SunEye News

April, 2008

Dear Solmetric SunEye users,

This newsletter provides some updates from Solmetric about the SunEye, including:

1. Solmetric web site adds self-help support
2. International Versions clarified
3. Software Version 2.6 (now available)
4. SunEye User Tip

As usual, we welcome your feedback on this information and on our products. Thank you again for choosing the SunEye.

Solmetric web site adds self-help support

The Solmetric web site was recently updated with enhanced capabilities:

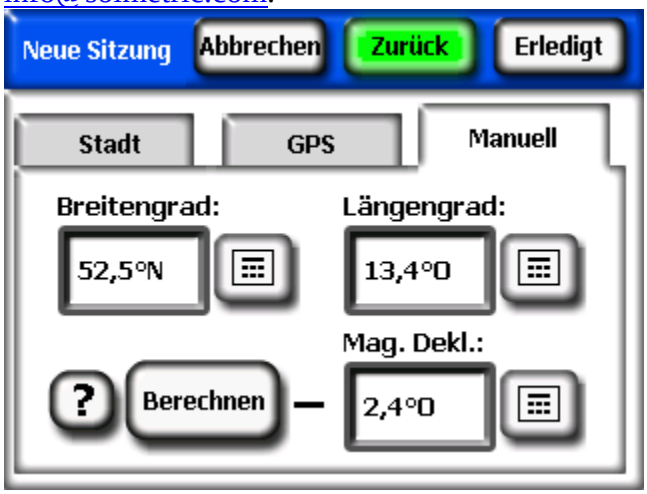
- On-line self help support. Many of the most common questions and answers are available within the support section, with a convenient keyword search. This means you can get assistance 24x7. Of course, we still welcome your calls (1-877-263-5026) and emails (support@solmetric.com) if you need further assistance.
- Expanded on-line store. Now it is easier to purchase not only the SunEye on-line in various configurations, but also the accessories and replacement parts as well. A screenshot showing the website is shown below.

Have a look at the site at www.solmetric.com, and let us know what you think.

International Versions clarified

With the right configuration, the SunEye can be operated anywhere in the world. Here are some considerations about SunEye operation outside the United States.

An international license enables SunEye operation outside the US, and enables the user interface to be in languages other than English. German is the only other language available right now, but several other languages are currently under development. This license is normally factory enabled prior to shipment. However, if you need to upgrade a US version to have worldwide operation capability, please contact us at info@solmetric.com.



Another consideration is which hemisphere you will operate in. For the northern hemisphere, the compass is oriented to point south – toward the sun path -- when Skylines are snapped. For the southern hemisphere, the compass is reconfigured to point north when Skylines are snapped. So there is a hardware difference in these versions. Note: the SunEye software knows your location, and provides the proper instructions. It is possible to use a single SunEye in both hemispheres. In one hemisphere, you will need to point south when the compass says north or vice versa. But don't worry, the SunEye interface will guide you through it!

In addition, US units come with a one year warranty, and international units come with a two year warranty.

Software Version 2.6 (now available)

The latest software adds a few enhancements:

- Automated checks for software updates over Internet. The automatic check can be enabled or disabled, and if a new version is found, you can download now or later.
- When acquiring the first Skyline in a new session, the user can define the default panel tilt and orientation for the session, so it does not need to be reentered for each Skyline. After snapping the first skyline, the user is reminded to verify the open sky vs. obstructed sky auto detection.
- On the desktop software, the panel orientation can be changed on all skylines in a session.
- When selecting which Skylines to include in the "Session Solar Access Averages" or exported in a report, individual skyline details can be seen on the selected skyline.

To download the latest, visit the support page at www.solmetric.com.

SunEye User Tip: Interpreting solar access results

A common question for SunEye users is what the percentages mean? If the SunEye says solar access is 80%, what exactly does that mean? 80% of what? What is the reference, ie. 100%?

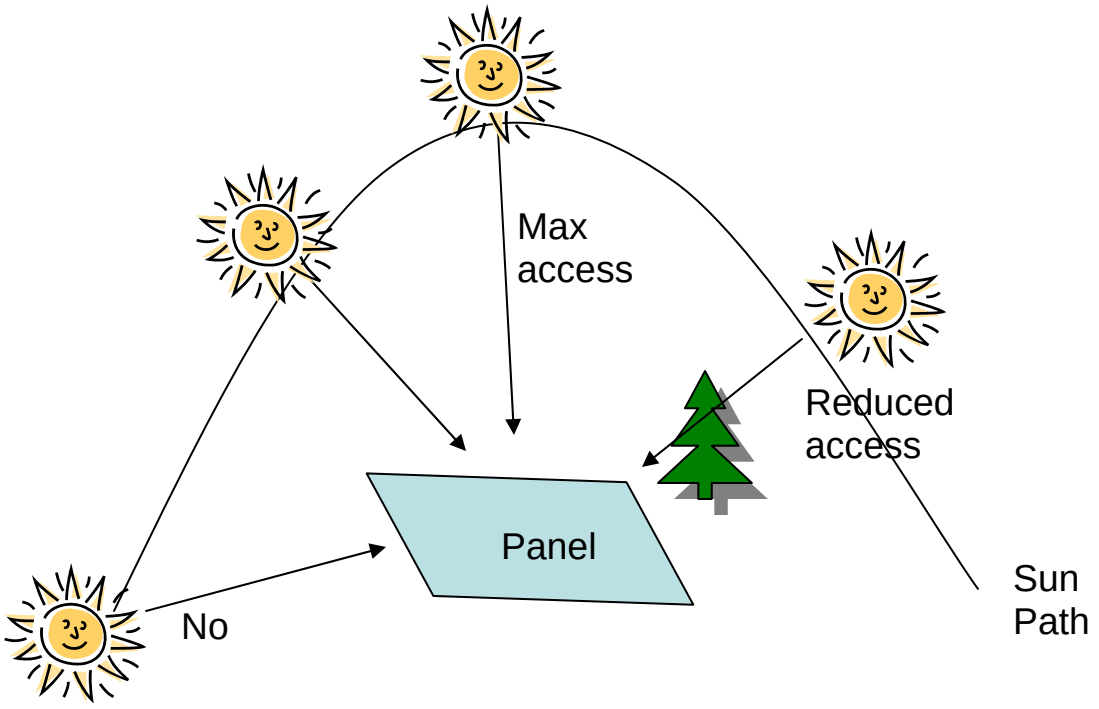
Well, here is an explanation that will hopefully help clarify this issue.

