Comparing Data Across Regions

This comparison is best done using schools with similar size and make of solar systems.

If you select schools which have different makes of solar system or different output capacity you will need to remember this when interpreting your results. The trends of increase or decreasing output throughout the study period will be able to be compared between systems of different size.

What you need to do:

- Select a number of schools, which are separated geographically.
- Find out as much as you can about the climate in the region in which each school is located.
- Mark each school on a map of the State or Australia.

1. What output trends do you expect from each solar system throughout the year? Consider day length and dry and wet season changes.

2. Do you expect the output trend throughout the year for each geographic location to be the same? Why?

- Record the total generation output for each day of your study for each of the schools you are analysing as detailed in "Analysing Solar School Data".
- Graph each school's output data by day/week/month across your study period
- Compare the graphs from the different regions

3. Does the output from each region change in the same way across the seasons?

4. How do these results compare to the trends you expected?

5. Are the results consistent with the general climate information you obtained for each region?

6. Would you have expected these results when compared to the actual solar radiation maps for the same measurement times?

7. Do you believe temperature and/or humidity may be factors in the output results? Design a method to test your belief using the temperature and humidity maps offered by the Met Bureau (www.bom.gov.au).

8. If you studied schools with different makes of solar arrays does the data suggest there may be a difference in efficiency under different climatic conditions? Explain your ideas.