

## The use of floodlit sports fields and how to pay for it.



**Floodlighting** of sporting ovals requires the installation of floodlights on normally 4 (and sometimes 6) lighting towers. Each tower will then be equipped with sufficient armatures to provide the required lux level for the entire field.

With electricity cost continuously on the rise there is, however, something to be said to limit the lighting to only that area that is being used while still maintaining the specified lux level. For instance, for an AFL oval of 185 m long and 155 wide, lighting up the entire oval for a fitness session with 20 people can be seen as a total overkill.

Ideally it would be possible to control only parts of the field depending on its usage. Of course, if you are going to do that you want to make sure that the sporting club making that decision is going to be awarded for it. The easiest way is to reduce their cost and link that to the cost of running the lights.

The cost is made up out of three components: 1) the electricity use, 2) the lamp replacement costs and 3) the maintenance cost including the installation of failed lights. Lamp replacement cost and maintenance cost can be worked out based on previous years of operation so a fixed figure can be used in the cost equation while kWh can be monitored.

The next thing to do is separate the venue hire cost from the light use cost so that the club is provided with an incentive to reduce expenditure. Providing them with the pole selection option (including light intensity) via a phone app, will make that easy and since the cost will be provided during and after light usage, it will bring home the actual cost to run the lights. This in turn will open up possibilities to further reduce light use by, for instance, running the lights at 50 lux for training and 100 lux during a game followed by switching off all but one pole at the end of the session for safe exit of the ground.

In all of this there will be winners on all sides: the clubs can reduce their expenditure to the council and the council can reduce its expenditure to the energy provider and lamp supplier (shorter usage means they last longer).

By using this type of system, the council can decide if they want to charge after usage by sending out invoices or using a pre-pay system with the credit being automatically deducted during floodlight use.

The control of individual poles and the light intensity selection may not always be available on existing sites however new technology in the use of the LED floodlights now allow for individual control of up to 64 lights per oval without the use of contactors.



For more information: please contact the Industrial Automation Group on 08 9300 1844 and ask for Henk de Graaf.