

Solar Fact Sheet: Third Party Finance



Nobody objects to the cost of Solar Energy. That's free. It's the high front-end cost of the equipment that hurts!



- ✓ Reduce capital cost by 97% - 100%
- ✓ Accelerate ROI to 0 – 18 months
- ✓ No operating, maintenance or repair expense

TerraShares Cashflow Neutral Solar™ Plans overcome the capital cost barrier and helps you achieve fast ROI and positive cashflow fast... really fast!

Third Party Financing

One of the greatest advances in solar energy is financing by outside investors — third party owners (“TPOs”). Prior to 2006, solar energy systems required a large commitment of capital; systems were generally small, contributing comparatively little to reducing power cost. By 2007, TPOs funded just 10% of US commercial solar installations. By 2008, TPO was up to 50%, and in 2010 and beyond, is expected to surpass 75%. Solar is the fastest growing of any energy technology and creates more jobs per unit than any other form of energy. Third Party Financing is fast becoming the mainstream way solar systems are financed.

PPA Or Solar Lease?

In most of the US — about 40 states — obtaining solar power is simple. A TPO installs a solar system on your property and sells you all the solar power directly, usually at a discount from the utility rate. The transaction uses what is called a **Power Purchase Agreement** (PPA). The Host pays only for the energy produced and savings increase during the term of the PPA contract as utility rates rise. The TPO puts up all the money, owns and maintains the solar system..

About 9 states, including Tennessee, have regulated utility monopolies and do not permit direct power sales. In such states, TPOs offer Solar Operating Leases instead of PPAs. Solar Lease rates can be set to ensure comparable or better energy cost savings¹. Thus, the end result is the same for the Host.

Either way, the TPO bears all costs, maintenance, and risk associated with the System and its performance. A particular advantage for schools, organizations, governments and churches is that the TPO can access tax and other incentives otherwise not available to non-profits. TPO arrangements allow for-profit companies to access solar energy without tying up cash or credit lines. Banks tend to like the “off balance sheet” transactions.

Third party financing locks in energy savings today. And in the face of rapidly increasing utility rates, it also reduces surprises due to volatile fossil fuel surcharges. TPO contracts for both PPAs and leases range from about six years to 15 or more years. Typically, the Host may acquire the system at the end of the contract term.

“Cashflow Neutral Solar™”

One solar systems integrator, **TerraShares**, takes the leasing concept one step further to neutral or even positive Cashflow very early in the lease contract — in zero to eighteen months. Normally, leasing companies seek to recover their outlay and profit in the first few years of the lease and set the lease payment structure accordingly. Thus, even though the Host may make no capital investment, the solar system is still costing more than it returns in savings and revenue.

With **TerraShares Cashflow Neutral Solar**, lease payments are purposely structured to be equal to or lower than anticipated savings and revenues in the early years. Then, as utility rates increase, lease payments can also rise to make up the difference and still provide Cashflow Neutral Solar performance. With Cashflow Neutral Solar, savings begin immediately and quickly becomes a net cash generator in zero to 18 months².

TerraShares offers several Third Party Solar Plans to suit the client’s situation. All provide a full, top of the line solar System and Green program with little or no up front expense, no capital cost or maintenance/repair expense to the Host.

TerraShares Project Qualifications

Third Party Solar is nearly painless for the Host, but there are a few “deal stoppers”. **TerraShares** has identified some factors that affect project viability:

¹ The reader will find that TerraShares offers savings much greater than the national average

² Some **TerraShares** solar plans require a small deposit that is amortized starting in the first year

- The project must be a good technical application. While most buildings/sites are suitable for solar, the mounting location must be secure, large enough and properly oriented, free of shade and mounting obstacles, and so forth. Solar systems add only modest weight to a roof — 1.5 to 7 lbs/sq. ft — the roof structure must be sufficient to bear the forces involved.
- The project must be attractive to investors. While the business of the Host may be of little consequence to the System itself, they may matter to investors. A school, church, library, manufacturing plant or water treatment project may be easier to fund than a prison or drug rehab center. This may affect project lead-time and financing terms.
- Incentives must be actually available. States and utilities are quick to tout their solar programs, but rebates, grants and other incentives are quickly disappearing, having become fully subscribed or just ending. In addition, key Federal incentives are set to end in less than one year. Experience has shown that the end of an incentive program generates a competitive “feeding frenzy”.
- Restrictive Host policies and contracting requirements can diminish the technical or financial viability of the project. The availability of some incentives requires certain terms in the PPA. Some contracting policies, such as prohibiting private underwriters or support acknowledgements, may affect the project viability.
- Installers must be qualified. TerraShares works with installers of proven skill and flexibility. We can work with others, but both TerraShares and incentive providers require that installers be of good character, financially viable, experienced, licensed, insured and in some cases possess specifically named certifications.
- A robust Host Green Program is important. Solar savings have much more impact when combined with the Green efforts of all facility occupants, and policies and practices. Green companies are more profitable and efficient, and thus, more attractive to lenders/investors. We favor committed Green organizations in our project evaluation.



