GREEN ENERGY INSTITUTE
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# Renewable Energy & Direct Public Revenue in Oregon

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The opinions and recommendations expressed in this report are those of the authors.

# About Us

The Green Energy Institute is a renewable energy policy organization within Lewis & Clark Law School's Environmental, Natural Resources, and Energy Law Program. The Green Energy Institute develops strategies and advocates for a transition to a renewable energy grid.

For more information on the Green Energy Institute, please visit our website at: https://law.lclark.edu/centers/green_energy_institute.

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# Contents

# Renewable Energy & Direct Public Revenue in Oregon

The aim of this report is to provide information regarding public revenues resulting from renewable energy development and assist decisionmakers in making informed policy decisions concerning renewable energy projects by explaining some of the relevant state and federal laws that incentivize renewable energy development and quantifying the direct, long-term, property-tax revenue that Oregon counties receive from renewable energy projects. Because this report focuses on property tax revenue, only renewable energy projects that are subject to property taxes within Oregon are analyzed and discussed. Many renewable energy projects in Oregon are exempted from local property taxes by two provisions of state law. First, alternative energy systems[1] that are net metering facilities or are "primarily designed to offset onsite electricity use" are exempt from property tax.[2] Second, publicly-owned property that is used for public purposes is exempt from property tax.[3] This shields publicly-owned renewable energy projects from property taxation, even if the project is not a net metering system or primarily designed to offset onsite electric use. As a rule, only privately-owned renewable energy projects that primarily produce electricity for use offsite are subject to property taxes in Oregon.[4] Payments from these projects, totaling almost $32 million in tax year 2017–2018, are a growing source of stable revenue for Oregon counties and local taxing districts.

Part I discusses and analyzes trends in renewable energy development and related property tax revenue. Part II provides a brief overview of property taxes in Oregon as well as an in-depth discussion and analysis of the three property tax abatement programs utilized by renewable energy developers. Part III contains a brief overview of three federal laws that enable and incentivize development of renewable energy projects at the community and utility scale in Oregon. This report does not analyze other benefits or costs associated with renewable energy projects, such as reduced air pollution or aesthetic impacts.

# I. Renewable Energy Trends & Direct Revenue in Oregon

Over the past ten years, Oregon has seen a significant increase in the number of renewable energy projects and installed renewable energy capacity. The number of projects has increased from 41 to over 100, and the nameplate capacity has increased by 64%, from 2,200 MW to 3,611 MW. In tax year 2017–2018, direct payments to counties and taxing districts from renewable energy projects totaled over $31.7 million. However, these projects and their benefits have not been evenly distributed across renewable resources or counties.

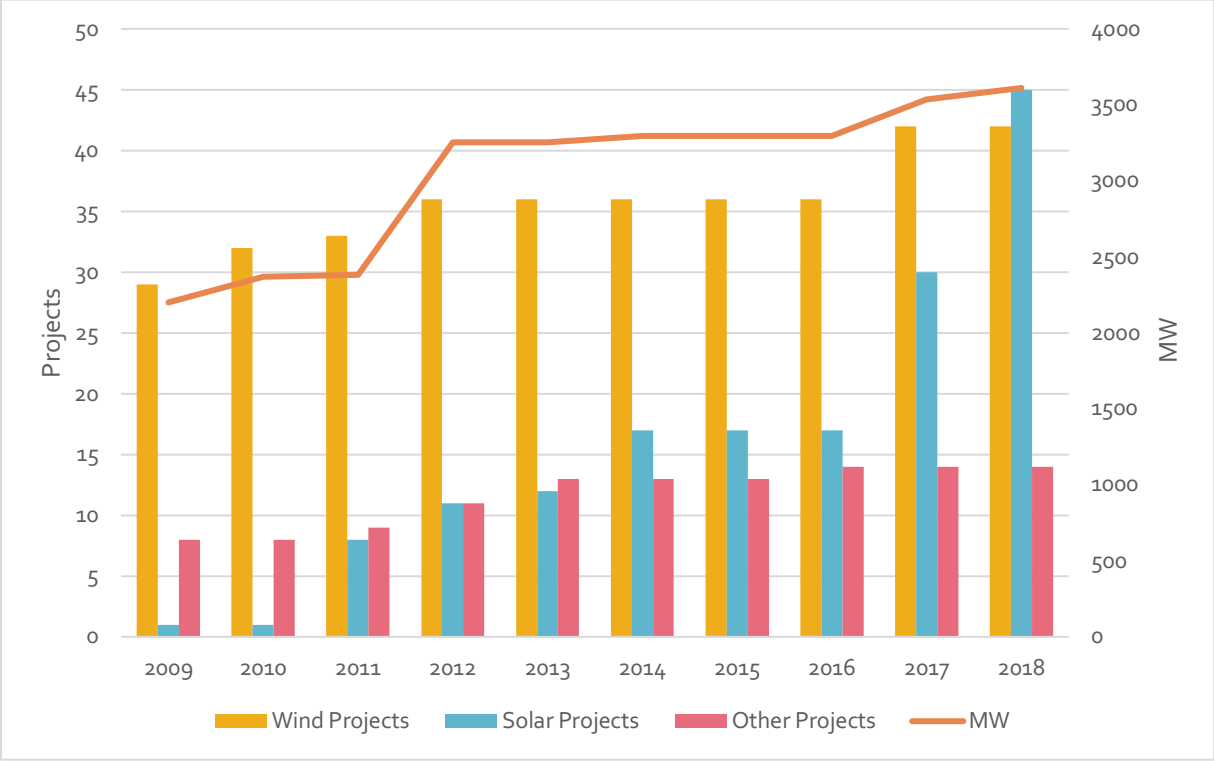


*Figure 1: Overall Trends in Renewable Energy Growth in Oregon*

## A. Renewable Energy Trends in Oregon

Renewable energy facilities in Oregon are powered by a wide array of resources, including: solar, wind, biogas, biomass, geothermal, hydro, and solid waste incineration.

### Solar

Solar, a relative newcomer in the renewable energy generation sector in Oregon, currently comprises a relatively small amount (8.5%) of Oregon's total renewable energy generation capacity. However, that amount has been growing rapidly. In the past ten years, installed solar capacity has increased by almost 280% and spread throughout the state. To date, thirteen counties—Clackamas, Crook, Deschutes, Jackson, Jefferson, Klamath, Lake, Malheur, Marion, Multnomah, Polk, Umatilla, and Yamhill Counties[5]—have solar facilities subject to property taxes in Oregon. Solar projects subject to property taxes have been proposed in additional counties, including Gilliam, Morrow, and Wasco Counties.[6]

Solar is poised to grow even more rapidly in the coming years as additional utility-scale solar farms come online. The Gala Solar project in Crook County increased the total nameplate capacity of operating solar projects subject to property taxes in Oregon by 22% when its 56

MWs came online in 2018. Either of the proposed 400 MW Obsidian Solar Center in Lake County or 303 MW Bakeoven Solar Project in Wasco County would significantly increase currently existing solar nameplate capacity.[7]

While these large projects may drive Oregon's total installed solar capacity in the coming years, most solar projects in Oregon are community-scale PURPA projects. Before the Gala Solar project came online, the largest solar facility in Oregon was 13 MWs and the average facility was 5.7 MWs. Based on the considerable number of PURPA contracts filed with the Oregon Public Utility Commission, most new solar projects in Oregon will continue to be community-scale PURPA projects.

Another potential area for solar-related revenue growth for counties and taxing districts is community solar. Community solar facilities, which allow electric rate-payers offset or reduce some of their electric bills by participating in community-scale, centralized solar projects are not exempt under current law from property taxation. Whether the community solar program succeeds and develops into a revenue source for counties and taxing districts depends in large part on Oregon Public Utility Commission regulations. A Community solar program that allows rate-payers in urban areas to participate in solar facilities in rural areas, would support infrastructure investment in rural areas and establish sources of stable, long-term revenue for rural counties and taxing districts.

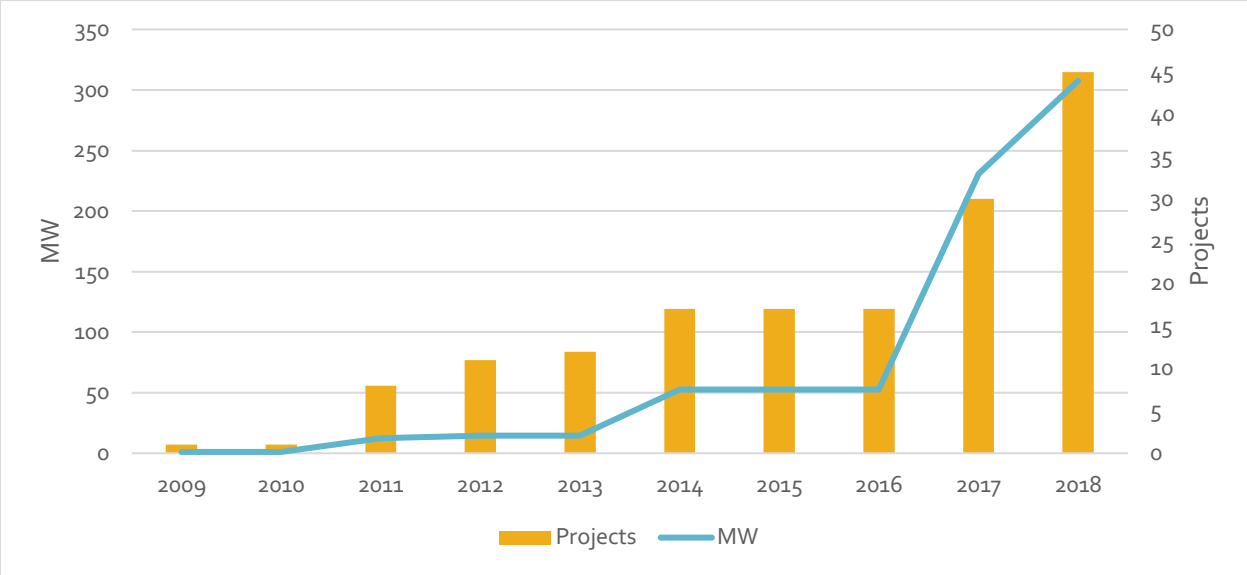


*Figure 2: Solar Energy Growth in Oregon*

## Wind

Utility-scale wind is the primary driver of renewable energy generation capacity in Oregon. Wind accounts for almost 87% of the renewable nameplate capacity in Oregon, a percentage that is unlikely to decrease with almost 1.5 gigawatts (*GW*) of utility-scale wind power in the approval/construction pipeline.[8]

While utility-scale wind dominates the renewable energy generation capacity in Oregon in size, it grows in fits and spurts as large projects come online. In the past ten years, Oregon's wind capacity has grown by 56%.

