PV Watts

PV Watts is a powerful tool that is used to estimate the energy generation and cost of energy of grid-connected PV systems throughout the world. This calculator is useful in construction during both pre-construction and post-construction phases. During pre-construction, PV Watts may be used to determine estimated energy savings throughout the life cycle of the project. When pitching this idea to the owner, it is always helpful to have calculations that justify the investment. During post-construction, you may use PV Watts to meet your desired energy savings goal since the annual energy consumption is already known. For instance, if you wanted to reach Net-Zero in your home, PV Watts would give you a very close idea of how many PV Panels are required depending on what your energy consumption is.

Exercises:

Step 1: Input the address of the project. "St Pete Pier" and click go.

Step 2: Notice what the latitude is on this geographical location. Click the right arrow "Go to system info".

Step 3: Here, you will draw your PV System by going to the map and finding the 3 PV Roofs on the parking lot. *Note: You will have to do this exercise individually for each roof.

Step 4: Select the 4 corners of any of the 3 roofs to find the total roof area and click save.

Step 5: Select the following options:

- Module Type: "Premium"
- Array Type: "Fixed" (by default)
- System Losses: "14.08" (by default)
- Tilt angle: This is equal to the latitude on this geographical location.
- Azimuth: 180 (by default)

Step 6: Click on the right arrow to see the results. This will tell you the amount of energy that the roof is able to produce on a yearly basis. Save the results and do this exercise for the 3 PV roofs.

Step 7: Gather your results and input them into the "PV Panel Energy Calculator" Excel File. Remember to add the results of the 3 PV roofs. Also, you will have to input the annual energy consumption on the site under "Load Profiles"

Step 8: Analyze your results and provide your answer to the problem statement questions.