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Michael Kaplan, Director
Oregon Department of Energy
625 Marion Street, NE
Salem, Oregon 97301-3737

Dear Mr. Kaplan:

We have completed our limited review of the Department of Energy's (department) Residential Energy Tax Credits (RETC), with a focus on tax credits issued for photovoltaic or PV solar cells. The purpose of this review was to (1) gain an understanding of the number and dollar amount of RETCs by product type; (2) gain an understanding of how the credits are issued, reserved, and used for PV third-party installations; and (3) understand the department's internal controls in place over third-party installation credits to ensure credits are issued in compliance with state laws and determine compliance with state laws.

Background

According to an overview published March 28, 2016, by the Legislative Revenue Office[1], the 1977 Legislature enacted Oregon Revised Statute (ORS) 316.116 allowing Oregon income tax credits for various alternative energy devices, systems that use "solar radiation, wind or geothermal resource as a source for space heating, water heating, cooling, electrical energy or any combination thereof for a dwelling which source meets or exceeds 10 percent of the total energy requirements for the dwelling." Policy changes throughout the years refined housing definitions and added or deleted certain types of devices. For example, PV systems, vehicles, appliances, solar electric, and wind categories were added, but hybrid vehicles were eliminated in 2010 and appliances were limited in 2011.

Key policy changes since 2011 allowed the department to provide a lesser amount of tax incentive for each type of alternative energy device as market conditions warrant and to consider evolving market conditions in prescribing minimum performance criteria and in determining credit amounts.

Photovoltaic credits comprise 50 percent of all RETCs

Seven program types of residential credits are offered by the department. As shown in figure 1, renewables and heat pumps accounted for 85% of tax-year 2015 credits, comprising 51% and 34% respectively. Renewable energy is generally defined as energy collected from natural resources such as sunlight, wind, rain, tides, waves, and geothermal heat. PV systems, which are a type of renewable energy, consist of PV solar cells or panels that are installed on homes to help reduce electricity costs by converting sunlight into energy.

[1] "Energy Tax Credits Overview – Energy Policy meets Tax Policy," 2016, Chris Allanach, Legislative Revenue Office, requested by Joint Interim Committee on Department of Energy Oversight.

Figure 1: RETC totals for tax year 2015

	Number of RETCs Issued	Dollar Amount of RETCs Issued	Percentage of Dollar Total
Alternative Fuel	137	$ 36,524	0.18%
Appliances	968	593,674	2.94%
Ducts	646	161,595	0.80%
Furnaces	5,275	2,201,392	10.91%
Heat Pumps	6,866	6,898,476	34.17%
HRV-ERV	2	900	0.00%
Renewables	1,844	10,296,954	51.00%
Totals	15,738	$20,189,515	100.00%

Figure 2 shows photovoltaic systems, a type of renewable, alone accounted for 50% of all 2015 credits.

Figure 2: Renewables for tax year 2015

	Dollar Amount of RETCs Issued	Percentage of Total RETCs by Dollar
Active Solar Water Heating	$ 36,351	0.18%
Passive Solar Space Heating	1,500	0.01%
Geothermal Heat Pump, Space and Water	47,700	0.24%
Photovoltaic	10,156,170	50.30%
Pool/Spa Heating	55,233	0.27%
Total Renewables	$10,296,954	51.00%
Total RETCs from Figure 1	$20,189,515	

Issuance of credits and third-party leasing

The department's *Oregon Solar Electric Guide* (guide) provides information to homeowners covering topics such as installation, financial incentives, permit requirements, and contractor selection. Homeowners may install PV systems themselves, but a certified technician must verify the PV system before the credit is issued. Credit amounts are the lesser of $6,000 or 50% of the cost of the system and must be claimed on the homeowner's state income tax each year in increments of $1,500 or less, for up to four years. Oregon Revised Statute 316.116 (7) allows for some carry forward provisions.

Although the cost of solar electric systems has dropped significantly since 2009, the average cost in 2012 was $22,000. The guide lists three common ways to finance a system: a home equity loan; a loan from Oregon's Small-scale Energy Loan Program, a bank, a municipality, or a utility; or a lease from a solar leasing company (third-party leasing). The department issued

1,736 PV credits in 2015, of which 35% of homeowners used the third-party leasing option that became available in 2011. The department's March 2016 listing of Oregon companies offering PV installation and employing at least one tax-credit technician showed 9 companies offering third-party leasing.

Oregon Law 2011, Chapter 730, Section 75 capped at $10 million the department's issuance of potential tax credits for third-party alternative energy device installations in any tax year. In tax year 2015, $3.6 million of the $10.2 million total tax credits issued were for third party installations. To ensure the program stays under the statutory cap, the department requires PV third-party installers to reserve a tax credit before commencing installation (OAR 330-070-0029). The credits are reserved for the year of installation and allocated in the order the requests are received. According to department management, excess reservation requests would be returned when the cap is reached. Systems must be installed and certified in the year reserved or by April 1 of the following year to receive a tax credit for that tax year. A new reservation would need to be requested if the system is not completed or certified before April 1. A third-party installer may not commence installation until a reservation reference number is issued by the department.