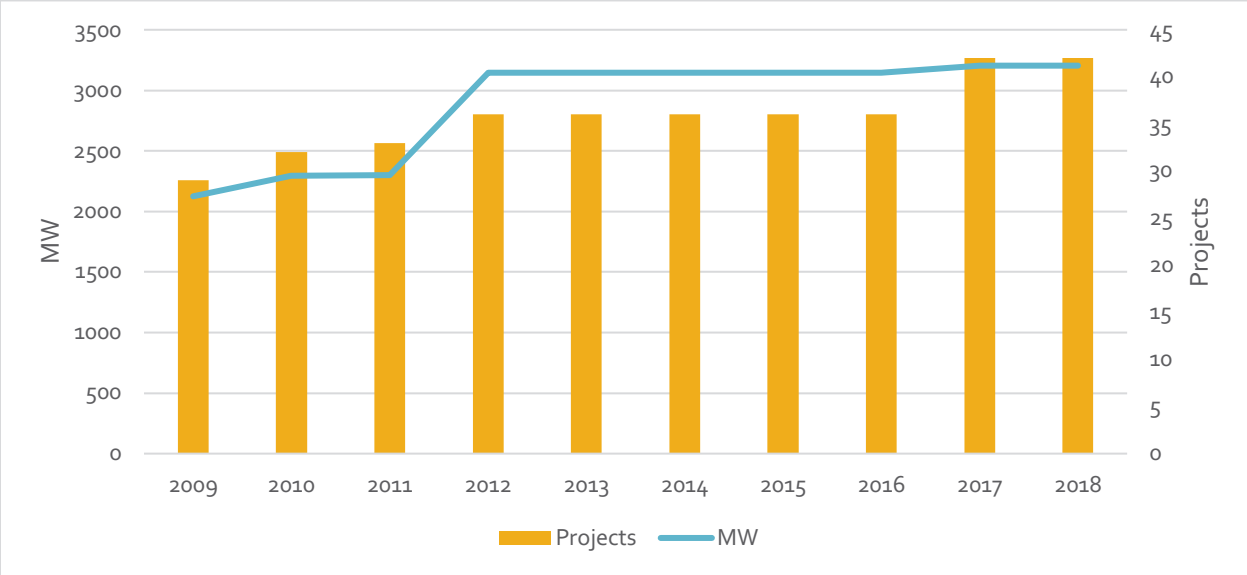


*Figure 3: Wind Energy Growth in Oregon*

To date, only six counties have windfarms and a handful of utility-scale projects are responsible for almost two-thirds of Oregon's wind generation capacity. However, it is important to note that there is a significant amount of wind development that occurs at the community-scale.

In the past two years, over 60 MWs of community-scale wind generation capacity has come online in Oregon, bringing the total amount of community-scale wind capacity in Oregon to over 145 MWs

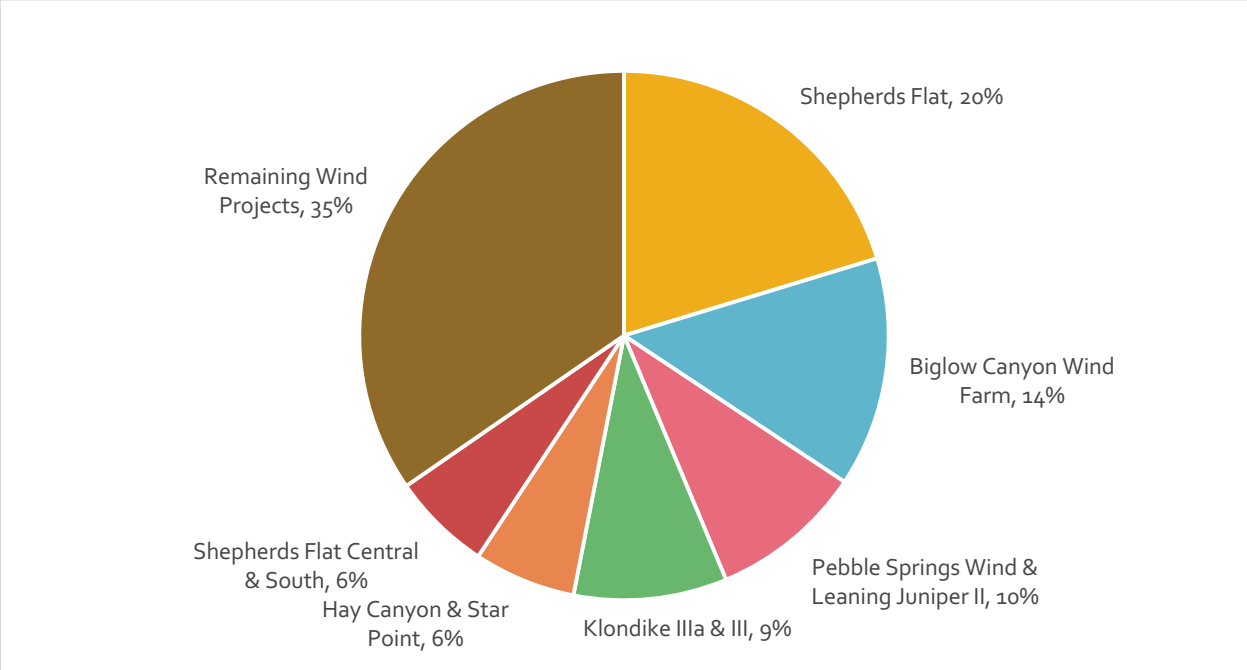


*Figure 4: Allocation of Wind Generation Capacity by Project*

### Biogas, Biomass, Geothermal, Hydro, & Solid Waste Incineration

Non-solar and -wind renewable energy facilities typically have higher capacity factors than solar and wind facilities.

| Resource | Capacity Factor |
|---|---|
| Solar Photovoltaic | 25.7% |
| Wind | 34.6% |
| Conventional Hydro | 43.1% |
| Biomass | 57.8% |
| Landfill Gas/Solid Waste Incineration | 68.0% |
| Geothermal | 74.0% |

*Figure 5: Average Capacity Factor of Renewable Facilities*[9]

This means that 1 MW of geothermal capacity will produce almost three times as much power as 1 MW of solar capacity over the course of a year.

Non-solar and -wind sources are also important because they can often provide firm power in contrast to the intermittent nature of power generated by wind and solar facilities.

Oregon has fourteen energy facilities in this category with a nameplate capacity of just over 100 MWs—legacy hydro projects were excluded from this analysis.[10] These projects are in Benton, Jackson, Jefferson, Klamath, Linn, Malheur, Marion, Morrow, and Tillamook Counties.

## B. Direct Revenue from Renewable Energy Projects in Oregon

Total direct payments to counties and taxing districts in tax year 2017–2018 totaled over $31.75 million, up from $28.50 in tax year 2014–2015—an average increase of 3.42% per tax year. In the past four years, renewable energy projects have paid over $120 million to counties and taxing districts in Oregon. For more detailed information, see the tables appended to this report.

### Distribution of Direct Public Revenue in Tax Year 2017–2018

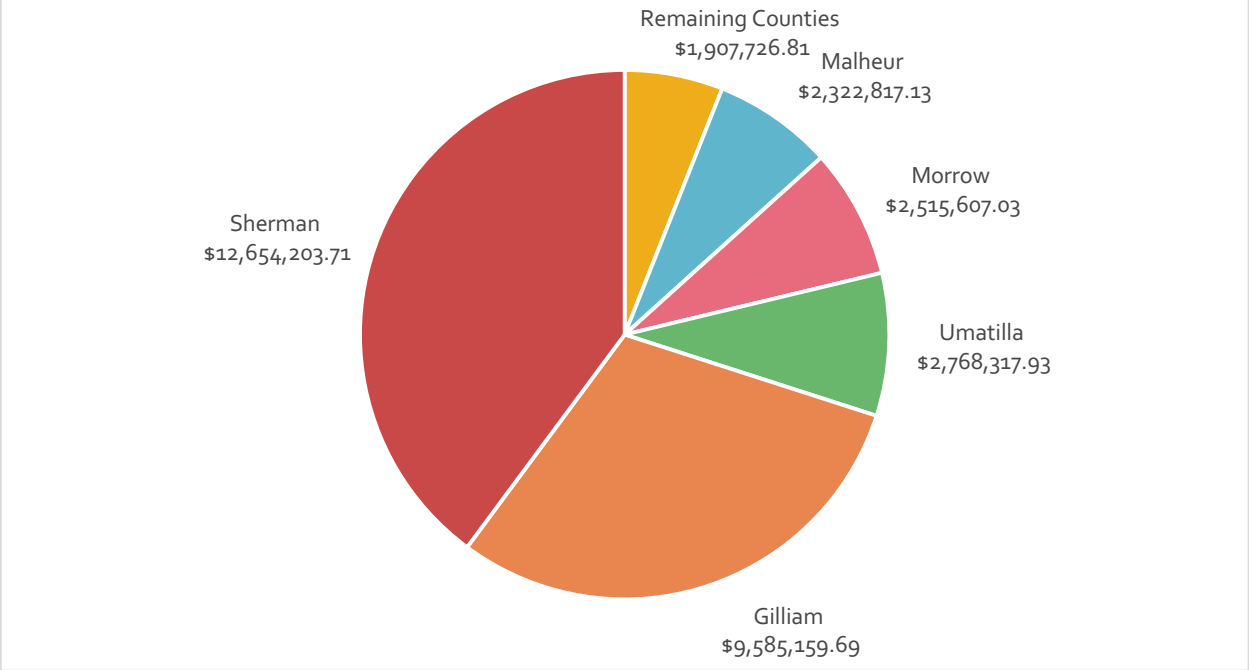


*Figure 6: Public Revenue from Renewable Energy Projects in Tax Year 2017–2018 by County*

Just as the generation capacity is not evenly distributed among renewable energy resources, direct revenue to taxing jurisdictions is not evenly distributed in Oregon. In tax year 2017–2018, only nineteen out of Oregon's thirty-six counties received property tax revenue from renewable energy projects.[11] Of those nineteen counties, five were responsible for roughly 95% of the direct revenue from renewable energy projects. This distribution is primarily driven by the outsized impact of utility-scale windfarms.

