

## Report from EMS Consultant on Smart Controllers

Regarding Smart Controllers for the LED Streetlights I spoke with EE. The current status is that the Tender which went to market in September 2019 is that it is still in evaluation with EE proposing short listed suppliers to provide demonstration sites when COVID19 circumstances permit.

These trials will consider both the smart controller in the light, the network connection and master controller.

EE needs to determine if there is a business case for particular lights and determine the benefit split between EE and Customers to determine what the charge to Councils would be. The costs include:

1. The Smart Controller in the light
2. Assessment of any dimming profiles for the lights
3. Network establishment connection; and
4. Master Station establishment and maintenance
5. An ongoing more complicated asset to manage

EE are not in a position to discuss the element costs from the tender as it is still under evaluation.

The savings, ignoring costs are likely to be limited to:

1. The reduced cost of night patrols for CAT V Highway Lights - \$14 per annum per light
2. Reduced energy costs with dimming between 10:00pm and 5:00am of typically 40%

Category P 17W - Not practical to dim

Category P 32.5W Dimmed - Annual Saving \$6

Category V 80W Dimmed - Annual Saving \$15

Category V 150W Dimmed - Annual Saving \$28

It is likely that the Category P lights will not prove to have a viable business case. The 80W would be marginal and the 150W would likely be positive. But this all depends on the costs of the system and its ongoing management.

My recommendation is to proceed as it as only approximately 80 of the lights (150W) will have a positive business case and as there is an uncertain timeline on the availability of the Smart Controllers and there cost Council would be served to:

1. Review the availability and business case closer to the replacement programme; and if not viable or still unknown
2. Conduct the replacement programme and at some future time retrofit the 150W High Way Lights with the smart controller if the business case is proved out.