Under the residential solar leasing option, the homeowner enters into a long-term contract with the installer, typically for 20 years. The leasing company owns and maintains the system, and the homeowner has the right to use the solar electricity generated by the system over the lease term. The tax credit belongs to the homeowner and the department issues the credit to the homeowner upon installation and verification.

Transferring tax credits

As authorized in ORS 469B.106 (9), homeowners who construct or install, have constructed or installed, or lease the alternative energy device may sell the credit to a person that pays the present value of the tax credit. Tax credits may be sold or transferred only once and may not be transferred in portions. Additionally, the department may establish by rule uniform discount rates to be used in calculating the present value of a tax credit. The department established in OAR 330-070-0014 uniform discount rates of 90% of the certified tax credit for credits greater than $1,500 and 95% for tax credits less than $1,500.

In 2015, only 3% of homeowners elected to sell their residential energy tax credits. This equated to 60 of 1,736 applicants. Once the department considers a homeowner's project to be eligible for a credit, a Pass-Through Option Application is sent to the homeowner. This application serves as an affidavit for both the homeowner and pass-through partner, certifying the amount paid and received for the credit.

The Pass-through Option Application states that an "individual, estate or trust subject to tax under ORS chapter 316" may buy the solar tax credit. ORS 316 is Oregon's personal income tax law. Prior to January 1, 2015, it was possible for a business to purchase the RETC as long as the credit was used against an individual tax liability. For example, a partnership, sole proprietorship or LLC may purchase a RETC, but an owner would need to claim the credit on his or her Oregon individual tax return.

Methodology

We reviewed the types of RETCs offered by the department and analyzed the credits issued. We reviewed relevant Oregon statutes, administrative rules, the Oregon Department of Revenue's website and the department's website information for residential energy tax credits. We also reviewed website information regarding solar panels and Oregon PV installers. We obtained summary RETC information for 2014 personal income tax full-year filers from a Department of Revenue Research Analyst. In addition, we performed analyses using the following data spreadsheets from the department: 1) 2010 through April 6, 2016 credit applicant data by program, year, and system; 2) certification date January 1, 2010 through April 15, 2016 pass-through partner data by system; and 3) 2015 through 2016 pass-through partner data from the PowerClerk system[2].

Since photovoltaic systems accounted for 50% of all 2015 credits, we focused our review on PV system credits. Because we limited our review to a risk assessment, we were not required to and did not conduct the review in accordance with generally accepted government auditing standards. Staff from our office who were not involved with this assignment reviewed this communication for accuracy, checking facts against supporting evidence.

Results

We determined the department's residential energy tax credits for PV systems are generally issued in compliance with state laws. We did note minor exceptions in pricing and recording some pass-through credits and noted two areas where the department could improve its documentation and attention to the pass-through rates and in providing accurate information on its website and on the tax credit application form.

For PV system credits issued in tax years 2010 through 2014, we were able to generally corroborate the department's data of RETC credits with the Department of Revenue's summary data of RETC credits claimed and used. In addition, credit applicant data limited to homeowners intending to sell tax year 2012 through 2015 PV system credits agreed to both pass-through (buyer) datasets we obtained from the department.

We considered the following when determining whether the department complied with state laws when issuing RETCs for PV systems:

- the annual cap for third-party leased RETC credits;
- individual credits capped at $6,000;
- third-party leased credits only issued to homeowners
- credits sold by homeowners at correct rates; and
- credits sold by homeowners only to individuals, estates, trusts, or, prior to January 1, 2015, businesses.

Annual cap/individual cap

Department staff reported to us that the annual cap of $10 million for third-party leased RETC credits has never been reached. Our review corroborated this assertion, and figure 3 shows the annual amount for third-party leased RETC credits has remained below $4.3 million.

[2] PowerClerk is the department's online platform implemented January 2015 to submit PV RETC applications. The use of PowerClerk became mandatory in June 2015.

Figure 3: Annual photovoltaic credits issued by tax year

	2011	2012	2013	2014	2015
Number of PV Credits Issued	1,470	1,037	1,096	1,502	1,736
Total PV Credit Amounts	$8,484,309	$6,027,268	$6,445,879	$8,845,749	$10,156,170
Number of Credits for Third-party Leases	684	417	592	709	613
Credits for Third-party Leases as a Percentage of Total PV Credits Issued	47%	40%	54%	47%	35%
Credit Amounts for Third-party Leases	$4,059,311	$2,479,518	$3,534,404	$4,216,015	$3,607,443
Credit Amounts for Third-party Leases as a Percentage of Total PV Credit Amounts	48%	41%	55%	48%	36%

We also examined the 2010-2016 tax year credit applicant data and determined that all credits were issued for $6,000 or less.

Third-party leased credits issued to homeowners

We scanned the 2010-2016 third-party leased credits and determined the department's records showed all were issued only to homeowners. For added assurance, we selected two tax credits from different counties and examined the supporting documentation. We selected one certified project each from 2015 and 2016 where the homeowners indicated on their applications they did not plan to sell the credit to a pass-through partner. We found both credits were correctly issued only to the homeowners.