## Distribution of Community-Scale Direct Public Revenue in Tax Year 2017–2018

At the community scale (≤20 MW), the revenue, while less, is more evenly distributed among counties, with Malheur County being the only significant outlier

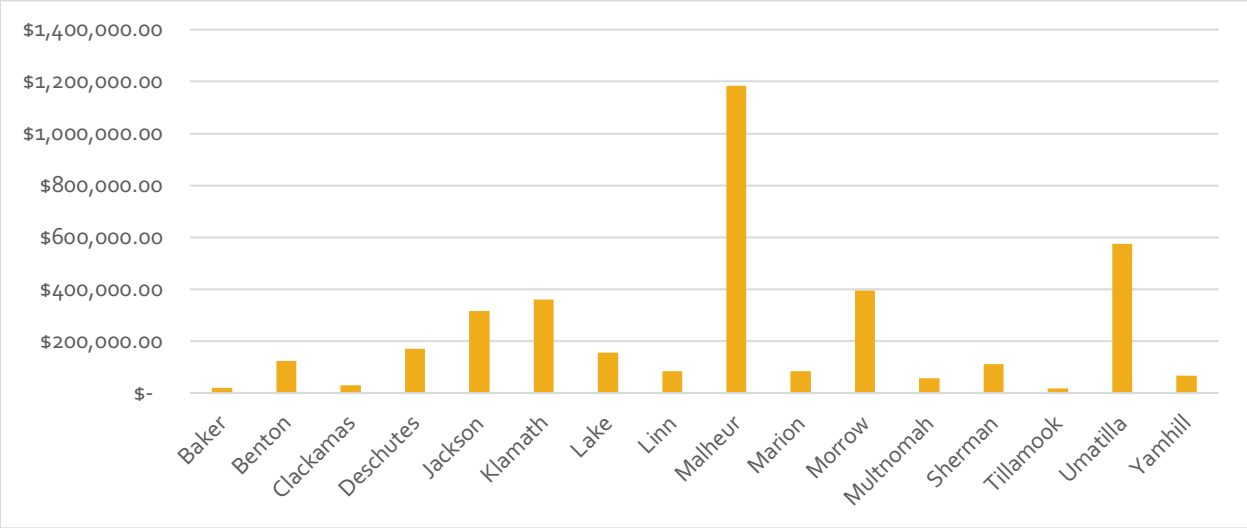


*Figure 7: Direct Public Revenue from Community-Scale Renewable Energy Projects in Tax Year 2017–2018*

## Distribution of Direct Public Revenue from Solar Projects

Direct public revenue from solar projects has increased twelve-fold in the past four years, from around $165,000 to over $2,000,000, as projects have come online and some tax abatements have expired. These numbers do not include the significant direct public revenue from the Gala Solar project that begins in tax year 2018–2019.

In tax year 2017–2018, eight counties received direct public revenue from solar facilities, this will increase to as many as thirteen counties in tax year 2018–2018 as projects have come online in Jackson, Jefferson, Marion, Polk, and Umatilla Counties.

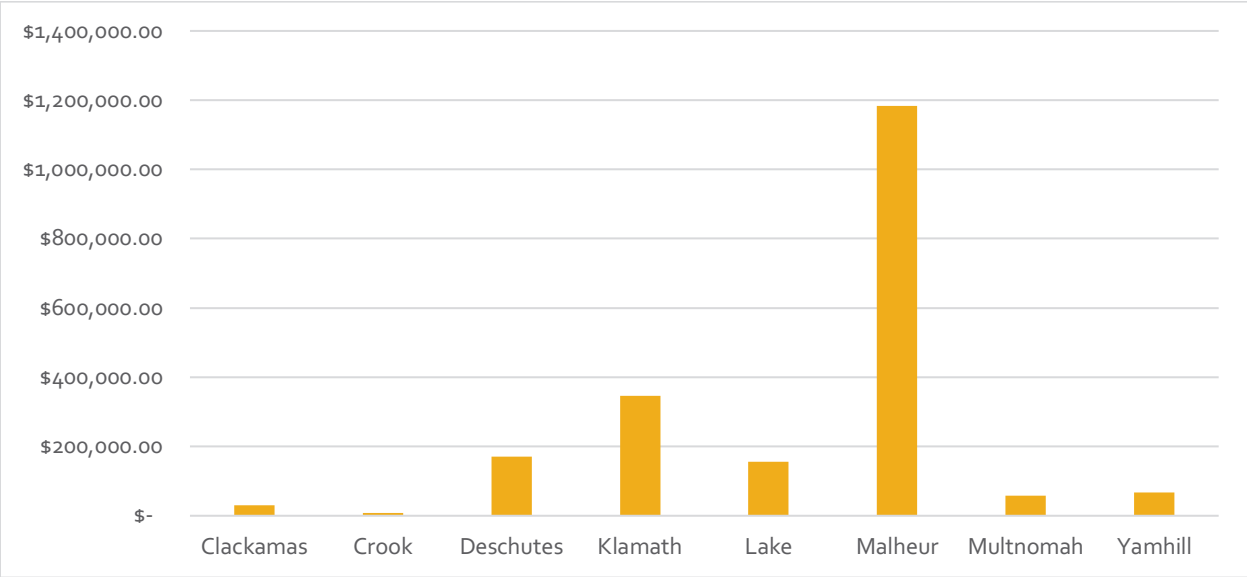


*Figure 8: Direct Public Revenue from Solar Energy Projects in Tax Year 2017–2018 by County*

# II. Property Taxes & Renewable Energy in Oregon

There are several ways in which property assessment and taxation in Oregon is structured to support renewable energy projects. Under Oregon law taxing districts—counties, incorporated cities, and certain public organizations—are authorized to levy property taxes to defray expenses, subject to limits imposed by the Oregon constitution and statutory provisions.[12] Renewable energy projects in Oregon receive both assessment and tax abatement benefits under state law.

## A. Central Assessment of Property Value

Under state law, county assessors typically assess property values.[13] However, most renewable energy projects are assessed by the Oregon Department of Revenue instead of by county assessors.[14] Central assessment of utility properties ensures that those properties, which often span multiple counties, are assessed uniformly and fairly throughout the state.[15] Community-scale biomass energy projects do not receive this benefit and are assessed by county assessors.[16]

## B. Tax Abatement Programs

There are three primary property tax abatement programs offered by the state that renewable energy projects leverage: the Rural Renewable Energy Development Zone (***RREDZ***), the Strategic Investment Program (***SIP***), and payments in lieu of taxes (***PiLoT***). One important reason that these are the preferred tax abatement programs is that they either do not have eligibility criteria tied to employment metrics or such requirements may be waived in certain circumstances.[17] Most renewable energy projects do not generate enough long-term jobs to qualify property tax abatement programs with employment criteria. Counties and cities play an active role in these programs and no abatement can be issued without the approval of the county (and city) in which the project is located.

### Rural Renewable Energy Development Zones

Historically, the RREDZ tax abatement program has been the primary property tax abatement claimed by renewable energy projects that were ineligible for the SIP, discussed below. The RREDZ abatement provides an abatement over twenty years equal to roughly 15% to 25% of property taxes that would otherwise have been levied. With the introduction of the solar PiLoT, discussed below, solar projects will likely transition away from use of the RREDZ abatement. Eligible non-solar projects that are too small to qualify for the SIP will likely continue to use the RREDZ program.

Under the RREDZ program, counties, cities in rural areas, or contiguous counties may apply to the Oregon Business Development Department for the Department to designate all the applicant's rural area as a rural renewable energy development zone.[18] Once a development zone has been established, businesses may apply for a RREDZ property tax exemption by filing an application with the zone's sponsor.[19] While the RREDZ program does have an eligibility requirement tied to employment,[20] that requirement may be waived with the consent of the zone's sponsor if the developer invests at least $5 million in the project.[21] If the project meets the eligibility requirements for the zone, the tax abatement must be granted.[22] The abatement granted by RREDZ program exempts eligible renewable energy projects from ad valorem taxes for the first three years of operation.[23] With the consent of the zone's sponsor, the abatement may be extended for up to two additional years.[24] This program remains a fallback option for solar projects in RREDZs, should the situs county refuse to enter into a PiLoT agreement.[25]

### Strategic Investment Program

The SIP is a state-administered program geared towards projects requiring significant capital investment that allows businesses—with local government approval—to exempt a portion of that investment from property taxes for fifteen years. The SIP has, in the renewable energy sector, historically been used by utility-scale windfarms because those projects have been the only renewable energy projects requiring a large enough capital investment to qualify for the SIP.[26]

If a project's capital cost meets or exceeds $25 million in a rural area or $100 million in a nonrural area,[27] the project's developer may ask the local county to hold a public hearing to consider the developer's request for an abatement under the SIP.[28] If the county agrees to enter into a SIP agreement with the developer, the agreement is sent on to the Oregon Business Development Commission. If the Commission determines that a project is eligible for the SIP, the project receives a fifteen-year tax abatement.[29] The amount of the abatement varies depending on the location of the project, the size of the monetary investment, and decreases by 3% each year until the abatement sunsets after fifteen years.

In nonrural areas, the portion of the project's real market value that exceeds $100 million is exempt from ad valorem taxation.[30] In rural areas, the SIP contains three different abatement brackets shown in the table below.

| Project Cost | Amount of Investment Subject to Ad Valorem Taxation |
|---|---|
| ≤ $500 million | $25 million |
| > $500 million ≤ $1 billion | $50 million |
| > $ 1 billion | $100 million |

*Figure 9: SIP Abatement Brackets in Rural Areas[31]*

Instead of paying taxes on the excess value, projects pay a community service fee equal to 25% of avoided property taxes, but no more than $2.5 million,[32] as well as any other payments negotiated between the developer and county.[33] These fees and other payments are distributed by the county pursuant to an agreement with the local taxing districts.[34] The amount of savings offered by the SIP depends on the agreement negotiated between the project developer and local county.

## Fee in Lieu of Property Taxes for Qualifying Solar Projects

This abatement program is the newest. In 2015, the Oregon legislature passed an act temporarily authorizing counties and incorporated cities to enter into agreements with the owners of solar projects to pay a fee in lieu of property taxes for tax years that begin on or after July 1, 2016.[35] Under these agreements, which can last up to twenty years,[36] solar projects pay a flat fee of $7,000 per megawatt (*MW*) of nameplate capacity instead of ad valorem property taxes.[37] The authority to enter into these agreements expires on January 2, 2022, but agreements that have entered into force before that date remain valid.[38] Unlike the SIP, there are no qualification criteria tied to the size of the capital investment. However, projects that have taken advantage of a RREDZ or the SIP may not utilize the PiLoT program.[39] The PiLoT program is the only property tax abatement program available to community-scale solar projects under $5 million.

