

The Light Towers

Activity - The Energy

Each tower has 140 halide lamps each being 2000 watts (NB. The average household light globe is 60 - 100 watts). When the floodlights are turned on, the system uses 1.8 megawatts or enough energy to run 700 - 1000 houses. The cost of electricity to power the lights is \$200/hr.

- How much does each light tower cost to run per hour?
- The lights for night football are turned on at 5.00pm and remain on until 11pm. How much will it cost the MCG to run the lights for this period?
- If there are 22 night games held at the MCG, what will the power bill for the lights be at the end of the season?

Now look at the power your family uses at home:

- How much does your power bill cost for an average billing period (eg. 3 months)?
- Estimate the cost of your power bill for a 12 month period.
- How long would this money keep the lights at the MCG turned on?

Challenge!

Work in a small group to create a 5 point action plan to reduce the power costs at school and at home.

FACT FILE

There are six light towers at the MCG, which were switched on in 1985.

Each tower is approximately 75m high or the equivalent of a 24 storey building. Each tower weighs about 130 tonnes. The diameter of each tower reduces from 4.2m at the base to 2 metres at the top. The towers are hollow and contain ladders connecting 12 to 14 landings. The system cost \$4.9 million to install.