Sale rates/sales to individuals

Our review of department records revealed that all but three of 69 credits transferred during tax years 2012 through 2015 (prior to the department's use of the PowerClerk system) were sold at department-established present value rates. Due to department errors of incorrect rates on applications, one buyer underpaid $58, another overpaid $245, and a third buyer overpaid $240. In addition, amounts paid by two other buyers were entered incorrectly into the department's system; however, the pass-through applications revealed these buyers paid the correct amounts. The department expects a reduction of these types of errors with its transition to the automated PowerClerk system.

We sampled 10 of 62 transferred tax credits from the PowerClerk system and found all 10 were sold at department-established present value rates. We also verified all transferred credits, from both of the department's systems, were sold to individuals, with the exception of one credit that was sold to a trust.

Other matters

Department offers abundant information about purchasing, financing and leasing PV systems

Recent news articles warn that home sales are struggling to close when homeowners carry $20,000 or more in lease obligations owed for solar panels.[3] Website www.Watchdog.org posted an 11-part series on third-party lessors and PV installers,[4] with an emphasis on a potential lack of disclosures regarding lease agreements.

Although the responsibility of purchasing a PV system lies solely with the homeowner, we believe the department has taken steps to mitigate some of the potential risks associated with leasing PV systems as described in the news articles. Both the department's website and the *Oregon Solar Electric Guide* provide abundant information for homeowners to be well informed about purchasing, financing, and leasing PV systems. The guide contains specific information on how to choose a contractor, how to obtain and choose among competing bids, and how to verify and accept installation. Furthermore, potential applicants and pass-through partners are encouraged to contact a tax advisor or the Oregon Department of Revenue and to call the department for more information.

Pass-Through Option Application form should be improved

As homeowners and pass-through partners must use a department-created application to complete the tax credit transfer process, there is a presumption that the supplied document would contain the current and correct present value rates associated with the amount of credit. If a wrong pass-through rate is used, homeowners or pass-through partners may have little recourse to rectify the situation as no money passes through the department. As previously mentioned, incorrect rates on the application forms caused incorrect calculations of pass-through amounts in some instances.

The pass-through rates are published in the department's administrative rules and are available to the public, so it could be presumed the homeowners and pass-through partners would have made sure correct rates were used. However, this could easily be overlooked if a reminder is not on the application form. The department's Pass-Through Option Application does not advise the users of the application to ensure correct rates are included on the form. Such language would clarify the homeowners' and pass-through partners' responsibilities and may help protect them and provide the department some protection from recourse should errors occur.

Discount rates need to be documented and routinely reviewed

Unlike other Oregon statutes authorizing the department to establish by rule a *formula* to determine discount rates for the sale of business energy tax credits, ORS 469B.106 (9) authorizes the department to establish by rule uniform discount *rates* to be used in calculating the present value of alternative energy RETCs. As previously mentioned, the department established discount rates of 90% and 95%, but the department did not maintain documentation for how these rates were determined to calculate present value. Nor does the department have a process in place for routine review of these rates to ensure they continue to represent present value over time.

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[3] "Solar is Becoming Real Estate's White Elephant," by Chriss W. Street, www.breitbart.com, February 17, 2016.
[4] Tori Richards, February 26, 2014 through June 23, 2015, http://watchdog.org/series/solarcity/.

Public information about tax credits should be kept current

We noted some discrepancies in information the department provides to the public regarding tax credits, which could confuse homeowners applying for PV residential energy tax credits. For example, effective January 1, 2015, new language in OAR 330-070-0014 removed businesses from parties eligible to receive pass-through credits; the new rule states eligibility is for "an individual, estate or trust." The department updated its Pass-through Option Application with this change but the current RETC application and instructions still state a homeowner may transfer the credit to a business. Additionally, some of the department's website information conflicts with other information provided on the site. For instance, the RETC Solar page offers a link to the 2014 RETC PV Application for "systems installed beginning January 1, 2014." However, the linked application is for PV systems "installed on or after January 1, 2013."

Recommendations

We recommend department management:

- consider its responsibility when department errors cause incorrect pass-through amounts and take action it deems appropriate;
- consider adding language to the Pass-through Option Application to the effect that both homeowners and pass-through partners share responsibility for ensuring the correct present value rate is used;
- establish and maintain documentation for the method used in determining discount rates to calculate present values of RETCs and routinely review and update the rates as necessary to ensure they continue to represent present values; and
- establish and maintain a method to update website information and forms that will provide consistent, accurate, and current information necessary for RETCs to be issued and transferred according to legislative requirements.

We appreciate your staff's time and cooperation during this review. If you have any questions, please contact Dale Bond, Audit Manager, at (503) 986-2351.

Sincerely,

Office of the Secretary of State, Audits Division

cc: Blake Johnson, Division Administrator, Central Services
Michael Williams, Manager, Energy Tax Credits, Grants, and Compliance
George Naughton, Interim Director, Department of Administrative Services