This program offers significant property tax savings for solar projects. In 2017, solar projects paying ad valorem property taxes paid an average tax rate of 1.17%, or $19,300 per MW of nameplate capacity. Shifting to the $7,000/MW PiLoT would cut the tax bill for these solar farms by almost two-thirds, resulting in an average effective tax rate of 0.43%. Over twenty years, these savings could total almost $250,000 in property tax savings per MW of nameplate capacity.

# III. Federal Support of Renewable Energy Development

This Part discusses the following three ways in which the federal government enables and supports renewable energy development in Oregon:[40] 1) The Public Utility Regulatory Policies Act of 1978 (***PURPA***),[41] 2) the commercial energy investment tax credit (***ITC***),[42] and 3) the energy production tax credit (***PTC***).[43] This Part is included to provide background information on the federal laws that shape and drive renewable energy development in the country. In particular, the sunsetting ITC and PTC will dictate the pace of renewable energy development over the next few years in Oregon as developers seek to ensure that their projects qualify for the maximum amount of available federal tax credits.

Experience has shown that PURPA, the ITC, and the PTC are important drivers of renewable energy development. In past years, the uncertainty regarding these tax credits, the stagnation of renewable portfolio standards in the region, and the expiation of Oregon's Business Energy Tax Credit (***BETC***) contributed to several years of minimal renewable energy development in Oregon between 2012 and 2016.

## A. Public Utility Regulatory Policies Act

The federal government enacted PURPA in the wake of the 1970s energy crises to support independent electricity production from qualifying facilities (***QFs***), which include renewable energy generating facilities with capacities up to 80 MW.[44] Under PURPA, electric utilities (including cooperatives and people's utility districts, but not the Bonneville Power Administration) are required to 1) purchase electricity from QFs, 2) connect the QFs to the electricity grid, and 3) compensate QFs for the electricity they produce at rates that do not exceed the utilities' own avoided costs.[45] PURPA directs electric utilities to enter into contracts to purchase output from qualifying solar energy producers at no more than the utilities' avoided cost rates—what the utility would otherwise pay to produce their own power or obtain power from another source.[46]

States have the primary responsibility for implementing PURPA, in accordance with federal statutes and regulations.[47] State regulations may influence the size of renewable energy projects by making it more administratively burdensome for larger projects to sell power to regulated utilities under PURPA. Typically, projects under a certain size can take advantage of standard contracts and avoided cost rates. Standard offer contracts significantly reduce transaction costs for smaller QFs and enable QFs to obtain adequate financing for their projects. Where this threshold is set can have a large effect on renewable energy development.

PURPA's mandate is the key driver behind community-scale renewable energy projects in Oregon. Through 2018, almost 90% of community-scaled projects are PURPA projects with average nameplate capacity is 8.1 MW.

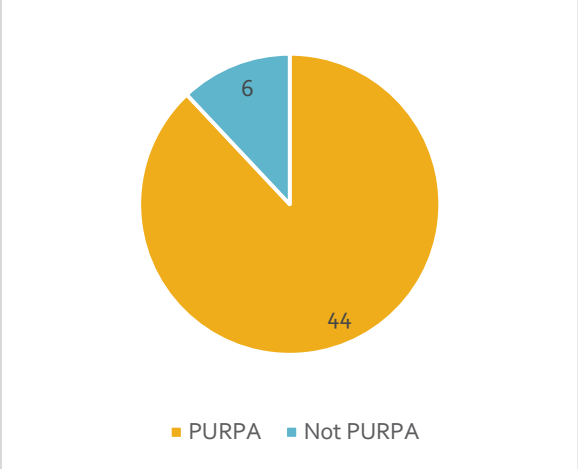


*Figure 10: Community Scale Projects & PURPA in Oregon through 2017.*

This trend shows no sign of abating. Since 2014, over 95% of community-scale projects in Oregon have been PURPA projects. The reason that some community-scale projects do not follow the PURPA route is that they are utility owned or developed and thus do not need to avail themselves of PURPA to access the grid or sell energy.[48]

## B. Federal Income Tax Credits

Federal tax credits have played a pivotal role in supporting renewable energy development. However, Congress has displayed only wavering support for these incentives and has frequently

allowed them to expire, leading to regular cycles of boom and bust in the renewable energy industry. Before 2013, projects had to enter service by the statutory deadline to be eligible for tax credits.[49] This was especially problematic for renewable projects that often take longer to develop than the brief and often retroactive tax credits authorized by Congress.[50] The uncertainty associated with the tax credits chilled the development of renewable energy projects.

Congress attempted to smooth out the boom and bust cycles when the ITC and PTC were extended in 2013. In the American Tax Payer Relief Act of 2012,[51] Congress changed the language governing when projects are eligible for the tax credits. Instead of requiring projects to be placed into service before the statutory deadline, eligible projects must now begin construction by the statutory deadline.[52] However, Congress did not define what it means to begin construction. The Internal Revenue Service (IRS) has taken the position that to begin construction means that physical work of a significant nature has commenced or more than 5% of the total project costs have been incurred.[53] The IRS's interpretation of the new eligibility threshold, as well as increasing cost competitiveness, should mitigate the precipitous drop-off in renewable energy development that occurred in the past as the tax credit deadlines approach.

## Investment Tax Credit

The ITC currently provides a tax credit equal to 30% of eligible costs (generally equipment and installation costs) of solar and fuel cell projects,[54] the tax credit for geothermal projects is 10% of eligible costs.[55] Congress permanently extended the ITC in 2018 but included a gradual reduction in the value of the ITC.[56]

Regardless of when projects begin construction, they must be placed into service before 2024 to be eligible for a tax credit greater than 10% of eligible costs.[57] Unless Congress extends the ITC at 30%, there will likely be some amount of slowdown in the commercial solar industry as the deadline passes, but the decrease in development should be more orderly than past ITC deadlines due to the gradual reduction in ITC value and more lenient temporal eligibility criteria.

| Year Construction Begins | Value of Solar ITC |
|---|---|
| 2019 | 30% |
| 2020 | 26% |
| 2021 | 22% |
| 2022 and later | 10% |

*Figure 11: Solar ITC Phasedown*

## Production Tax Credit

The PTC provides a tax credit tied to the amount of energy generated from renewable energy projects in the first ten years of operation.[58] The PTC increases with inflation and currently pays $0.023 per kWh sold.[59] In 2015, Congress extended the PTC for wind facilities and included a gradual phase reduction in the value of the PTC.[60]

Wind projects that begin construction after 2019 are not eligible for the PTC.[61] However, unlike the ITC, the PTC has no date by which the projects must enter service, the PTC only requires that construction begins, as defined by the IRS, within an eligible year.

Congress has shown little appetite for extending the PTC. The phase down of the PTC is already well under way. New renewable energy projects from other resources, such as biomass, geothermal, solar, municipal solid waste, hydro, and wave are not eligible for the tax credit unless construction began in 2017 or earlier.[62] And, the tax credit for wind facilities is about to step down to 40% of its original value—before expiring entirely. There will likely be a flurry of activity through the end of 2019 as wind projects attempt to qualify for the PTC, even if the projects themselves are not placed into service for several years.

| Year Construction Begins | Decrease in PTC Value | Value of Wind PTC in 2018 |
|---|---|---|
| 2016 | N/A | 2.3¢/kWh |
| 2017 | 20% | 1.9¢/kWh |
| 2018 | 40% | 1.4¢/kWh |
| 2019 | 60% | 0.9¢/kWh |

*Figure 12: PTC Phasedown*

# IV. Conclusion

Renewable energy projects provide long-term, stable revenue for the counties and taxing districts in which they are located. However, development can only occur where there are adequate renewable sources of energy, available grid capacity, local support, and given the monopoly-nature of the utility industry, favorable policies that require or encourage utilities to buy power from renewable energy facilities on fair and reasonable terms. Counties that have aggressively supported renewable energy development in the past now find themselves receiving significant direct revenue. Sherman County's certified tax roll for the 2017–2018 tax year was just over $7 million, of which over $2.5 million came from renewable energy projects. That year, in addition to the $2.5 million in property tax payments, taxing districts in Sherman County also received $10 million in payments from renewable projects under the SIP.

Large windfarms are not the only way to generate significant revenue from renewable energy projects. Taxing districts in Malheur County received $2.3 million in property taxes from non-wind sources that are 22 MW or less.[63]

The data clearly show that renewable energy projects of all types can be sources of significant, stable, long-term revenue for counties and taxing districts in Oregon—especially in rural areas. Counties and taxing districts should fully explore the property tax implications of renewable energy projects before rejecting renewable energy development or agreeing to significant property tax abatements.

