

# Sanofi Australia – North Ryde

## COOLNOMIX™ AC-01™ Trial – November 2013

### 1 SUMMARY

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The main server room at Sanofi Australia's North Ryde (NSW Australia) Head Office is air conditioned by two (2) Liebert (formally Emerson) dual compressor dedicated server room air conditioners. These air conditioners are operated as an alternate duty cycle configuration i.e. only one (1) system operates at any one time.

A total of two (2) COOLNOMIX™ AC-01™ with Optimized Refrigerant Supply (ORS) energy and temperature controllers were installed into each of the air-conditioners, complete with by-pass switches to isolate the COOLNOMIX™ AC-01™ from controlling the air conditioner.

Power monitoring of both air conditioners was performed between 5<sup>th</sup> and 15<sup>th</sup> of November 2013 by a Fluke 1735 digital power monitor set at 10 minute intervals and room temperature was also logged over the same period.

We were not made aware of when these air conditioners were "duty cycled" nor were we made aware of the switching off and on times of the COOLNOMIX™ AC-01™ energy and temperature controllers, it was up to us to advise Sanofi of these times and dates based solely on the readings taken.

### 2 RESULTS

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As advised, the total monitoring period was from 1:40pm 5<sup>th</sup> November to 12:40pm 15<sup>th</sup> November.

The duty cycle on the Air Conditioners were changed from PCU-1 to PCU-2 at 11am on 8<sup>th</sup> November, with COOLNOMIX™ AC-01™ on PCU-1 But not switched off between 5<sup>th</sup> and 8<sup>th</sup> so we have only considered PCU-2 for this analysis

From the 8<sup>th</sup> November till approximately midday on 10<sup>th</sup> November ( this was a Sunday so Sanofi do have some dedicated staff! ) the PCU-2 operated without COOLNOMIX™ AC-01™ and these were switched back on at approximately Midday on the 13<sup>th</sup> November (see graph below).

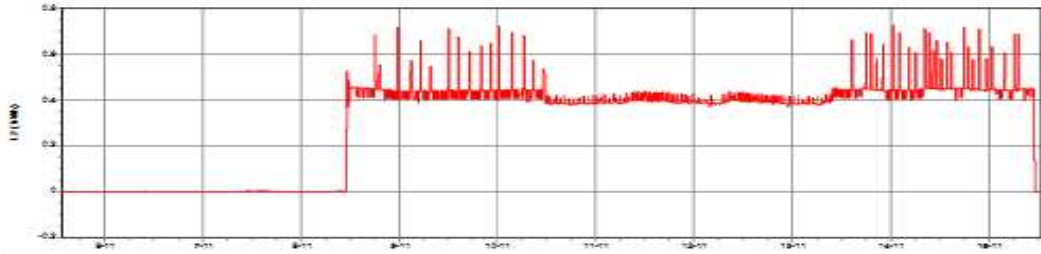
For the purpose of simplicity, and calculation of savings, we have only analyzed equal periods of "on" and "off" for the COOLNOMIX™ AC-01™ on the PCU-2 Air Conditioner. The times and dates used were Midnight on 9<sup>th</sup> November to Midnight on 10<sup>th</sup> November. See graph below.

Temperature stayed within 1 degree C throughout the test period.

The total observed kWh savings over this period – 24.31kWh

Total Reduction in Energy Usage - 15%

Based on an average cost of energy of 24 Cents/kWh - \$ 5:83 / day or \$ 2,128 / year



### Sanofi Adventis - North Ryde - Coolnomix Trial - Total kWh

