



Iowa Department of **REVENUE**

Solar Energy System Tax Credit Annual Report for 2018 Released December 31, 2018

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 claimed during the previous calendar year, and any other information IDR may deem relevant and appropriate. This report meets that requirement for 2018.

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.

The Iowa Solar Energy System Tax Credit equals a percentage 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. 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 completed on or after January 1, 2016, the Iowa Solar Energy System Tax Credit is equal to 50 percent of 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 is

claimed on federal form 5695, Residential Energy Credits for individuals. The Iowa tax credit for an individual cannot exceed \$5,000.

For business installations completed on or after January 1, 2016, the Iowa Solar Energy System Tax Credit is equal to 50 percent of 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 is capped at \$5 million beginning calendar year 2015, up from \$4.5 million in calendar year 2014. Beginning in 2014, \$1 million of the cap is 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 set-aside 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 Credit awards over the last seven years are summarized in Table 1. In 2013, the \$1.5 million cap was met, although as a result of amended applications and revocations, the final awarded amount is slightly above the cap. Amendments to awards made in 2014 also explain the total falling below the \$4.5 million cap available in that year. Effective with the 2014 award year, any unused awards are rolled over to the following year, allowing additional awards in future tax years.

Table 1. Solar Energy System Tax Credit Awards

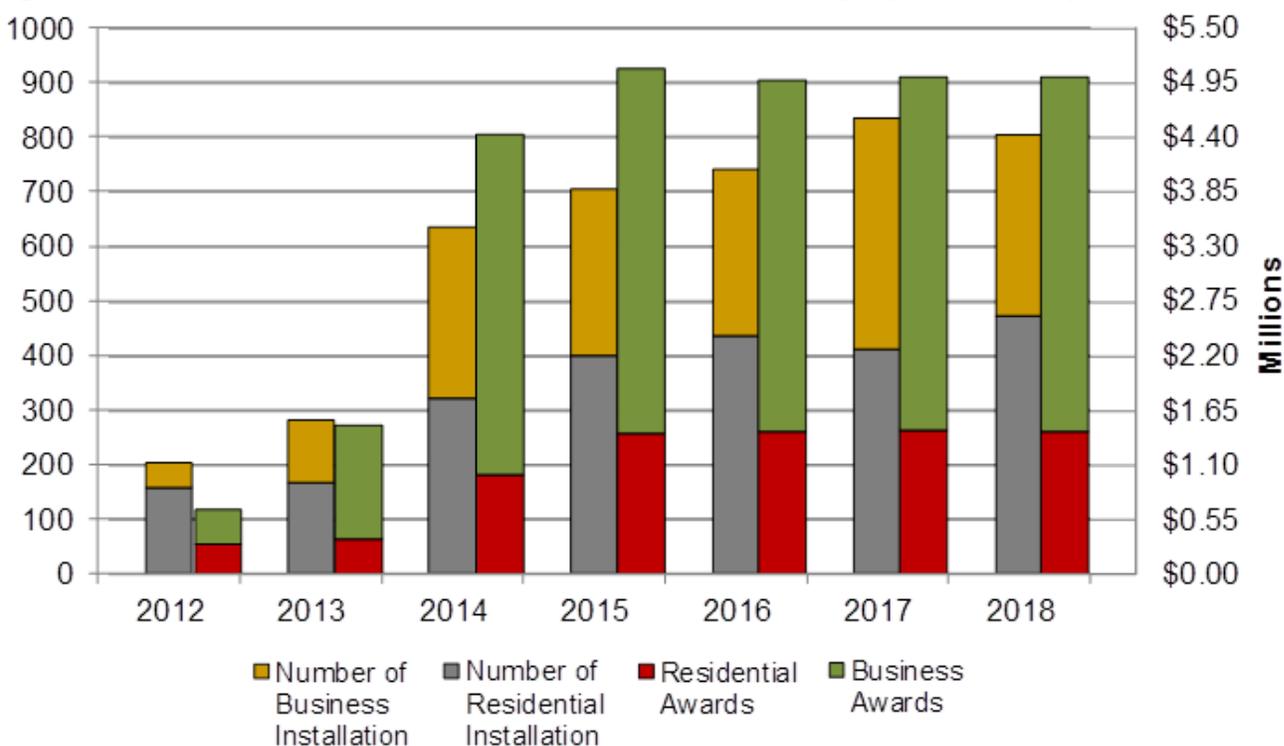
Award Year	Residential Installations			Business Installations			Total	
	Number of Tax Credit Awards	Amount of Tax Credit Awards	Average Tax Credit Award	Number of Tax Credit Awards	Amount of Tax Credit Awards	Average Tax Credit Award	Number of Tax Credit Awards	Amount of Tax Credit Awards
2012	158	\$292,263	\$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	314	\$3,409,472	\$10,858	634	\$4,411,891
2015	397	\$1,402,779	\$3,533	305	\$3,672,081	\$12,040	702	\$5,074,860
2016	437	\$1,437,860	\$3,290	305	\$3,570,567	\$11,707	742	\$5,008,427
2017	410	\$1,443,195	\$3,520	422	\$3,509,112	\$8,315	832	\$4,952,307
2018	473	\$1,441,009	\$3,047	335	\$3,607,028	\$10,767	808	\$5,048,037
Total	2,362	\$7,374,812		1,840	\$19,271,218		4,202	\$26,646,030