# ENDNOTES

[1] Oregon's statutes use the phrase "alternative energy system" instead of renewable energy project. Alternative energy system is defined to mean "solar, geothermal, wind, water, fuel cell or methane gas energy systems" used to provide heating, cooling, or electricity. OR. REV. STAT. § 307.175(1) (2018). For the purposes of this report, the two terms, alternative energy system and renewable energy project, are interchangeable as all the projects discussed within this report fall within the statutory definition.
[2] Net metering facilities are energy systems that are installed on the user's premises, designed to operate in parallel with an electric utility's system and offset all or part of onsite energy demands. *Id.* § 757.300(1)(d).
[3] *Id.* § 307.090(1). This provision includes the property of "cities, towns, school districts, irrigation districts, drainage districts, ports, water districts, housing authorities, public universities listed in ORS 352.002 and all other public or municipal corporations" in Oregon. *Id.*
[4] While this report focuses on taxable renewable energy projects that produce electricity, there are other types of community-scale renewable energy projects that are subject to property taxes, such as the High Desert Biomass Cooperative's biomass-fueled district heating project in Burns. *See* Randy Parks, *High Desert Biomass Cooperative Buys Heating System*, BURNS TIMES-HERALD (Nov. 8, 2017), https://btimesherald.com/2017/11/08/high-desert-biomass-cooperative-buys-heating-system.
[5] U.S. ENERGY INFO. ADMIN., *supra* note 60, at 167 tbl.6.7.B.
[6] The Oregon Public Utility Commission's qualifying facility contract dockets for Pacific Power, Portland General Electric, and Idaho Power provide a good snap shot of where potential solar development is being considered in Oregon. *In re* Idaho Power Co., No. RE 141 (Or. Pub. Util. Comm'n), https://apps.puc.state.or.us/edockets/docket.asp?DocketID=19096; *In re* PacifiCorp, No. RE 142 (Or. Pub. Util. Comm'n), https://apps.puc.state.or.us/edockets/Docket.asp?DocketID=19097; In re Portland Gen. Elec., No. RE 143 (Or. Pub. Util. Comm'n), https://apps.puc.state.or.us/edockets/Docket.asp?DocketID=19098.
[7] *Obsidian Solar Center*, OR. DEP'T OF ENERGY, https://www.oregon.gov/energy/facilities-safety/facilities/Pages/OSC.aspx (last visited Nov. 1, 2018); *Bakeoven Solar Project*, OR. DEP'T OF ENERGY, https://www.oregon.gov/energy/facilities-safety/facilities/Pages/BSP.aspx (last visited Nov. 9, 2018). There is a second proposed solar facility in Lake County that would add up to another 60 MW of solar capacity. Blue Marmot Solar Energy Facility, OR. DEP'T OF ENERGY, https://www.oregon.gov/energy/facilities-safety/facilities/Pages/BMS.aspx (last visited Nov. 1, 2018).
[8] *Energy Facility Siting: Facilities Under Review*, OR. DEP'T OF ENERGY, https://www.oregon.gov/energy/facilities-safety/facilities/Pages/default.aspx (last visited Oct. 30, 2018). There are 763 MW of solar capacity in the Energy Facility Siting Council's approval pipeline. *Id.*
[9] U.S. ENERGY INFO. ADMIN., ELECTRIC POWER MONTHLY: WITH DATA FOR AUGUST 2018, at 167 tbl.6.7.B (2018).
[10] Not all taxable non-solar or –wind renewable energy projects produce electricity. Some, such as the High Desert Biomass Cooperative's biomass-fueled district heating project in Burns, produce heat. However, because this report focuses on taxable renewable energy projects that produce electricity, these unique renewable energy projects were not included in the analysis.
[11] Currently, twenty-one counties have renewable energy projects that are subject to property taxes. Two counties had projects that did not owe taxes in tax year 2017–2018 because eligible projects claimed the RREDZ abatement for that tax year or the projects did not come online until later in 2018.
[12] *E.g.*, OR. REV. STAT. §§ 310.020 (counties), 223.866 (cities), 261.385 (people's utility districts), 264.300 (domestic water supply districts), 265.140(9) (cemetery maintenance districts), 266.420 (park and recreation districts), 267.305 (mass transit districts), 267.620 (transportation districts), 268.500 (metropolitan service district), 328.579 (schools), 371.336 (special road districts). Taxing districts are limited in the maximum amount of taxes that may be imposed due to constitutional or statutory provisions. *See, e.g.*, OR. CONST. art. XI, §§ 11, 11b. The distinction between real market value and maximum assessed value contained in article XI, section 11 of Oregon's constitution generally does not matter because renewable energy projects which are typically new construction. Taxing districts may impose additional taxes under certain conditions to meet certain bond obligations or if the local voters approve a tax increase above the standard constitutional limit. OR. CONST. art. XI, § 11(4)–(5).

[13] OR. REV. STAT. § 308.210(1).
[14] *Id.* § 308.515(1)(j)–(k).
[15] Comcast Corp. v. Dep't of Revenue, 337 P.3d 768. 772–74 (Or. 2014) (discussing Oregon's history of central assessment).
[16] *See* OR. REV. STAT. § 308.516(2)(b). There is also an exemption to central assessment for qualifying energy projects co-located with data centers. *Id.* § 308.519(1)(b).
[17] *Cf. id.* § 285C.200(1)(c) (setting forth a floor on employment requirements for the Enterprise Zone tax abatement program).
[18] Rural area is all land that "is not within the urban growth boundary of a city with a population of 30,000 or more." *Id.* § 285C.350(3).
[19] *Id.* § 285C.356.
[20] *Id.* § 285C.362(1)(b).
[21] *Id.* § 285C.362(2).
[22] *See id.* §§ 285C.140, .356(3).
[23] *Id.* § 285C.362(3)(a).
[24] *Id.* § 285C.362(5)(a).
[25] *See id.* §§ 285C.140(9), 356(1). (authorizing business to appeal a failure or refusal to authorize a business's application for an abatement under the RRDEZ to the Oregon Tax Court).
[26] Until the Gala Solar Farm in Crook County (56 MW), no solar farm in Oregon exceeded 13 MWs of nameplate capacity.
[27] OR. REV. STAT. § 285C.606(1)(c). For more information on the SIP, see Strategic Investment Program, BUS. OR., https://www.oregon4biz.com/Oregon-Business/Tax-Incentives/SIP/ (last visited Oct. 5, 2018), and the links contained therein.
[28] OR. REV. STAT. § 285C.609(4).
[29] *Id.* § 307.123(2)(c). The tax abatement begins in the tax year after the earliest of the project generating electricity for sale or one year from when construction commences. *Id.* § 307.123
[30] *Id.* § 307.123(2)(a)(A), (c).
[31] *Id.* § 307.123(2)(a)(B), (c). From 2003–2017 there was only a single bracket tax abatement bracket which exempted the real market value of projects above $25 million from ad valorem taxation in rural areas. 2003 Or. Laws. ch. 662, sec. 12, amended by 2017 Or. Laws. ch. 490, sec. 1. In 2017, the legislature amended the SIP, changing how the SIP applies in rural areas. 2017 Or. Laws. ch. 490, sec. 1.
[32] OR. REV. STAT. § 285C.609(4)(b)(B).
[33] *Id.* § 285C.609(5).
[34] *Id.* § 285C.609(6)(a). If the local taxing districts and county cannot reach an agreement on how to distribute the payments, the Oregon Business Development Commission will determine an appropriate allocation formula. *Id.* § 285C.609(6)(b).
[35] 2015 Or. Laws. ch. 571, secs. 1–2.
[36] *Id.* sec. 1, § 1(a).
[37] *Id.* sec. 1, § 2.
[38] *Id.*
[39] *Id.* sec. 1, § 7.
[40] The federal government provides several other incentives for renewable energy projects that are not discussed in this report, such as accelerated depreciation schedules—also known as the Modified Accelerated Cost Recovery System (MACRS). *See, e.g.*, INTERNAL REVENUE SERV., PUB. 946, HOW TO DEPRECIATE PROPERTY (2018), https://www.irs.gov/pub/irs-pdf/p946.pdf.
[41] Pub. L. No. 95-617, 92 Stat. 3117 (codified as amended in scattered sections of U.S.C.).
[42] I.R.C. § 48 (2018).
[43] *Id.* § 45.
[44] PURPA, 16 U.S.C. § 796(17)(A); 18 C.F.R. § 292.204 (2018).
[45] 16 U.S.C. §§ 824a-3(a), 824i; 18 C.F.R. §§ 292.303, .304.
[46] 18 C.F.R. § 292.101(b)(6).
[47] 16 U.S.C. §§ 824a-3(f).

[48] Examples include the Old Mill Solar project in Klamath County and the Bellevue Solar Project in Yamhill County.
[49] *E.g.*, I.R.C. § 45(d)(1) (2006) ("In the case of a facility using wind to produce electricity, the term 'qualified facility' means any facility owned by the tax payer which is originally placed in service after December 31, 1993, and before January 1, 2009"); id. § 48(a)(1)–(2) ("[The tax credit for solar energy is 30% but only for projects placed in service] before January 1, 2009.").
[50] *See, e.g.*, Job Creation and Worker Assistance Act of 2002, Pub. L. No. 107-147, § 603, 116 Stat. 21, 59 (extending PTC for almost two years); Working Families Tax Relief Act of 2004, Pub. L. No. 108-311, § 313, 118 Stat. 1166, 1181 (extending the PTC for two years, eight months of which was a retroactive extension); Energy Tax Incentives Act of 2005, Pub. L. No. 109-58, § 1301, 119 Stat 986, 986–87 (extending the ITC and PTC for two years until the end of 2008) Tax Relief and Health Care Act of 2006, Pub. L. No. 109-432, § 201, 120 Stat. 2922, 2944 (extending the PTC for one year until the end of 2009); Energy Improvement and Extension Act of 2008, Pub. L. No. 110-343, § 101, 122 Stat. 3807, 3808 (extending the PTC for one year until the end of 2010); American Recovery and Reinvestment Tax Act of 2009, Pub. L. No. 111-5, § 1101, 123 Stat. 306, 319 (extending the PTC for three years until the end of 2013).
[51] American Taxpayer Relief Act of 2012, Pub. L. No. 112-240, 127 Stat. 2313 (2013).
[52] *Id.* § 407, 117 Stat. at 2340–42 (codified at I.R.C. §§ 45(b)(5) (PTC), 48(a)(6) (ITC)).
[53] I.R.S. Notice 2013-29 (PTC); I.R.S. Notice 2018-59 (ITC).
[54] I.R.C. § 48(a)(2)–(3) (2018). Projects eligible for the PTC, such as windfarms may, under certain conditions, elect to receive the ITC instead of the PTC. Id. § 48(a)(5). However, this rarely occurs as the PTC typically provides more value in the long run.
[55] I.R.C. § 48(a)(2)(A)(ii).
[56] Bipartisan Budget Act of 2018, Pub. L. No. 115-123, § 40411, 132 Stat. 64, — (codified at I.R.C. § 48(a)(6)).
[57] I.R.C. § 48(a)(6)(B).
[58] I.R.C. § 45(a).
[59] I.R.C. § 45(a)(1), (b)(2). *Renewable Electricity Production Tax Credit (PTC)*, U.S. DEP'T OF ENERGY, https://www.energy.gov/savings/renewable-electricity-production-tax-credit-ptc (last visited Oct. 5, 2018).
[60] Consolidated Appropriations Act, 2016, Pub. L. No. 114-113, Div. P., § 301, 129 Stat. 2242, 3038 (2015). While solar projects may claim the PTC, since the credit is tied to actual energy output, the PTC is generally claimed by sources with higher capacity factors that generate more energy. Utility-scale solar electric facilities averaged 25.7% of nameplate capacity in 2017. U.S. ENERGY INFO. ADMIN., ELECTRIC POWER MONTHLY: WITH DATA FOR AUGUST 2018, at 167 tbl.6.7.B (2018). Wind facilities, the next lowest source, averaged 34.6% in the same period. Id.
[61] The ITC has a provision tying the ITC for wind facilities that elect to receive the ITC instead of the PTC to the same phase down schedule for wind facilities set forth in the PTC, eliminating the incentive for wind facilities to elect the ITC instead of the PTC because of the ITC's more distant phase down schedule. I.R.C. § 48(a)(5)(E).
[62] See I.R.C. § 45(d)(2)–(11).
[63] Malheur County has six solar farms with a combined nameplate capacity of 50 MW and one 22 MW geothermal electric generating plant, none of which received any tax abatement benefits in tax year 2017–2018.

