

POLICY BRIEF

The Benefits of and Obstacles to Third-Party Solar Ownership

Many end users of electricity would like to use solar photovoltaic (PV) generation to reduce their utility bills and save on business operating costs. However, solar PV systems can have high initial costs and must be properly operated and maintained to deliver optimal benefits. Third-party ownership of solar PV through power purchase agreements (PPAs) or solar leases allows more homeowners and businesses to “go solar” by lowering the cost of solar installation and maintenance of a system. Energy Alabama is committed to supporting policies enabling continued alternative energy innovation while lowering costs for consumers.

Specifically, Energy Alabama supports third-party solar ownership.

Background |

Third-party ownership is an established financing solution in the United States and is one of the most popular methods of solar financing for consumers to realize the benefits of solar energy. In 2014, 72% of residential solar PV systems were financed through third parties according to U.S. Residential Solar Financing 2015-2020, a report published by Green Tech Media Research.¹

Third-party ownership of solar energy primarily occurs through two models. A customer can sign a traditional lease and pay for the use of a solar system or the customer can sign a PPA to pay a specific rate for the electricity that is generated each month.

- More than 90 percent of New Jersey’s residential solar market has consisted of third-party owned systems since Q2 2013.

¹ <https://www.greentechmedia.com/articles/read/72-of-us-residential-solar-installed-in-2014-was-third-party-owned>, 12 Dec 2016

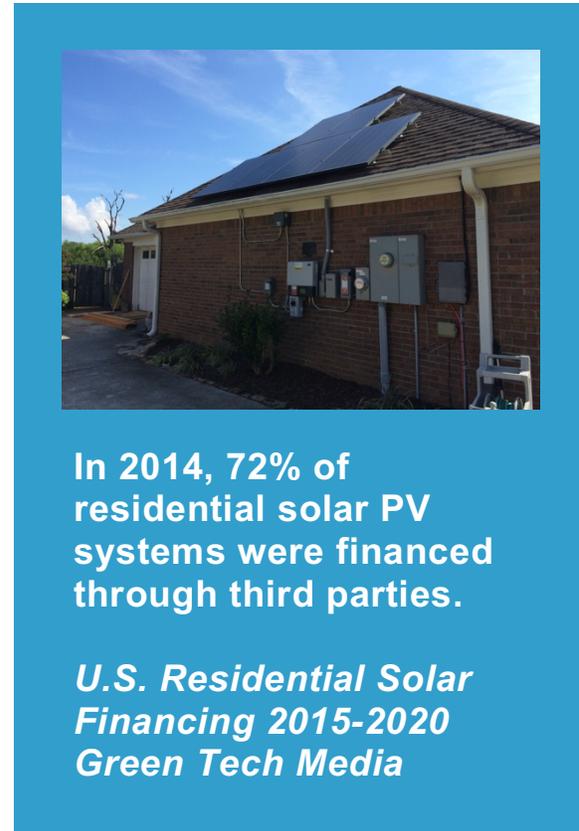
- In Q1 2014, more than 50 percent of New York’s distributed generation systems were third-party owned, and in California, Arizona and Colorado, 69 to 81 percent of installed distributed generation systems were third-party owned.

Solar Power Purchase Agreements and Leasing Models |

Third-party ownership of solar energy primarily occurs through two models: solar leases and power purchase agreements.

In the PPA model, an installer/developer builds a solar energy system on a customer’s property at no cost. The solar energy system offsets the customer’s electric utility bill, and the developer sells the power generated to the customer at a fixed rate, typically lower than the local utility. The lower electricity price serves to offset the customer’s purchase of electricity from the grid while the developer receives the income from the sale of electricity as well as any tax credits and other incentives generated from the system. PPAs typically range from 10 to 25 years during which time the developer remains responsible for the operation and maintenance of the system. At the end of the PPA contract term, a customer may be able to extend the PPA, have the developer remove the system, or buy the solar energy system from the developer.

In the lease model, the customer signs a contract with an installer/developer and pays for the solar energy system over a specific time period, rather than paying for the power produced. Solar leases can be structured so customers pay no up-front costs, some of the system cost, or purchase the system before the end of the lease term. Similar leasing structures are commonly used in many other industries, including automobiles and office equipment.