Note: Reflects applications approved as of December 17, 2018

Source: Iowa Department of Revenue CACTAS Award Database

Awards during the first seven years of the program total \$26.6 million. Total awards for 2018 are slightly higher than \$5 million due to rollover, with over \$1.4 million awarded for residential installations, meeting the \$1 million residential set-aside (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 counts of residential awards exceeding business award counts in all but one award year. Applications received for installations in 2018 after the cap was met in early summer are placed on the waitlist and will receive awards under the 2019 cap.

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



The average Solar Energy System Tax Credit awards for residential and business installations jumped between 2013 and 2014 due to the Legislative increase in the maximum awards for installations in 2014 and later (see Table 1). 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.

The average residential award decreased from award year 2017 to 2018 while the average award for business installations increased. The average 2018 award for a residential installation decreased to \$3,047 from \$3,520. The residential awards issued during award year 2018 included smaller KW systems and more awards than 2017 while the number of business awards dropped. In 2018, 17 percent of the number of awards issued for residential installations equaled the maximum tax credit compared to 25 percent in 2017, and 27 percent in 2016. The average award for a business installation increased to \$10,767 from \$8,315. In 2018, 35 percent of awards for business installations equaled the maximum, compared to 27 percent in 2017.

While the 2012 cap was not fully utilized, applications for installations completed after 2012 have easily exceeded the cap in all other years (see Table 2). For the 2013 cap, the first 281 installations during calendar year 2013 used up the cap, pushing the remaining 201 installations on the waitlist with awards issued 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, 57.8 percent of the cap was awarded for prior year installations; in 2016, prior year installations accounted for 51.2 percent of awards. Awards made under the 2017 cap include 486 installations completed in 2016, accounting for 57.6 percent of the cap. In 2018, 89.1 percent of awards reflect prior year installations. At the time of this report, the Department has received applications for 601 2018 installations that have been placed on the waitlist for 2019 awards or have yet to be reviewed. Those on the waitlist total \$1.6 million in 2019 tax credits; unreviewed applications have requested an additional \$1.7 million.

