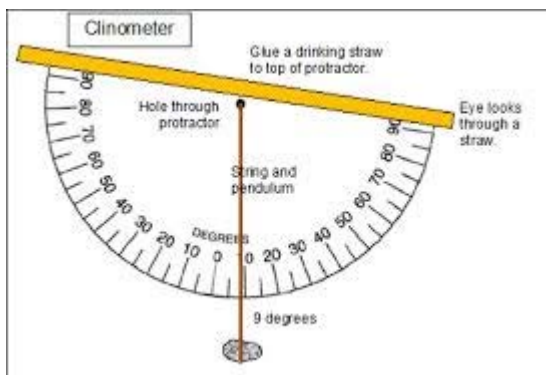


1. Site assessment:
 - 1.1. Take pictures of where you think you want to mount the panels: Keep in mind that the selected location ideally will see full sunlight with absolute minimum amount of shading from nearby trees or buildings.
 - 1.2. Measure dimensions of mounting location: The size of location determines maximum number of solar panels that will physically fit
 - 1.3. If planning to put panels on roof: determine type, age, condition of roof and underlying structure. Solar panels carry a 25 year warrantee, you want to make sure your roof has at least that much life because it is costly to remove and re-install solar system to repair roof.
 - 1.4. Take a panoramic photo of view due South taken from mounting location: This will allow estimation of annual solar insolation. Direct sun is needed to make power.
 - 1.5. Photograph electrical panel with door open: When connecting to the house power distribution system, solar requires certain minimum standards to meet code (in order to have a safe, reliable system)
 - 1.6. Size of system desired: What is your current electrical use? Go to BC Hydro bill and look at the little graph that shows kWh daily average usage. A typical home uses between 20-50 kWh/day. Multiply that number by 365 to get kWh/year that you currently consume. Now decide what fraction of that consumption you want to replace with solar.

2. Site Analysis: This is how you can determine site suitability and potential payback.
 - 2.1. The ideal location faces due South with no obstructions. The minimum solar window is about 90 degrees (45 degrees East and West of due South),
 - 2.2. As you face directly into the sun around noon in Winter, you can see how the site looks from the point of view of the solar panel. It is more important to have an unobstructed 90 degree window than it is to have the window face due South. The window can point as much as 20 degrees toward the East or West without severely degrading performance of the system.
 - 2.3. When taking these bearings, be the same height above ground as the projected panel location. This means for a roof mount, it is ideal to take readings from up there.
 - 2.4. The horizon line is the other measurement you need to take. On the Sunshine Coast, the sun only rises to 22 degrees above the horizon in Winter. In the Summer (June), it goes just above 60 degrees. You can measure the base horizon above trees, buildings and other obstacles by taking a bearing on the obstacle and using an inclinometer to measure its elevation.



See detailed directions in http://www.builditsolar.com/SiteSurvey/site_survey.htm

Useful Websites:

<http://pvwatts.nrel.gov/pvwatts.php>

You can even select roof area on a google map overlay, to get an idea of available production, but of course it doesn't account for shading obstacles or microclimate issues.

This isn't really a substitute for a site assessment; it is more an idealized maximum assuming perfect exposure.

The sun charts for a DIY shading report can be generated from here:

<http://solardat.uoregon.edu/SunChartProgram.html>

You have to use lat/long for Canadian addresses, but lots of sites are available to give you that.

49.4 and -123.5 is Gibsons-ish from: <http://www.latlong.net>

Azimuth and elevation guides : <http://www.builditsolar.com/SiteSurvey/ElevAzGage.pdf>

Walkthrough of a DIY shading obstacle PV survey:

http://www.builditsolar.com/SiteSurvey/site_survey.htm

Live and Historical Performance of systems on coast:

Sechelt https://enlighten.enphaseenergy.com/pv/public_systems/Ufat666802/overview

Gibsons https://enlighten.enphaseenergy.com/pv/public_systems/kcJV439648/grid/hours