Emerald Coast Solar

WE PUT THE POWER OF THE SUN TO WORK FOR YOU!

5 questions to ask about the solar support system:

Our previous 3 articles have focused on the installation company, on solar panels and on the solar inverter. This final article focuses on the support structure for the solar system.

The support structure does more than hold the panels. It secures the panels in case of storm, it keeps the panels in the correct position for maximum power production and, in some cases, is adjustable to be able to move the panels to increase power production at different times of the year. It is important to understand the crucial role this part of the solar system plays, in ensuring your system produces the highest level of power possible.

1) Is the support system a fixed angle system or is it adjustable?

   A fixed angle support system locks your panels into a fixed position on your roof. This means that as the sun changes position on the horizon, your panels will not be as efficient. If the panels are set for the summertime, they are close to flat on your roof to maximize power harvest in the summer. If they are set for a spring and fall, they will be set at more of an angle (20 degrees) to get the most power from these times of the year. The problem is, they will not be as efficient during the rest of the year and will miss out on substantial power harvests during the winter and the summer.

   An adjustable angle system will allow for seasonal adjustments to the angle of the panels and will be a much more efficient system, producing much higher levels of power production for more of the year. However, a single angle adjustable system will still be limited in range of adjustment and therefore will not achieve the greatest energy harvest available.

   A dual adjustable system (where both the front and back support legs can be adjusted) will allow for the greatest range of adjustment and will produce the most power year round. ***Emerald Coast Solar is the only company to offer dual adjustable support systems, standard for each of our system installs.***

2) What angle is the system going to be set to?

   Here in Yucatan the standard angle set for a fixed position system is 20 degrees. This is a compromise set, designed to maximize power harvest in the spring and fall. A low angle set (less than 20 degrees) will increase production in the summertime and a high set (over 20 degrees) will increase production in the winter.

   At ECS, we maximize production through most of the year by adjusting our systems to maximize power harvest through spring, summer and fall. It is unfortunate but, the winter set is too great an angle (given our winter weather conditions) to be a safe angle for the panels to be positioned. This does not sound like it would make much of a difference in performance but, it does. Our dual adjustable systems have an average year-round power gain over fixed position and single adjustable position systems of 10% or more. That is (on a ten-panel system) equal to adding one more panel.

A division of Beach Bums Limited S DE RL DE CV

Phone: Jo-Anne at 999-114-4974 or Tony at 999-219-1611

E-Mail: beachbums.ceo@gmail.com or beachbums.cfo@gmail.com

3) What is the support system made of?

All support systems are not created equal! The differences in the construction of your solar system support structure, can make the difference between a system that will last five years and one that will last 25 years or longer.

Is the system made of anodized aluminum? Most support systems are constructed of aluminum. If you are offered a system not made of aluminum show the salesperson the door and contact a different company, especially if you live on the coast. However, not all aluminum is created equal. Normal aluminum has no protection against the elements. Anodized aluminum is higher quality and is designed to withstand the rigors of our environment. Unfortunately, it costs more, and most companies will not use it. As well, the largest supplier of support systems in Mexico does not stock anodized supports normally, they need to be special ordered. ***ECS only uses anodized supports for all our installs.***

How is the support structure interconnected? The standard is to connect the various components of the support structure with galvanized nuts and bolts. Unfortunately, even galvanized will rust in our coastal environment (and quite quickly). The better choice is to use stainless steel for all connections. Of course, this is more expensive in the short term but, it is a support system that will stand the test of time unless… The aluminum and the stainless are not kept separate from each other. ***ECS uses only stainless steel for our structure connections.***

It is very important to ensure that the two different metals remain separate from each other. If not, then the stronger metal will deteriorate the weaker metal. We have seen systems under two years old where the aluminum is turning to powder where it is in contact with the galvanized or stainless connecting bolts. So, does the company separate the different metals in the support structure? ***ECS separates all our metals in all our systems.***

4) How is the system attached to the roof?

There are many different ways of attaching your system to your roof. These range from the basic of attaching the support legs directly to your roof with a single bolt, up to building cement support columns bonded to your roof with stainless steel threaded rod running the length of the column and secured into the roof with expansion nuts. Each of these methods increases both the cost of the system and the system security on your roof.

The weakest system is the one attached directly to your roof using galvanized screws or bolts to hold it in place.

Next is the system mounted on small cement columns poured directly onto your roof with a single bolt passing through the column into the roof.

Next is the same column with 2 bolts/screws secured into your roof.

Emerald Coast Solar

WE PUT THE POWER OF THE SUN TO WORK FOR YOU!

The highest level of security for your support system is to chip the roof, insert two expansion anchors into the roof, attach stainless steel threaded rod and then pour the columns. ***This is the ECS method of attaching the roof supports for your solar system.***

5) What wind force is the structure rated to withstand?

This is one of the big lies the solar industry and, most install companies continue to promote. They will tell you that the panels are rated to withstand winds in excess of 100 miles per hour. They may also tell you that the support system is rated to the same or even higher winds, however, here is what they do not tell you.

a. The guarantees for the panels and the support structures are provided by the manufacturer, not the installer.
b. If a panel breaks free of the support system and crashes to the ground, the panel is not guaranteed. It was the support system that failed, not the panel.
c. If the support system failed the manufacturing company may replace the parts of the support system but, not the panel, as they do not guarantee the panel only the support structure.
d. In the event of a hurricane there is no guarantee for either the support system or the panels as the winds in a hurricane will normally exceed (in gusts) what either the support system or the panels are guaranteed for.
e. Access to any of these warranties is usually the responsibility of the homeowner, not the installation company. Most guarantees cover the parts only. Labor is the responsibility of the home owner and in many cases, the home owner may be responsible for the cost to ship the defective part back to the manufacturer for analysis and pay for shipping of the repaired or replacement part back to the homeowner. These costs will easily exceed the cost to buy replacement parts.

Your best protection is to hire a reputable company that stands behind their products with guarantees separate from those of the manufacturer. A company that practices superior installation methods and backs up their products (in writing) with after install service and maintenance programs. ***ECS is one such company. Our install methods are the best available and we back up our systems with the best warrantees and after sale service available.***

This was the fourth article in our educational series on solar systems. You can find the previous articles - *Questions for any company you are considering as your solar installation team*, *10 questions to ask about solar panels* and *10 questions to ask about solar inverters* – on our web site at www.ecsolarmx.com.

This concludes our series on questions to ask. We believe that if you read the questions and our comments, that you will be better prepared to make a well-informed decision on the best system and the best installation team for your solar project. Solar is a big project and is costly to put in place. Our goal is to ensure you get the best solar system available. Ask the questions. Any good installation company will be happy to provide the answers and, if they cannot, then they are probably a poor choice for your project.

A division of Beach Bums Limited S DE RL DE CV

Phone: Jo-Anne at 999-114-4974 or Tony at 999-219-1611

E-Mail: beachbums.ceo@gmail.com or beachbums.cfo@gmail.com

Emerald Coast Solar

WE PUT THE POWER OF THE SUN TO WORK FOR YOU!

Please watch for our future articles on various aspects of solar and solar systems.

Thank you for taking the time to read this. We hope you will consider Emerald Coast Solar when deciding on a company to install solar on your home or business. For more information please contact:

Jo-Anne at 999-114-4974 or send us an e-mail at beachbums.cfo@gmail.com. You can also check us out at ecsolarmx.com.

A division of Beach Bums Limited S DE RL DE CV

Phone: Jo-Anne at 999-114-4974 or Tony at 999-219-1611

E-Mail: beachbums.ceo@gmail.com or beachbums.cfo@gmail.com