Worksheet #2: Black Rock Forest Electrical Energy Incidence versus Solar Energy Incidence

Instantaneous Solar Incidence
(W/m²)

Rate of arrival of solar energy upon one square meter of Earth's surface. Varies from minute to minute as sun rises and sets, as clouds come and go.

Average Daily Solar Incidence (W/m²)
Rate of arrival of solar energy upon 1 m² of Earth, averaged over 24 hours

Use a calculator to calculate the average daily solar incidence for this day: _________ W/m²
Procedure:

1. From the diagram, add all the watts of solar energy for the 24 hours of the day.

2. Find the average hourly rate.

3. Compare your answer to Column B (Average SI for Day) for February 4.

4. Look at the graph (above) and explain the curve.