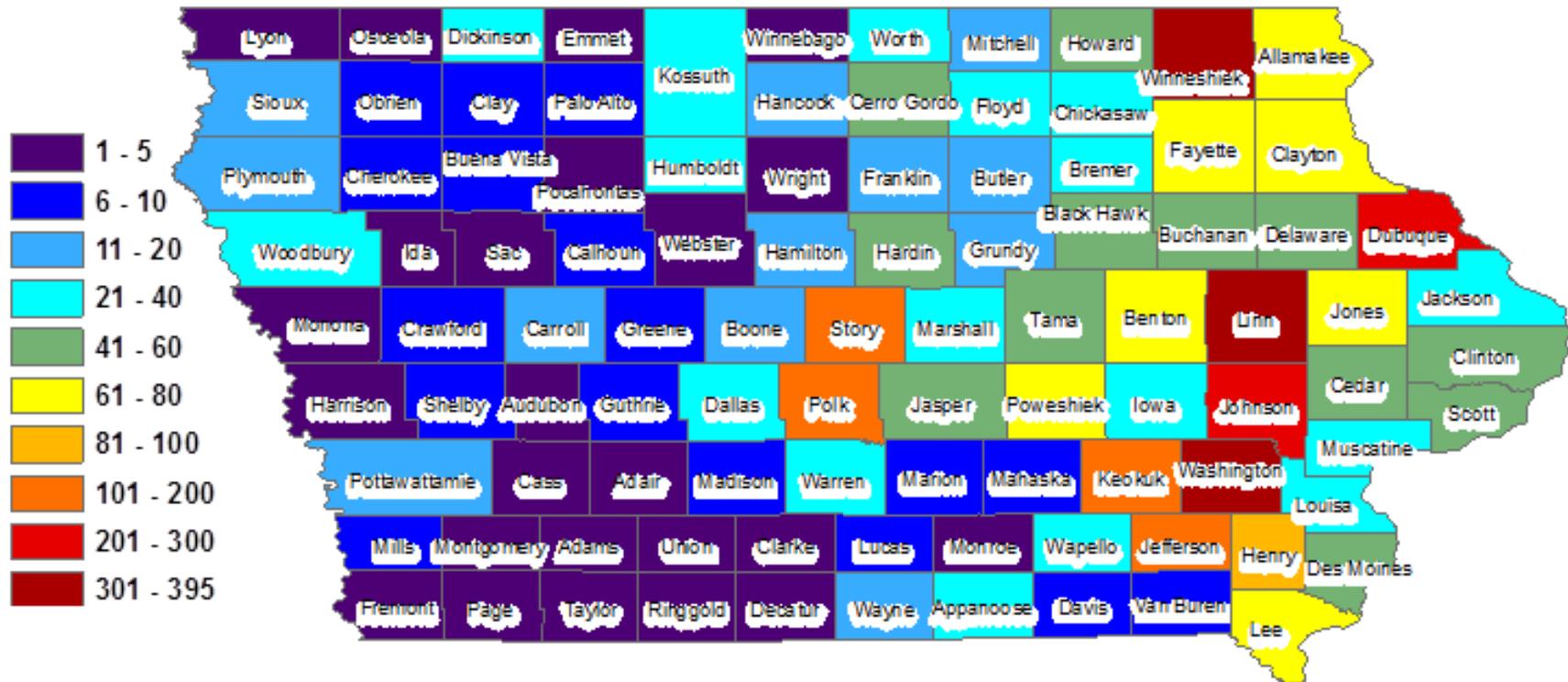
Table 2. Solar Energy System Tax Awards by Installation Year

Award Year	Current Installation		Installation in Prior		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	433	\$3,506,113	201	\$905,778	20.5%
2015	318	\$2,183,039	384	\$2,891,821	57.8%
2016	393	\$2,450,733	349	\$2,557,694	51.2%
2017	346	\$2,071,369	486	\$2,880,938	57.6%
2018	101	\$591,090	707	\$4,456,947	89.1%
Total	2,075	\$12,952,852	2,127	\$13,693,178	

Note: Reflects applications approved as of December 17, 2018
Source: Iowa Department of Revenue CACTAS Award Database

Awards in the first seven years of the Solar Energy System Tax Credit have been issued for 4,202 separate and distinct installations in Iowa. There has been at least one installation receiving an award in each of the Iowa counties (see Figure 2). Although installations have been widespread, the prevalence is geographically concentrated in Eastern Iowa. Dubuque and Johnson counties each have had over 200 installations receiving tax credit awards, while Linn, Washington, and Winneshiek counties all have had more than 300 installations.

Figure 2. Solar Energy System Tax Credit Awards by County, Award Years 2012-2018



Source: Iowa Department of Revenue, CACTAS award database as of December 14, 2018.

Awards made to-date reflect over \$209.5 million in solar energy system investments by Iowans (see Table 3). The average reported residential installation costs increased from \$23,984 in 2017 to \$25,632 in 2018. The reported average cost of a business solar energy system installation decreased from \$90,648 in 2017 to \$86,727 in 2018, based on applications approved to-date. The count of installations for which awards have been approved increased from 838 in 2016 to 1,048 in 2017. The approved solar energy system applications for calendar year 2018 installations total 101 to-date. Installations for 2018 are incomplete as taxpayers have until May 1, 2019 to submit their applications and the count does not include applications on the 2019 waitlist or those awaiting review.