# Appendix

# Data by County

| Project Name | Resource | Capacity in MW | Approximate Tax Year of Initial Operation | 2018 Assessed Value | 2017 Assessed Value | Total Direct Payments 2017 | 2017 Payments/ Assessed Value | 2016 Assessed Value | Total Direct Payments 2016 | 2016 Payments/ Assessed Value |
|---|---|---|---|---|---|---|---|---|---|---|
| **Baker** | | | | | | | | | | |
| Benson Creek, Durbin Creek, Jett Creek, Prospector, & Willow Spring Windfarms | Wind | 50 | 2017 | $98,853,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Lime Wind | Wind | 3 | 2011 | $2,000,000 | $2,078,000 | $20,272 | 0.98% | $2,330,000 | $22,307 | 0.96% |
| **Benton** | | | | | | | | | | |
| Coffin Butte Landfill Gas Generation Project | Biomass | 5.66 | 1995 | $10,773,200 | $10,459,100 | $123,811 | 1.18% | $10,146,000 | $122,413 | 1.21% |
| **Clackamas** | | | | | | | | | | |
| Colton | Solar | 2.2 | 2018 | $2,600,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Baldock Solar Highway Project | Solar | 1.75 | 2012 | $1,660,000 | $1,600,000 | $20,244 | 1.27% | $2,100,000 | $26,412 | 1.26% |
| Lever Solar Farm | Solar | 0.5 | 2011 | $800,000 | $776,700 | $10,214 | 1.32% | $754,100 | $9,860 | 1.31% |
| **Crook** | | | | | | | | | | |
| Gala Solar | Solar | 56 | 2017 | $83,360,000 | $622,000 | $7,556 | 1.21% | N/A | N/A | N/A |
| **Deschutes** | | | | | | | | | | |
| Bear Creek Solar Center | Solar | 10 | 2018 | $4,370,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Tumbleweed Solar | Solar | 9.9 | 2017 | $13,009,100 | $2,187,000 | $31,269 | 1.43% | N/A | N/A | N/A |
| Collier Solar | Solar | 10 | 2016 | $15,700,000 | N/A | $69,500 | N/A | N/A | N/A | N/A |
| Neff Solar | Solar | 10 | 2016 | $16,600,000 | N/A | $69,500 | N/A | N/A | N/A | N/A |
| **Gilliam** | | | | | | | | | | |
| Shepherds Flat | Wind | 650 | 2012 | $807,270,000 | $675,168,000 | $4,094,033 | 0.61% | $721,917,000 | $5,185,980 | 0.72% |
| Pebble Springs Wind and Leaning Juniper II | Wind | 300.3 | 2009 | $260,044,000 | $258,800,000 | $2,369,663 | 0.92% | $254,416,000 | $2,360,282 | 0.93% |
| Wheat Field Wind Farm | Wind | 96.6 | 2009 | $74,998,000 | $69,894,000 | $748,698 | 1.07% | $77,339,000 | $823,010 | 1.06% |
| Willow Creek | Wind | 27 | 2009 | $27,045,000 | $27,710,000 | $163,834 | 0.59% | $29,050,000 | $167,001 | 0.57% |
| Rattlesnake Rd Wind Phase I | Wind | 102.9 | 2008 | $71,046,000 | $75,618,000 | $815,097 | 1.08% | $84,711,000 | $901,460 | 1.06% |

| Project Name | Resource | Capacity in MW | Approximate Tax Year of Initial Operation | 2018 Assessed Value | 2017 Assessed Value | Total Direct Payments 2017 | 2017 Payments/ Assessed Value | 2016 Assessed Value | Total Direct Payments 2016 | 2016 Payments/ Assessed Value |
|---|---|---|---|---|---|---|---|---|---|---|
| Leaning Juniper | Wind | 100.5 | 2006 | $99,257,000 | $102,187,000 | $1,085,440 | 1.06% | $99,007,000 | $1,053,592 | 1.06% |
| Condon Phase II | Wind | 25.2 | 2003 | $15,300,000 | $13,515,000 | $157,279 | 1.16% | $13,260,000 | $154,594 | 1.17% |
| Condon Phase I | Wind | 24.6 | 2002 | $14,700,000 | $12,985,000 | $151,111 | 1.16% | $12,740,000 | $303,126 | 2.38% |
| **JACKSON** | | | | | | | | | | |
| Eagle Point | Solar | 9.9 | 2018 | $15,300,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Dry Creek | Biogas | 2.3 | 2008 | Data unavailable | | | | | | |
| Biomass One | Biomass | 30 | 1980 | $22,138,000 | $20,280,000 | $315,636 | 1.56% | $16,217,000 | $249,853 | 1.54% |
| **JEFFERSON** | | | | | | | | | | |
| Adams Solar Center | Solar | 10 | 2018 | $2,520,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Elbe Solar Center | Solar | 10 | 2018 | $2,400,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| 45 Mile Hydroelectric Project | Hydro | 2.999 | 2016 | $13,761,000 | Data unavailable | | | | | |
| **KLAMATH** | | | | | | | | | | |
| Bly Solar Center | Solar | 8.5 | 2018 | $4,370,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Ewauna Solar 2 | Solar | 2.9 | 2018 | $4,850,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Woodline Solar | Solar | 8 | 2018 | $14,000,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Chiloquin Solar | Solar | 9.9 | 2017 | $12,445,800 | $2,154,000 | $19,864 | 0.92% | N/A | N/A | N/A |
| Turkey Hill Solar | Solar | 13 | 2017 | $18,000,000 | $18,000,000 | $91,000 | 0.51% | N/A | N/A | N/A |
| Merrill Solar | Solar | 13 | 2017 | $11,650,000 | $11,650,000 | $91,000 | 0.78% | N/A | N/A | N/A |
| Dairy Solar | Solar | 13 | 2017 | $14,100,000 | $14,100,000 | $91,000 | 0.65% | N/A | N/A | N/A |
| Ewauna Solar 1 | Solar | 0.83 | 2016 | $1,220,000 | $1,188,000 | $5,810 | 0.49% | N/A | N/A | N/A |
| Old Mill Solar | Solar | 6.8 | 2016 | $8,461,900 | $8,192,000 | $47,600 | 0.58% | N/A | N/A | N/A |
| C-DROP Hydro Plant | Hydro | 1.1 | 2012 | $576,000 | $600,000 | $6,782 | 1.13% | $550,000 | $6,231 | 1.13% |
| North Fork Sprague River (FERC P-6552) | Hydro | 1.23 | 1985 | $835,700 | $811,400 | $6,603 | 0.81% | $787,800 | $6,430 | 0.82% |
| **LAKE** | | | | | | | | | | |
| Lakeview Solar | Solar | 13 | 2017 | $17,250,000 | N/A | $70,000 | 0.41% | N/A | N/A | N/A |
| B.C. Solar | Solar | 8 | 2016 | $12,800,000 | $14,749,500 | Data unavailable | | | | |
| Lakeview 500 | Solar | 0.495 | 2013 | $670,000 | $620,000 | $3,456 | 0.56% | $720,000 | $3,456 | 0.48% |
| Lakeview 363 | Solar | 0.333 | 2012 | $650,000 | $590,000 | $2,331 | 0.40% | $660,000 | $2,331 | 0.35% |
| Outback Solar | Solar | 5 | 2011 | $7,100,000 | $6,120,000 | $79,252 | 1.29% | $6,200,000 | $64,652 | 1.04% |
| **LINN** | | | | | | | | | | |
| Evergreen BioPower | Biomass | 10 | 2007 | N/A | $4,333,060 | $55,032 | 1.27% | $4,633,220 | $58,918 | 1.27% |
| Falls Creek Hydro (FERC P-6661) | Hydro | 4.9 | 1984 | $1,973,400 | $2,528,700 | $28,138 | 1.11% | $2,750,500 | $30,682 | 1.12% |

| Project Name | Resource | Capacity in MW | Approximate Tax Year of Initial Operation | 2018 Assessed Value | 2017 Assessed Value | Total Direct Payments 2017 | 2017 Payments/ Assessed Value | 2016 Assessed Value | Total Direct Payments 2016 | 2016 Payments/ Assessed Value |
|---|---|---|---|---|---|---|---|---|---|---|
| **MALHEUR** | | | | | | | | | | |
| Hyline Solar Center | Solar | 9 | 2017 | $17,324,000 | $18,395,000 | $225,782 | 1.23% | N/A | N/A | N/A |
| Thunderegg Solar Center | Solar | 10 | 2017 | $18,823,000 | $19,987,000 | $293,912 | 1.47% | N/A | N/A | N/A |
| Open Range Solar Center | Solar | 10 | 2017 | $16,756,000 | $17,792,000 | $253,406 | 1.42% | N/A | N/A | N/A |
| Grove, Vale Air, & Railroad Solar Centers | Solar | 21 | 2017 | $39,097,000 | $41,526,000 | $410,791 | 0.99% | N/A | N/A | N/A |
| Neal Hot Springs Phase 1 | Geothermal | 22 | 2012 | $112,929,900 | $108,812,000 | $1,138,924 | 1.05% | $105,124,000 | $1,056,138 | 1.00% |
| **MARION** | | | | | | | | | | |
| Sheep Solar | Solar | 2.2 | 2018 | $3,100,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Silverton Solar | Solar | 2.2 | 2018 | $3,100,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Gervais | Solar | 2.2 | 2018 | $3,000,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Oak Lea Dairy | Biogas | 0.19 | 2011 | N/A | $1,212,580 | $13,994 | 1.15% | $1,306,660 | $15,043 | 1.15% |
| Covanta Marion | Solid Waste Incineration | 13.1 | 1987 | N/A | $6,165,850 | $70,261 | 1.14% | $5,221,200 | $59,564 | 1.14% |
| **MORROW** | | | | | | | | | | |
| Shepherds Flat Central and South | Wind | 195 | 2012 | $238,802,000 | $203,532,000 | $1,795,689 | 0.88% | $214,516,000 | $1,818,783 | 0.77% |
| Four Mile Canyon, Pacific Canyon, Sand Ranch, & Wagon Trail | Wind | 31.45 | 2009 | $31,818,000 | $27,852,000 | $243,432 | 0.87% | $27,046,000 | $246,926 | 0.78% |
| Threemile Canyon Wind | Wind | 9.9 | 2009 | $8,503,000 | $7,658,000 | $101,522 | 1.33% | $7,819,000 | $97,773 | 1.25% |
| Willow Creek | Wind | 45 | 2009 | $45,075,000 | $46,180,000 | $326,114 | 0.71% | $48,420,000 | $321,074 | 0.59% |
| Finley Bioenergy | Biogas | 4.8 | 2002 | N/A | $3,730,280 | $48,847 | 1.31% | $4,174,760 | $51,526 | 1.23% |
| **MULTNOMAH** | | | | | | | | | | |
| Prologis Projects/Sunway | Solar | 3.5 | 2008 | Data unavailable | | | | | | |
| **POLK** | | | | | | | | | | |
| Norwest Energy 14 | Solar | 2.2 | 2018 | $3,200,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Valley Creek Road | Solar | 2.2 | 2018 | $3,240,000.00 | N/A | N/A | N/A | N/A | N/A | N/A |
| Steel Bridge Solar | Solar | 2.4 | 2016 | $2,900,000 | $4,700,000 | $0 | N/A | $7,463,000 | $0 | N/A |