The Solar Access is defined relative to the insolation available on a surface with the panel at the tilt and azimuth specified by the user. “One hundred percent” is defined as the total amount of insolation incident on that surface without shade within the field of view of the surface. Note: it is therefore possible to have 100% solar access even when there is shade, so long as the shade is not within the field of view of the panel.

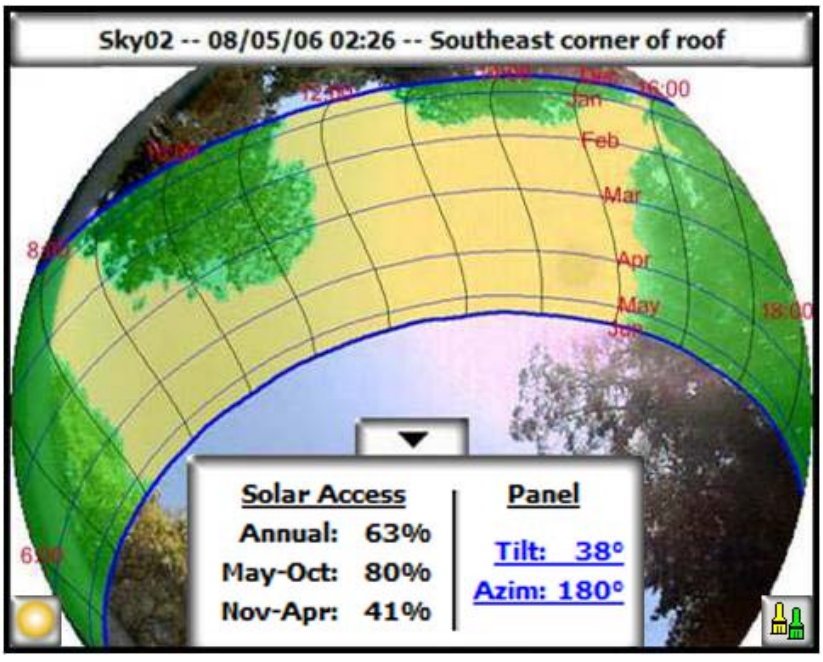
What is insolation again?
Insolation is the solar energy available over a specified time interval in a given area, expressed in Watt-hours/square meter. Irradiance is the instantaneous solar power incident on a surface, and is usually expressed in watts per square meter. Irradiance integrated over time equals insolation. The average irradiance arriving on the planet after passing through the atmosphere is commonly approximated to be 1000 W/m^2. Over a one hour period of full sun, insolation would be 1000 Wh/ m^2.

The solar access numbers reported by the SunEye are percentages that are calculated by first calculating insolation (kWh/m^2) for every 15 minute time interval, every 4 days, for the entire year. This insolation value includes NASA average historical weather data for the latitude and longitude set in the session. Next, the skyline data is analyzed to determine which 15 minute intervals throughout the year are shaded. The sum of the un-shaded 15 minute insolation values for a given period (for example 1 month) divided by the total insolation possible (assuming no shading) for the same period times 100 gives the solar access percentage for that time period.

This drawing illustrates some of the solar access concepts. Note that if the sun is behind the panel, there is no insolation and therefore no access. When the sun’s rays are normal to the surface – or as normal as they can get with the given sun path – then the solar access is maximized. Shade from obstructions causes reduced access. The SunEye calculates solar access in % compared to the total available for that surface in that orientation.



On the SunEye, you set the tilt and azimuth of the panel, and the solar access calculation uses these values. If you change tilt and azimuth after the skyline is captured, then the solar access values are recomputed. With the latest SunEye software version 2.6, you can change the tilt and azimuth and automatically re-compute solar access for all skylines in a session.



If you have any questions or inputs for our next SunEye News, please call us or send an email to info@solmetric.com. If you want to unsubscribe from this newsletter, please send an email to info@solmetric.com.