The Process

Entering into a Third Party Solar Lease/PPA is straightforward for the Host. Depending on whether the project is initiated by TerraShares or your contractor, the process may vary a bit. Typical steps include:

- TerraShares conducts a preliminary solar audit of the site.
- TerraShares reviews the project with the Host (and contractor, as applicable) and proposes a Project Plan, to include preliminary System configuration, estimates of performance and savings, and major Solar Lease or PPA terms.
- The Host approves the Project Plan, enters into Site Lease and Solar Operating Lease agreements, engages TerraShares and pays the good faith deposit (see below).
- TerraShares engineers the System in detail and certifies the building and site.
- TerraShares, as System integrator, coordinates with all parties, registering the project with all incentive providers and regulators, and applies for all incentives, prepares financing documentation, charters the TO and other duties.

- **TerraShares** identifies funding sources suitable for the specific project and secures all commitments for funding and incentives. If the Host is purchasing the system outright, the contractor installs the system and the project is completed.
- In the case of TPO systems, **TerraShares**, upon securing all necessary financial and technical resources, proceeds with procurement, supervises installation and otherwise integrates the total project.
- **TerraShares** commissions the system and remains involved as Managing Partner until Solar Lease/PPA term.

Fees and Expenses

During the term of the PPA or Solar Lease, the Host pays for no equipment, maintenance or repair. Upon engagement, the Host will pay **TerraShares** a good faith deposit in the amount of 3% to 5% of the estimated System installed cost. The Host receives 100% of the power generated by the System and (a) buys the power (PPA) or (b) pays the lease rate each month.

The System must be insured against all perils. Since the cost to insure separate equipment located at a third party site is expensive, yet the System represents a minor part of building's value, the Host may agree to include the system in its insurance coverage and security during the PPA or lease. The premium, if any, is considered to be part of the PPA or Solar Lease rates and may have little or no affect on Host's insurance coverage or premium,.

Flexible End of Term Options

At the end of the contract, **TerraShares** offers the Host several choices:

- Extend the contract by mutually agreement,
- Terminate the contract. TPO removes the System,
- Buy the System at significant savings. Host may engage **TerraShares** Green Finance to secure acquisition grants or funding.
- Acquire the entire TPO to access special tax advantages³.

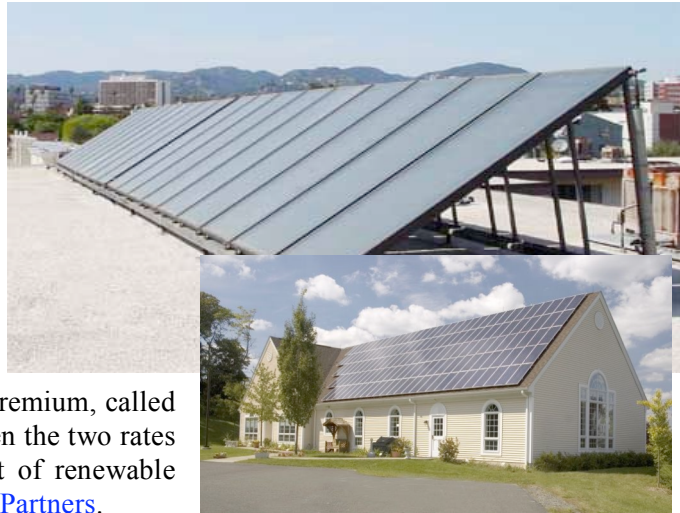
Not all vendors may offer all options. Contracts are reasonably flexible to address the Host's and the owners' specifications regarding terms, program inclusions, pricing, end of contract provisions and so forth.