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|---|---|---|---|---|---|---|---|---|---|---|
| **SHERMAN** | | | | | | | | | | |
| PáTu Wind Farm | Wind | 9 | 2010 | $7,702,000 | $7,382,000 | $110,730 | 1.50% | $7,661,000 | $116,788 | 1.52% |
| Hay Canyon & Star Point | Wind | 199.5 | 2009 | $154,310,000 | $157,814,000 | $1,737,419 | 1.10% | $150,175,000 | $1,737,419 | 1.16% |
| Biglow Canyon Wind Farm | Wind | 449.7 | 2008 | $600,865,000 | $638,022,000 | $6,903,000 | 1.08% | $689,346,000 | $6,903,000 | 1.00% |
| Klondike IIIa & III | Wind | 300.1 | 2008 | $267,593,000 | $304,097,000 | $2,999,199 | 0.99% | $278,905,000 | $2,870,156 | 1.03% |
| Klondike II | Wind | 75 | 2005 | $48,252,000 | $48,500,000 | $766,425 | 1.58% | $47,736,000 | $727,711 | 1.52% |
| Klondike I | Wind | 24 | 2001 | $8,630,000 | $8,697,000 | $137,430 | 1.58% | $8,841,000 | $134,776 | 1.52% |
| **TILLAMOOK** | | | | | | | | | | |
| Farm Power Misty Meadow | Biogas | 0.75 | 2013 | N/A | $804,530 | $8,552 | 1.06% | $781,100 | $8,280 | 1.06% |
| Farm Power Misty Meadow | Biogas | 0.995 | 2013 | N/A | $898,400 | $8,857 | 0.99% | $898,400 | $8,760 | 0.98% |
| **UMATILLA** | | | | | | | | | | |
| Project Chopin | Wind | 5.1 | 2017 | $10,250,000 | $10,090,000 | $112,856 | 1.12% | N/A | N/A | N/A |
| Project Chopin | Wind | 5.1 | 2017 | $10,250,000 | $10,090,000 | $127,051 | 1.26% | N/A | N/A | N/A |
| Solwatt | Solar | 0.36 | 2011 | $900,000 | $920,000 | N/A | N/A | $1,060,000 | N/A | N/A |
| Combine Hills Phase II | Wind | 63 | 2010 | $65,100,000 | $62,800,000 | $524,024 | 0.83% | $61,500,000 | $524,433 | 0.85% |
| Vansycle II | Wind | 98.9 | 2010 | $46,729,000 | $51,445,000 | $858,571 | 1.67% | $60,301,000 | $878,811 | 1.46% |
| Big Top, Butter Creek, Four Corners, Oregon Trail, & Ward Butte | Wind | 33.1 | 2009 | $30,882,000 | $24,967,000 | $333,796 | 1.34% | $26,248,000 | $340,807 | 1.30% |
| Combine Hills | Wind | 41 | 2004 | $22,120,000 | $12,500,000 | $151,470 | 1.21% | $13,500,000 | $161,713 | 1.20% |
| State Line Wind Project | Wind | 112.8 | 2002 | $26,220,000 | $33,004,000 | $534,079 | 1.62% | $22,798,000 | $375,681 | 1.65% |
| Vansycle Windplant | Wind | 25.1 | 1999 | $9,950,000 | $10,451,000 | $126,470 | 1.21% | $11,740,000 | $154,838 | 1.32% |
| **UNION** | | | | | | | | | | |
| Elkhorn Wind Power Project | Wind | 8 | 2008 | $8,765,000 | $7,228,000 | $31,125 | 0.43% | $7,875,000 | $32,786 | 0.42% |
| Elkhorn Wind Power Project | Wind | 93 | 2008 | $100,735,000 | $83,072,000 | $384,608 | 0.46% | $91,425,000 | $305,666 | 0.33% |
| **YAMHILL** | | | | | | | | | | |
| Mill Creek Road | Solar | 2.2 | 2018 | $3,250,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Amity-Dayton | Solar | 2.2 | 2018 | 2,230,000 | N/A | N/A | N/A | N/A | N/A | N/A |

| Project Name | Resource | Capacity in MW | Approximate Tax Year of Initial Operation | 2018 Assessed Value | 2017 Assessed Value | Total Direct Payments 2017 | 2017 Payments/ Assessed Value | 2016 Assessed Value | Total Direct Payments 2016 | 2016 Payments/ Assessed Value |
|---|---|---|---|---|---|---|---|---|---|---|
| Bellevue Solar Project | Solar | 1.66 | 2011 | $1,140,000 | $3,200,000 | $38,010 | 1.19% | $3,200,000 | $38,037 | 1.19% |
| Yamhill Solar Project | Solar | 1.19 | 2011 | $780,000 | $2,400,000 | $29,003 | 1.21% | $2,400,000 | $29,334 | 1.22% |
| TOTALS | | 3611.39 | | $3,784,648,000 | $3,345,441,100 | $31,696,374 | | $3,247,769,740 | $30,568,413 | |

* The complete data set may be downloaded from the Green Energy Institute at Lewis & Clark Law School's website: https://law.lclark.edu/centers/green_energy_institute/.

# Data by Resource

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|---|---|---|---|---|---|---|---|---|---|---|
| **Biogas** | | | | | | | | | | |
| Dry Creek | Jackson | 2.3 | 2008 | N/A | $1,212,580 | Data unavailable | | | | |
| Oak Lea Dairy | Marion | 0.19 | 2011 | N/A | $3,730,280 | $13,994 | 1.15% | $1,306,660 | $15,044 | 1.15% |
| Finley Bioenergy | Morrow | 4.8 | 2002 | N/A | $804,530 | $48,848 | 1.31% | $4,174,760 | $51,527 | 1.23% |
| Farm Power Misty Meadow | Tillamook | 0.75 | 2013 | N/A | $898,400 | $8,552 | 1.06% | $781,100 | $8,281 | 1.06% |
| Farm Power Misty Meadow | Tillamook | 0.995 | 2013 | N/A | 1212580 | $8,858 | 0.99% | $898,400 | $8,761 | 0.98% |
| **Biomass** | | | | | | | | | | |
| Coffin Butte Landfill Gas Generation Project | Benton | 5.66 | 1995 | $10,773,200 | $10,459,100 | $123,811 | 1.18% | $10,146,000 | $122,414 | 1.21% |
| Biomass One | Jackson | 30 | 1980 | $22,138,000 | $20,280,000 | $315,637 | 1.56% | $16,217,000 | $249,854 | 1.54% |
| Evergreen BioPower | Linn | 10 | 2007 | N/A | $4,333,060 | $55,033 | 1.27% | $4,633,220 | $58,919 | 1.27% |
| **Geothermal** | | | | | | | | | | |
| Neal Hot Springs Phase 1 | Malheur | 22 | 2012 | $112,929,900 | $108,812,000 | $1,138,924 | 1.05% | $105,124,000 | $1,056,139 | 1.00% |
| **Hydro** | | | | | | | | | | |
| 45 Mile Hydroelectric Project | Jefferson | 2.999 | 2016 | $260,044,000 | Data unavailable | | | | | |
| C-DROP Hydro Plant | Klamath | 1.1 | 2012 | $576,000 | $600,000 | $6,783 | 1.13% | $550,000 | $6,231 | 1.13% |
| North Fork Sprague River (FERC P-6552) | Klamath | 1.23 | 1985 | $835,700 | $811,400 | $6,603 | 0.81% | $787,800 | $6,430 | 0.82% |
| Falls Creek Hydro (FERC P-6661) | Linn | 4.9 | 1984 | $1,973,400 | $2,528,700 | $28,138 | 1.11% | $2,750,500 | $30,683 | 1.12% |
| **Solar** | | | | | | | | | | |
| Colton | Clackamas | 2.2 | 2018 | $2,600,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Baldock Solar Highway Project | Clackamas | 1.75 | 2012 | $1,660,000 | $1,600,000 | $20,244 | 1.27% | $2,100,000 | $26,412 | 1.26% |
| Lever Solar Farm | Clackamas | 0.5 | 2011 | $800,000 | $776,700 | $10,214 | 1.32% | $754,100 | $9,860 | 1.31% |
| Gala Solar | Crook | 56 | 2017 | $83,360,000 | $622,000 | $7,556 | 1.21% | N/A | N/A | N/A |

