The Standing Seam Metal Roof that Generates Clean, Renewable Electric Energy

ATA-SOLAR™

Frequently Asked Questions

1) What is ATA-Solar/What is BIPV?
ATA-Solar is a BIPV (Building Integrated Photovoltaic) System, which is comprised of a Uni-Solar flexible thin-film amorphous silicon solar laminate adhered directly to a metal roof panel in a quality controlled factory environment.

2) How does it work? How is electricity generated from the system?
Sunlight hits the photovoltaic modules on the rooftop and produces direct current (DC) electricity. This DC electricity is directly converted to alternating current (AC) via an inverter that is tied to the building's utility panel.

3) How do I find out how many Kilowatt Hours (kWh) my building uses?
Refer to your utility bill to find out how many kWh your building uses.

4) What size kW systems are available from ATAS?
ATA-Solar is a PV system that is customized to your roof size and budget. Roofs with a southern exposure are the most idea for PV solar applications. Easterly and westerly facing roofs are also appropriate but with reduced production.

5) How much electricity will it generate per month and how much will I save on my monthly electric bill?
It will depend on the size of the system and where the project is located.

6) How efficient are the ATA-Solar panels?
ATA-Solar collects 9% of the available light/energy from the sun, versus about 12% for crystalline panels. However, ATA-Solar picks up three spectrums of light, therefore collecting earlier and later in the day than traditional crystalline panels. The daily-generated electricity is higher with ATA-Solar (versus crystalline panels) since it collects the sun's energy for more hours of the day.

7) How long is the warranty period on ATA-Solar?
The ATA-Solar Uni-Solar module is warranted to produce a minimum of 80% of capacity for 25 years. Experience has proven that the PV panels initially produce up to 10% more than their rated capacity, dropping to about 80% of the rated capacity after 20 years.

8) Will it still perform after the warranty period is over? If so, at what levels?
ATA-Solar will still produce electricity after the warranty period, but could be at a lower capacity. Continued annual power degradation, post warranty, is estimated to 0.75% annually, or less.

9) What colors of ATA-Solar are available?
ATA-Solar is only available in a dark blue color, a color intrinsic to the amorphous silicon thin film that is the heart of the solar module. The metal roof panels to which the Uni-Solar PV modules are attached are available in over 30 standard colors. A special PV blue designed to appear close in color to the solar module is available.

10) Does a certified installer have to install the metal roof panels with the BIPV adhered to them?
A regular metal roofing contractor installs the metal roof panels, with the ATA-Solar modules already attached to the metal roof panels in the factory.

11) Does an electrician have to hook up the system?
Yes, an electrical contractor has to hook up the system. In some states, a certified installer must be used in order to qualify for the incentives or rebates. Electrical contractors may be certified by the North American Board of Certified Energy Practitioners (NABCEP). You can visit their website at www.nabcep.org for more information.

12) Can I install the metal roof panels with the BIPV adhered to them myself?
ATAS strongly recommends that you have a professional metal roofing contractor install the panels to protect your investment; however, it is possible to install the panels yourself. Again, an electrical contractor should be hired to hook up the BIPV system.

13) Can the BIPV be installed on an existing metal roof?
We recommend the existing metal roof be removed and replaced with ATA-Solar panels to ensure proper BIPV adhesion.

14) Will you sell the Uni-Solar laminate alone, for others to adhere to metal roof panels?
No. We are only selling our ATA-Solar system, which includes the Uni-Solar laminate factory-applied to our metal roof panels.

15) Would ATAS consider certifying a roofer in a particular area to adhere the laminate at jobsites for others, or, could there be a team from ATAS who would come out and install the solar film on panels at the jobsite (as long as it was being applied onto ATAS coil)?
No. We do not recommend adhering the laminate at a jobsite. To ensure the highest quality and proper adhesion of the laminate to the panel, we will only adhere the laminates in our factory.

16) How much square footage of roof space is required for the different size kW systems?
Refer to the "ATA-Solar Minimum Roof Size Requirements" listing on our website.

17) Can the roof space on which the ATA-Solar will be installed include dormers?
Yes, provided there is sufficient "clear" roof space available on which to install the ATA-Solar panels. Refer to the "ATA-Solar Minimum Roof Size Requirements" listing on our website, and also refer to the photos of buildings which show "Suitable" and "Unsuitable" roofs on which to install ATA-Solar.

18) Can the roof space on which the ATA-Solar will be installed include roof penetrations?
Yes.

19) What ATAS metal roof profiles are available with the ATA-Solar BIPV laminate?
We offer our Dutch Seam 19 ¼" wide metal roof panel (MRD194), our Field-Lok 18" wide metal roof panel (FLS 180), and our Field-Lok 16 ½" wide metal roof panel (FLM165). All three of these profiles are standing seam metal roof systems. The Field-Lok profiles are mechanically seamed systems for low sloped roofs. The Dutch Seam profile is a snap lock seam system for steeper sloped roofs.