Role of the TVA

Federal PURPA regulations have long required utilities to buy electricity produced by their customers ("ratepayers"), but did not set the pricing. When the solar power generated by the ratepayer exceeds its needs, the excess power flows to the utility, turning the ratepayer's electric meter backwards. The ratepayer then pays only for the net amount of utility power actually purchased. This is called "Net Metering" and is used in about 35 states.

³ TPO acquisition only makes sense for for-profit entities

In its seven state service area, TVA, however, has adopted a different plan, called “Dual Metering”, whereby a new meter measures ratepayer (solar) generation, while the existing meter measures ratepayer consumption and peak usage in the normal way. Through its *Generation Partners Program* TVA and its power distributors “purchase” (actually credit) the ratepayer’s solar power at a higher rate than the ratepayer’s normal incoming rate. This premium, called a “feed-in tariff”, creates a spread between the two rates that can be used to help offset the cost of renewable energy equipment. See [TVA Generation Partners](#).



In exchange for its feed-in tariff, TVA requires that 100% of the solar power be sold to TVA (i.e., *not* used internally on site). The ratepayer pockets the Generation Partners premium and then pays for all its power needs at the normal rates. TVA also retains all Renewable Energy Credits (REC’s), an increasingly controversial policy as the world carbon market grows rapidly. The TVA plan adds complexity to the project, but does not reduce energy savings to the ratepayer.

Host Responsibilities

Under either a PPA or Solar Lease agreement, the Host has certain responsibilities:

- Purchase or receive 100% of the power generated by the System according to the terms of the contract
- Provide site access to the TPO during installation and for the life of the agreement
- If the Host decides the System must be removed and reinstalled due to no fault of the System, the Host bears all related costs and reimburses TPO for its assistance.
- Maintain full insurance against all perils and provide physical security.
- Assist **TerraShares** to identify and contact, but not solicit, suitable investors candidates within Host’s organization and affinity group.

Frequently Asked Questions

Q: Does TerraShares substitute different or cheaper equipment?

A: No! Third Party Group can make a full return on its investment only by eventually selling the System, and so, will insist on the best, most reliable equipment available. **TerraShares** may actually upgrade a System design if it does not meet **TerraShares** specifications that assure an investment quality installation. No factory “seconds” or rejects are acceptable.

Q: We are a private school with little budget. Can third party funding work for us?

A: Yes. Third party finance was created for organizations that cannot access tax incentives, have little capital budget or wish to conserve credit lines. In addition, private entities can fund energy projects “off balance sheet”, too.

Q: Must the solar System be located on our roof?

A: No, systems are easily mounted on the ground, on parking or walkway covers, used to create shading and many other variations. Yet, roofs offer advantages: security, abundant clear space, elevated above shading obstructions and have few alternative uses. Large ground mounted systems may require an environmental impact analysis.

Q: How much do I need to budget for maintenance and training our personnel?

A: Nothing. The System Owner is responsible for all maintenance, repair and performance

Q: Can we use third party financing and still access grants, incentives and REC's?

A: Generally not. The TPO uses the incentives to "buy down" your Lease or PPA cost and so, receives all incentives and tax benefits. If TVA Generation Partners is involved, TVA keeps all REC's.

Q: Our state offers schools and governments grants and subsidized loans. Can we use those with third party financing?

A: Possibly, depending on the terms of the grant or loan. They may certainly be used indirectly to prepare the site, etc. Such grants or loans may be allowed to pay for deposits or otherwise participate in the project.

Q: What happens at the end of the PPA or Solar Lease term, if we choose not buy the System?

A: Unless we reach a continuation agreement, the System must be removed and sold to others.

Q: Will the System damage my roof?

A: No. Systems will be mounted without roof penetrations wherever possible. When penetrations are necessary, our certified installers use proven hardware and techniques. Solar panels are not very heavy and all manufacturers design their systems so the point loads and total weight are well within the capabilities of most commercial roofs. (In any case, a Professional Engineer will certify the roof to be sure.)

Q: What if I have to replace or repair my roof?

A: To repair or replace the structure on which the System is mounted, some or all panels may have to be removed and reinstalled. This must be at Host expense. This is another reason to prefer non-penetrating mounting methods. Note: shading of the roof by the panels helps prolong roof life.

The information contained in this fact sheet may change without notice. To learn about updates and more, contact your participating energy contractor or give us a call:

TerraShares

865/789-7448

<http://www.TerraShares.com>

jatkins@terrashares.com