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|---|---|---|---|---|---|---|---|---|---|---|
| Bear Creek Solar Center | Deschutes | 10 | 2018 | $4,370,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Tumbleweed Solar | Deschutes | 9.9 | 2017 | $13,009,100 | $2,187,000 | $31,270 | 1.43% | N/A | N/A | N/A |
| Collier Solar | Deschutes | 10 | 2016 | $15,700,000 | N/A | $69,500 | N/A | N/A | N/A | N/A |
| Neff Solar | Deschutes | 10 | 2016 | $16,600,000 | N/A | $69,500 | N/A | N/A | N/A | N/A |
| Eagle Point | Jackson | 9.9 | 2018 | $15,300,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Adams Solar Center | Jefferson | 10 | 2018 | $2,520,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Elbe Solar Center | Jefferson | 10 | 2018 | $2,400,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Bly Solar Center | Klamath | 8.5 | 2018 | $4,370,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Ewauna Solar 2 | Klamath | 2.9 | 2018 | $4,850,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Woodline Solar | Klamath | 8 | 2018 | $14,000,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Chiloquin Solar | Klamath | 9.9 | 2017 | $12,445,800 | $2,154,000 | $19,864 | 0.92% | N/A | N/A | N/A |
| Turkey Hill Solar | Klamath | 13 | 2017 | $18,000,000 | $18,000,000 | $91,000 | 0.51% | N/A | N/A | N/A |
| Merrill Solar | Klamath | 13 | 2017 | $11,650,000 | $11,650,000 | $91,000 | 0.78% | N/A | N/A | N/A |
| Dairy Solar | Klamath | 13 | 2017 | $14,100,000 | $14,100,000 | $91,000 | 0.65% | N/A | N/A | N/A |
| Ewauna Solar 1 | Klamath | 0.83 | 2016 | $1,220,000 | $1,188,000 | $5,810 | 0.49% | N/A | N/A | N/A |
| Old Mill Solar | Klamath | 6.8 | 2016 | $8,461,900 | $8,192,000 | $47,600 | 0.58% | N/A | N/A | N/A |
| Lakeview Solar | Lake | 13 | 2017 | $17,250,000 | N/A | $70,000 | N/A | N/A | N/A | N/A |
| B.C. Solar | Lake | 8 | 2016 | $12,800,000 | $14,749,500 | Data unavailable | | | | |
| Lakeview 500 | Lake | 0.495 | 2013 | $670,000 | $620,000 | $3,456 | 0.56% | $720,000 | $3,456 | 0.48% |
| Lakeview 363 | Lake | 0.333 | 2012 | $650,000 | $590,000 | $2,331 | 0.40% | $660,000 | $2,331 | 0.35% |
| Outback Solar | Lake | 5 | 2011 | $7,100,000 | $6,120,000 | $79,253 | 1.29% | $6,200,000 | $64,652 | 1.04% |
| Hyline Solar Center | Malheur | 9 | 2017 | $17,324,000 | $18,395,000 | $225,782 | 1.23% | N/A | N/A | N/A |
| Thunderegg Solar Center | Malheur | 10 | 2017 | $18,823,000 | $19,987,000 | $293,913 | 1.47% | N/A | N/A | N/A |
| Open Range Solar Center | Malheur | 10 | 2017 | $16,756,000 | $17,792,000 | $253,406 | 1.42% | N/A | N/A | N/A |
| Grove, Vale Air, & Railroad Solar Centers | Malheur | 21 | 2017 | $39,097,000 | $41,526,000 | $410,792 | 0.99% | N/A | N/A | N/A |
| Sheep Solar | Marion | 2.2 | 2018 | $3,100,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Silverton Solar | Marion | 2.2 | 2018 | $3,100,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Gervais | Marion | 2.2 | 2018 | $3,000,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Prologis Projects/Sunway | Multnomah | 3.5 | 2008 | Data unavailable | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|
| Norwest Energy 14 | Polk | 2.2 | 2018 | $3,200,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Valley Creek Road | Polk | 2.2 | 2018 | $3,240,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Steel Bridge Solar | Polk | 2.4 | 2016 | $2,900,000 | $4,700,000 | $0 | 0.00% | $7,463,000 | $0 | 0.00% |
| Solwatt | Umatilla | 0.36 | 2011 | $900,000 | $920,000 | Data unavailable | | $1,060,000 | Data unavailable | |
| Mill Creek Road | Yamhill | 2.2 | 2018 | $3,250,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Amity-Dayton | Yamhill | 2.2 | 2018 | $2,230,000 | N/A | N/A | N/A | N/A | N/A | N/A |
| Bellevue Solar Project | Yamhill | 1.66 | 2011 | $1,140,000 | $3,200,000 | $38,010 | 1.19% | $3,200,000 | $38,037 | 1.19% |
| Yamhill Solar Project | Yamhill | 1.19 | 2011 | $780,000 | $2,400,000 | $29,003 | 1.21% | $2,400,000 | $29,334 | 1.22% |
| **SOLID WASTE INCINERATION** | | | | | | | | | | |
| Covanta Marion | Marion | 13.1 | 1987 | N/A | $6,165,850 | $70,262 | 1.14% | $5,221,200 | $59,564 | 1.14% |
| **WIND** | | | | | | | | | | |
| Benson Creek, Durbin Creek, Jett Creek, Prospector, & Willow Spring Windfarms | Baker | 50 | 2017 | $98,853,000 | Data unavailable | | | | | |
| Lime Wind | Baker | 3 | 2011 | $2,000,000 | $2,078,000 | $20,273 | 0.98% | $2,330,000 | $22,307 | 0.96% |
| Shepherds Flat | Gilliam | 650 | 2012 | $807,270,000 | $675,168,000 | $4,094,034 | 0.61% | $721,917,000 | $5,185,980 | 0.72% |
| Pebble Springs Wind & Leaning Juniper II | Gilliam | 300.3 | 2009 | $260,044,000 | $258,800,000 | $2,369,664 | 0.92% | $254,416,000 | $2,360,282 | 0.93% |
| Wheat Field Wind Farm | Gilliam | 96.6 | 2009 | $74,998,000 | $69,894,000 | $748,699 | 1.07% | $77,339,000 | $823,011 | 1.06% |
| Willow Creek | Gilliam | 27 | 2009 | $27,045,000 | $27,710,000 | $163,834 | 0.59% | $29,050,000 | $167,001 | 0.57% |
| Rattlesnake Rd Wind Phase I | Gilliam | 102.9 | 2008 | $71,046,000 | $75,618,000 | $815,097 | 1.08% | $84,711,000 | $901,461 | 1.06% |
| Leaning Juniper | Gilliam | 100.5 | 2006 | $99,257,000 | $102,187,000 | $1,085,441 | 1.06% | $99,007,000 | $1,053,593 | 1.06% |
| Condon Phase II | Gilliam | 25.2 | 2003 | $15,300,000 | $13,515,000 | $157,279 | 1.16% | $13,260,000 | $154,594 | 1.17% |
| Condon Phase I | Gilliam | 24.6 | 2002 | $14,700,000 | $12,985,000 | $151,112 | 1.16% | $12,740,000 | $303,126 | 2.38% |
| Shepherds Flat Central & South | Morrow | 195 | 2012 | $238,802,000 | $203,532,000 | $1,795,689 | 0.88% | $214,516,000 | $1,818,783 | 0.77% |
| Four Mile Canyon, Pacific Canyon, Sand Ranch, & Wagon Trail | Morrow | 31.45 | 2009 | $31,818,000 | $27,852,000 | $243,433 | 0.87% | $27,046,000 | $246,927 | 0.78% |
| Threemile Canyon Wind | Morrow | 9.9 | 2009 | $8,503,000 | $7,658,000 | $101,523 | 1.33% | $7,819,000 | $97,773 | 1.25% |
| Willow Creek | Morrow | 45 | 2009 | $45,075,000 | $46,180,000 | $326,114 | 0.71% | $48,420,000 | $321,075 | 0.59% |

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|---|---|---|---|---|---|---|---|---|---|---|
| PáTu Wind Farm | Sherman | 9 | 2010 | $7,702,000 | $7,382,000 | $110,730 | 1.50% | $7,661,000 | $116,788 | 1.52% |
| Hay Canyon & Star Point | Sherman | 199.5 | 2009 | $154,310,000 | $157,814,000 | $1,737,419 | 1.10% | $150,175,000 | $1,737,419 | 1.16% |
| Biglow Canyon Wind Farm | Sherman | 449.7 | 2008 | $600,865,000 | $638,022,000 | $6,903,000 | 1.08% | $689,346,000 | $6,903,000 | 1.00% |
| Klondike IIIa & III | Sherman | 300.1 | 2008 | $267,593,000 | $304,097,000 | $2,999,199 | 0.99% | $278,905,000 | $2,870,156 | 1.03% |
| Klondike II | Sherman | 75 | 2005 | $48,252,000 | $48,500,000 | $766,425 | 1.58% | $47,736,000 | $727,711 | 1.52% |
| Klondike I | Sherman | 24 | 2001 | $8,630,000 | $8,697,000 | $137,430 | 1.58% | $8,841,000 | $134,777 | 1.52% |
| Project Chopin | Umatilla | 5.1 | 2017 | $10,250,000 | $10,090,000 | $112,857 | 1.12% | N/A | N/A | N/A |
| Project Chopin | Umatilla | 5.1 | 2017 | $10,250,000 | $10,090,000 | $127,051 | 1.26% | N/A | N/A | N/A |
| Combine Hills Phase II | Umatilla | 63 | 2010 | $65,100,000 | $62,800,000 | $524,024 | 0.83% | $61,500,000 | $524,433 | 0.85% |
| Vansycle II | Umatilla | 98.9 | 2010 | $46,729,000 | $51,445,000 | $858,571 | 1.67% | $60,301,000 | $878,811 | 1.46% |
| Big Top, Butter Creek, Four Corners, Oregon Trail, & Ward Butte | Umatilla | 33.1 | 2009 | $30,882,000 | $24,967,000 | $333,796 | 1.34% | $26,248,000 | $340,807 | 1.30% |
| Combine Hills | Umatilla | 41 | 2004 | $22,120,000 | $12,500,000 | $151,470 | 1.21% | $13,500,000 | $161,713 | 1.20% |
| State Line Wind Project | Umatilla | 112.8 | 2002 | $26,220,000 | $33,004,000 | $534,079 | 1.62% | $22,798,000 | $375,681 | 1.65% |
| Vansycle Windplant | Umatilla | 25.1 | 1999 | $9,950,000 | $10,451,000 | $126,470 | 1.21% | $11,740,000 | $154,838 | 1.32% |
| Elkhorn Wind Power Project | Union | 8 | 2008 | $8,765,000 | $7,228,000 | $31,126 | 0.43% | $7,875,000 | $32,786 | 0.42% |
| Elkhorn Wind Power Project | Union | 93 | 2008 | $100,735,000 | $83,072,000 | $384,608 | 0.46% | $91,425,000 | $305,666 | 0.33% |

* The complete data set may be downloaded from the Green Energy Institute at Lewis & Clark Law School's website: https://law.lclark.edu/centers/green_energy_institute/.