Table 3. Solar Energy System Tax Credit Installation Costs by Installation Year

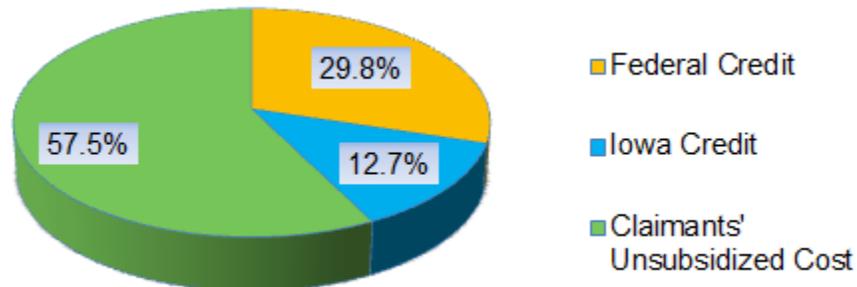
Installation Year	Residential Installations			Business Installations			Total	
	Count	Total Cost	Average Cost	Count	Total Cost	Average Cost	Count	Total Cost
2012	159	\$2,749,004	\$17,289	45	\$3,057,192	\$67,938	204	\$5,806,196
2013	312	\$6,219,981	\$19,936	190	\$14,556,940	\$76,615	502	\$20,776,921
2014	413	\$11,586,373	\$28,054	431	\$34,067,554	\$79,043	844	\$45,653,927
2015	397	\$10,099,716	\$25,440	268	\$24,358,660	\$90,891	665	\$34,458,376
2016	400	\$10,019,992	\$25,050	438	\$34,019,384	\$77,670	838	\$44,039,376
2017	615	\$14,750,227	\$23,984	433	\$39,250,735	\$90,648	1,048	\$54,000,962
2018	66	\$1,691,735	\$25,632	35	\$3,035,457	\$86,727	101	\$4,727,192
Total	2,362	\$57,117,028	\$24,182	1,840	\$152,345,922	\$82,797	4,202	\$209,462,950

Source: Iowa Department of Revenue CACTAS Award Database

Note: Reflects applications approved as of December 14, 2018

Of the \$209.5 million in installation costs for qualifying solar projects incurred by taxpayers, federal tax credits have subsidized 29.8 percent and the Iowa Solar Energy System Tax Credits have subsidized another 12.7 percent (see Figure 2). Iowa residents and businesses will only pay \$120.4 million in costs (57.5%), assuming they will be able to fully utilize both nonrefundable tax credits to offset federal and Iowa tax liability.

Figure 3. Distribution of Solar Energy System Tax Credit Installation Costs from Award Years 2012-2018



During the 2014 application year, IDR began collecting the total kilowatt capacity (KW) of each solar energy system installed. Beginning in 2015, 99.5 to 100 percent of installations for business applications included KW. Awards include amended applications for years in which KW were not collected. Because some residential applications are for solar fans, such that KW capacity is not applicable, the shares reporting KW are less than 100 percent. The residential applications reporting KW accounted for 98.1 percent of total residential installation costs in 2015, 99.3 percent in 2016, 99.7 percent in 2017, and 100 percent for approved 2018 awards. During 2018, for the applications processed to-date, business applicants reported a total of 1,364 KW installed and residential applications reported a total of 622 KW. The average capacity of a residential solar energy system was 9.3 KW in 2017, slightly increasing to 9.4 KW in 2018; the average capacity of a business solar energy system was 39.6 KW in 2017, slightly decreasing to 39.0 KW in 2018.