20) How long is the payback period (return on investment)?
The ROI depends on incentives, rebates, location and costs of electricity. A 30% federal tax credit (for both residential and commercial properties) is effective Jan. 1, 2009. For other state and utility incentives, you can visit www.dsireusa.org.

21) Can the installer walk on the ATA-Solar?
Yes. Walking on the ATA-Solar panels will not harm them.

22) Can the ATA-Solar be curved, and if so, is that done in the factory or in the field?
Yes. Curving of the panels would be done in the factory. The ATA-Solar FLM165 (Field-Lok 16 ½" wide) profile is the only profile that can be curved.

23) How does ATA-Solar compare to Crystalline Photovoltaic panels?
ATA-Solar is more economical than crystalline PV panels due to the savings from installation labor and not needing an expensive solar PV racking system. ATA-Solar also produces electricity earlier and later in the day. The panels are light weight yet extremely durable and can sustain much greater impact than crystalline panels. ATA-Solar can be walked on and will not be damaged by adverse weather conditions such as hail. It can be more economical than crystalline PV panels due to the savings from installation labor and not needing an expensive solar PV racking system. Other inherent advantages of ATA-Solar include the lighter weight of the system compared to crystalline panels and the durability of the panels under adverse weather conditions.

24) What type of federal, state and local tax credits, rebates and grants are available to me?
A 30% federal tax credit is effective Jan. 1, 2009 for both residential and commercial/industrial projects. There will no longer be a dollar-amount cap for residential applications. There will be a 5 ½ year write-off for commercial and industrial buildings. For other state and utility incentives, you can visit www.dsireusa.org.

25) With the dark blue color of the BIPV, won't that heat up and transfer that heat into my building?
About 2.5% of the energy generated is consumed by the HVAC to cool the attic. All PV gets hot and the efficiency drops. ATA-Solar does not drop as much in efficiency as crystalline PV panels do when they get very hot. In addition, we can use raised clips for the installation of some of our standing seam metal roof panels, and this creates a ¼" space between the roof substrate and the metal roof panel to provide a natural airflow to the ridge and aid in cooling the panel.

26) What if one of the panels gets damaged? How is it repaired, or does it need to be replaced?
If a module is damaged, only the specific damaged area (i.e. 9" x 15-½") will not produce electricity. The balance of the panel will produce as warranted.

27) Is any electricity generated if my roof is not facing directly south?
This depends on the slope (pitch) of the roof. A roof with a low slope works best if it is not facing south. However, even roofs with moderate to medium-high slopes between East (-90°) and West (+90°), relative to true South at 0°, may be good candidates. Thin films of PV suffer less from angular degradation than crystalline PV panels.

28) What effect does the pitch of my roof have on the system?
As the slop or pitch of the roof increases, the necessity of a true south installation increases.

29) Is any electricity generated if it is a cloudy day?
Electricity is produced on a cloudy day, at a reduced level. The same triple junction, triple spectrum, collecting of the sun's light, allows for collection of reduced or diffused light that normal crystalline PV panels cannot.

30) How much does it weigh per square foot?
The weight of the ATA-Solar laminate is 0.7 pounds per square foot. The typical weight of a crystalline PV panel is 3.0 pounds per square foot.

31) Will hail damage the ATA-Solar?
Extremely large hail may cause an individual cell to become damaged; however, the rest of the PV laminate will operate normally. ATA-Solar has been tested with 1" diameter hail at 55 mph.

32) Will ATA-Solar attract lightning?
No, ATA-Solar will not attract lightning. Lightning is attracted to the highest point, so the PV laminate on our metal roof panel has no greater chance of being hit than any other roofing material.

33) Is ATA-Solar wind resistant? For what wind speed ratings has it been tested?
ATA-Solar has been tested and proven to withstand winds of up to 160 miles per hour.

34) How will ATA-Solar affect the resale value of my home?
ATA-Solar should increase the value of your home due to the generation of electricity and reduction in the amount of electricity the home owner purchases from the electric company each month.

35) Do I need to remove my existing roof materials to install the ATA-Solar panels, or can the panels be installed over my existing roof without tearing the existing roof off?
That will depend on the existing condition of your roof and the ATA-Solar panel profile chosen. Local codes may dictate a maximum of two layers of roof materials.

36) What states, counties, cities or utility companies offer the best tax incentives to use ATA-Solar?
Go to www.dsireusa.org to find out what incentives are being offered by your state or utility.

37) Can I sell the excess electricity generated, but not used, back to the electric company, and if so, how do I do that?
Yes, a meter will measure the amount of electricity put back into the electric company's grid. This is called net-metering. The electric company will pay a set rate payment to the building owner, usually paid annually. Net metering laws vary from state to state, so it is important to know your state's net-metering laws.

38) Is there a limit to the amount of excess electricity that a utility will buy back from a building owner?
The amount the utility will buy will generally not be more than 10% of the total building usage. This should be verified with the local utility company.

49) Are there a minimum number of days that is sunlight needed for optimum performance?
The best performance is to have as many full sunny days as possible. Data used in all calculations for ROI (Return On Investment) and performance is based on averages taken from 30 year climate averages maintained and published by government labs.