

## CASE STUDY

# AGL 120 SPENCER ST

V2.0, 08/11/17

### THE PROJECT

Mirvac Development (Mirvac) and Australian Gas Limited (AGL) have conducted an empirical energy performance comparison of Organic Response (OR) solution with a Networked Lighting Control solution to quantify the energy savings benefits derived from a Distributed Intelligence system. The project aimed to identify and quantify the savings attributable to the lighting control system only, thus the light fittings were not altered throughout the process. The site for this case study was AGL's head office on 120 Spencer St, Melbourne spanning approximately 400SQM.

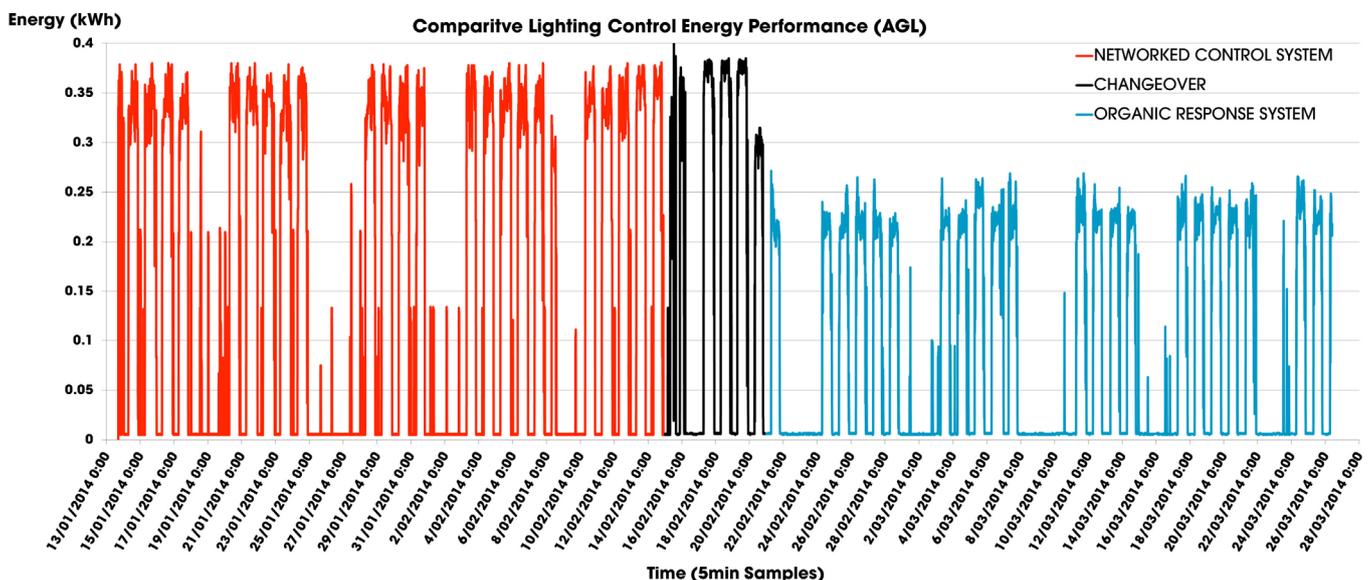
The project collected data from January to March 2014 and included sampling the kWh energy consumption of the lighting circuit in 5 minute time intervals; the subsequent analysis was conducted independently by consultancy firm WSP Lincolne Scott (WSP).

### ENERGY SAVINGS.

Organic Response delivered energy savings of ~46% compared with the networked addressable solution, the difference being entirely attributable to the controls only.

PARTNERS	MIRVAC & AGL
LOCATION	MELBOURNE, AUSTRALIA
RESULTS	46% CONTROL SAVINGS

PROJECT DETAILS	
INDUSTRY	Commercial Office
OFFICE TYPE	Activity-based working
LUMINAIRES	75 x 2x28W T5 Luminaire
EXISTING NETWORKED CONTROL SYSTEM	Interior Occupancy Switching Perimeter Daylight Harvesting
ORGANIC RESPONSE CONTROL SYSTEM	Distributed Intelligence: - per luminaire control of light level & dwell time - per luminaire response to daylight and occupancy
ENERGY SAVINGS	~46%



## CASE STUDY

# AGL 120 SPENCER ST

V1.0, 27/10/14

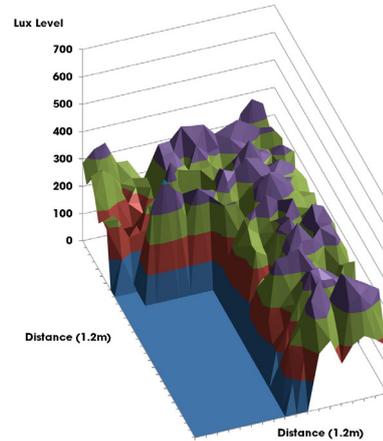
The increased sensor density of the OR solution allowed for a much simpler, more granular and effective optimisation process that saw the energy consumption reduce dramatically. The lights were able to respond more intuitively to the occupants and natural light within the space.

This resulted in occupants being largely unaware of any change in the work environment; indeed many of the occupants reported no noticeable change in lighting conditions throughout the case study period.

A detailed survey of light levels within the space was conducted under both control configurations. Light readings were taken at the working plane in a 1.2m x 1.2m grid. Due to a discrete Organic Response Sensor Node on each luminaire, the illumination levels throughout the space were optimal in relation to energy performance, while still maintaining Australian Standard illumination levels.

### ILLUMINATION LEVELS ATTRIBUTABLE TO CONTROL SYSTEMS

#### NETWORKED CONTROL SYSTEM



#### ORGANIC RESPONSE SYSTEM