Table 4. Total KW of the Solar Systems Installed Yearly by 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	Percent of Installations Reporting KW
						Reported	Reporting KW
2014	Business	366	\$29,205,522	9,291.8	25.4	85.7%	84.9%
	Residential	280	\$8,267,253	2,441.0	8.7	71.4%	67.8%
2015	Business	268	\$24,358,660	8,180.1	30.5	100.0%	100.0%
	Residential	352	\$9,907,914	3,139.5	8.9	98.1%	88.7%
2016	Business	436	\$34,010,384	12,594.5	28.9	100.0%	99.5%
	Residential	382	\$9,948,210	3,381.9	8.9	99.3%	95.5%
2017	Business	433	\$39,250,735	17,128.5	39.6	100.0%	100.0%
	Residential	600	\$14,708,350	5,567.0	9.3	99.7%	97.6%
2018	Business	35	\$3,035,457	1,363.6	39.0	100.0%	100.0%
	Residential	66	\$1,691,735	622.2	9.4	100.0%	100.0%
Total		3,183	\$174,384,220	63,710.1	20.0		

Note: Reflects applications approved as of December 17, 2018

Source: Iowa Department of Revenue CACTAS Award Database

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 return. 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 six tax years for which claims could be made, \$19.7 million of Solar Energy System Tax Credits have been reported on the IA 148, with \$15.3 million of those credits used to offset Iowa tax liability (see Table 5). Based on tax year 2017 claims verified to-date, new claims totaled \$4.2 million and claims carried forward from prior year awards totaled \$3.2 million, for a total of \$7.5 million claims available. Taxpayers applied \$3.7 million against tax liability and carried forward \$4 million in credits to be claimed in tax years 2018 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 5. 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	Amount of Tax Credits Carried Forward
2012	241	\$0	\$679,758	\$679,758	\$454,884	\$225,373
2013	432	\$187,400	\$1,552,363	\$1,739,763	\$1,003,357	\$752,591
2014	1,111	\$686,463	\$4,021,015	\$4,707,478	\$2,434,741	\$2,292,650
2015	1,530	\$2,193,039	\$4,593,412	\$6,786,451	\$3,262,269	\$3,641,158
2016	1,781	\$3,329,719	\$4,576,327	\$7,906,046	\$4,382,865	\$3,794,701
2017	1,892	\$3,243,370	\$4,237,550	\$7,480,920	\$3,738,691	\$4,014,750
Total	6,987		\$19,660,425		\$15,276,807	

Note: Claim collection and verification is incomplete for tax years 2016 or later.

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 return if the installation was completed during the following year that falls within the prior 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.

For tax years 2014 through 2017, 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 \$1.9 million over the first six years.

Tax year 2017 claims include both those credits awarded for 2017 and credits carried forward from tax year 2016 claims. IDR is in the process of verifying or billing tax years 2016 and 2017 claims for 323 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 \$560,809 in applied claims and \$36,958 in carry forward 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.

Table 6 summarizes the Solar Energy System Tax Credit claims by tax type each year. The average amount of tax credits applied to tax liability for a corporation was \$2,996, individuals was \$1,920, and franchise was \$5,569 on 2017 tax returns filed and verified to-date. Over the last six tax years, \$14.1 million (92.2%) was claimed against individual income tax liability, \$1.1 million was claimed against corporation income tax, and \$0.1

million was claimed against franchise tax liability. No claim has been made against moneys and credits tax.

Table 6. 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
2012	Individual	\$405,593	89.2%	\$1,748
	Corporation	\$49,291	10.8%	\$5,477
2013	Individual	\$863,083	86.0%	\$2,180
	Corporation	\$140,274	14.0%	\$3,897
2014	Individual	\$2,192,070	90.0%	\$2,110
	Corporation	\$175,644	7.2%	\$2,583
	Franchise	\$67,027	2.8%	\$16,757
2015	Individual	\$3,034,610	93.0%	\$2,102
	Corporation	\$217,968	6.7%	\$2,564
	Franchise	\$9,691	0.3%	\$9,691
2016	Individual	\$4,105,466	93.7%	\$2,442
	Corporation	\$277,399	6.3%	\$2,774
	Franchise	\$0	0.0%	\$0
2017	Individual	\$3,478,394	93.0%	\$1,920
	Corporation	\$215,742	5.8%	\$2,996
	Franchise	\$44,555	1.2%	\$5,569
Total	Individual	\$14,079,216	92.2%	\$2,083
	Corporation	\$1,076,318	7.0%	\$3,382
	Franchise	\$121,273	0.8%	\$8,004

Source: Iowa Department of Revenue CACTAS Claim Database

Contact: Questions can be addressed to Amy Harris of the Iowa Department of Revenue at (515) 281-0196 or Amy.Harris@iowa.gov.