9%	\$3,419
	Franchise	\$0	0.0%	\$0
	Individual Income	\$4,512,147	96.1%	\$1,793
2022	Corporate	\$135,818	2.0%	\$4,381
	Franchise	\$0	0.0%	\$0
	Individual Income	\$6,532,125	98.0%	\$2,100
Total	Corporate	\$2,334,444	6.0%	\$3,133
	Franchise	\$233,541	0.6%	\$10,616
	Individual Income	\$36,526,156	93.4%	\$1,972

Source: Iowa Department of Revenue CACTAS and IMPACT Claim Databases