Benefits of PPAs to Solar Customers |

- No or low upfront capital costs
- The developer handles the up-front costs of sizing, procuring and installing the system. Without any upfront investment, customers are able to adopt solar and begin saving money as soon as the system is operational.
 - Transfer of up-front capital costs to an entity with greater access to capital, lower cost of capital, or greater ability to utilize tax specific incentives has been critical to adoption in the commercial and industrial sectors.
- Reduced energy costs

- Solar PPAs provide a fixed, predictable cost of electricity for the duration of the agreement and are structured in one of two ways.
 - Fixed Escalator Plan – the price paid by the customer rises at a predetermined rate, typically between 2% and 5%, which is often lower than projected utility price increases.
 - Fixed Price Plan – maintains a constant price throughout the PPA term, saving customers more as utility prices rise.
- Limited risk
 - The developer is responsible for system performance and operating risk, such as storm damage.
- Better leverage of available tax credits



“Third party ownership for solar opens the market up to more participants such as nonprofits, cities, and regular folks.”

Daniel Tait
 CEO
 Energy Alabama

- Developers are typically better positioned to utilize available tax credits to reduce system costs. For example, municipal hosts, non-profits, and other public entities with no taxable income would not be able to take advantage of the Section 48 Investment Tax Credit.
- Potential increase in property value
 - Solar PV systems have been shown to increase residential property values.² The long-term nature of these agreements allows PPAs to be transferred with the property and thus provides customers a means to invest in their home at little or no cost.

Legislative and Regulatory Obstacles |

Current code in Huntsville blocks Third Party Ownership, and would have to be clarified to allow it.

² Hoen, Ben, Ryan H. Wiser, Peter Cappers, and Mark A. Thayer. *An Analysis of the Effects of Residential Photovoltaic Energy Systems on Home Sales Prices in California*. Berkeley: LBNL, 2011

- Huntsville Code 26-94. Standby and Resale Service.
 - All purchased electric service, other than emergency or standby service, used on the premises of any customer shall be supplied exclusively by the city; and the customer shall not directly or indirectly sell, sublet, assign or otherwise dispose of the electric service or any part of such service.
- Alabama Code Para 37-4-1, subpart (7), Utility. Such term shall mean and include every person, not engaged solely in interstate business, that now or may hereafter own, operate, lease, or control:
 - Any plant, property, or facility for the generation, transmission or distribution, sale or furnishing to or for the public of electricity for light, heat, or power, or other uses, including any conduits, ducts, or other devices, materials, apparatus, or property for containing, holding, or carrying conductors used or to be used for the transmission of electricity for light, heat, or power, or other uses.

These codes would need clarification to exempt third party owners from definition as utility and could include provisions such as:

- Expand the definition of a utility to include the requirement they must provide both electricity and ancillary services. Ancillary services are defined as services necessary or incidental to the transmission and delivery of electricity from generating facilities to retail electricity consumers, including but not limited to scheduling, load shaping, reactive power, voltage control and energy balancing services.³
- Codify exemption of third party owners with language such as:
 - Persons who, for compensation, own or operate individual systems which use renewable energy to generate electricity and sell electricity generated from those systems to not more than one customer of a public utility per system if each individual system is:
 - Located on the premises of another person;
 - Used to produce no more than 150 percent of that other person’s requirements for electricity on an annual basis for the premises on which the individual system is located; and
 - Not part of a larger system that aggregates electricity generated from renewable energy for resale or use on premises other than the premises on which the individual system is located.⁴

Additionally, net metering or a fair market value such as a “Value of Solar Tariff” would need to be addressed. Net metering or similar policy would need to be enacted state-wide, by individual non-utilities as defined in Alabama Code Section 37-4-1, or allowed by third party developers. Otherwise, third party PPA owners would not be able to produce more electricity than it consumes.

³ Oregon Public Utility Commission order 08-388. <http://apps.puc.state.or.us/orders/2008ords/08-388.pdf>

⁴ 2009 Nevada Assembly Bill 186, http://www.leg.state.nv.us/Session/75th2009/Bills/AB/AB186_EN.pdf

Other Considerations |

While bad actors are present in many market segments, consumer protections can be implemented with passage of third party ownership legislation. By implementing standardized third party PPA contract language, the customer's best interests are served by having standard rules and contract clauses in place. This would help ensure customers receive a fair deal and are not paying hidden fees or signing up for services of which they are not aware. A standard contract would leave less room for future interpretation of legality.