

# **Australian Industry Group – Managing your energy costs**



# Case Study - Ausgrid

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- Electricity distribution network across Sydney, Central Coast and Hunter regions
- provide power to 1.6 million homes and businesses
- Our network consists of:
  - over 30,000 substations,
  - 500,000 power poles,
  - 50,000km of below and above ground cables.
- Energy costs of about \$17m pa (~0.5% of revenue)

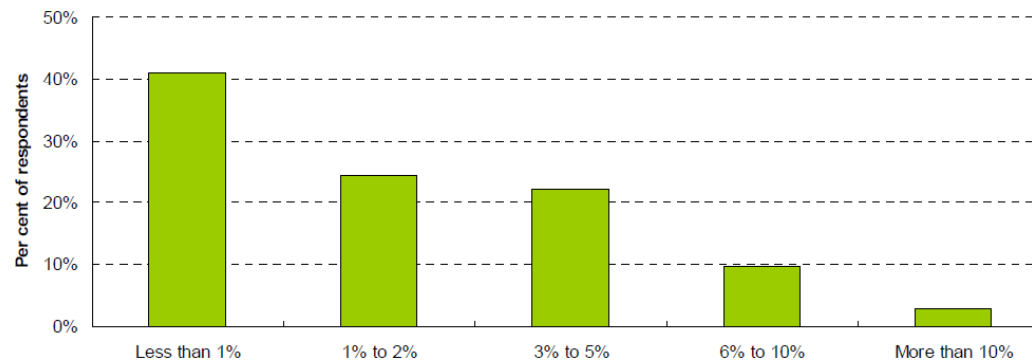


Figure 1 - company electricity spend as a percentage of sales in 2009-10

AiG, Energy Shock: confronting higher prices, Feb 2011

# Past performance

- Focused on improving customers energy efficiency rather than our own



- Plenty of ad hoc activities
- Limited focus on energy management

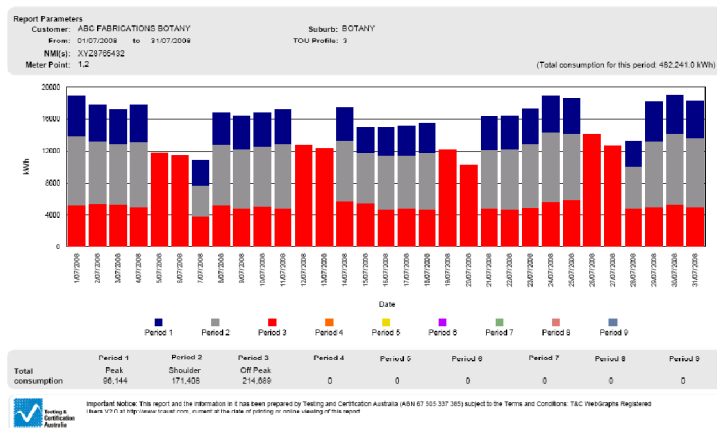
# Corporate Commitment

- Strategy developed and endorsed
- Annual action plan with corporate and individual performance targets
- Regular reporting to Executive



# Understanding

- Reviewed our energy bills
- Established data management systems to collect and record information
- Identified appropriate benchmarks to measure performance
- Reviewed energy use to understand how and where
  - incl. energy audits, sub-metering, spot metering



# Analysis

- Was critical to understanding the wealth of information
- Helped focus our efforts on key areas
- Key part of learning process

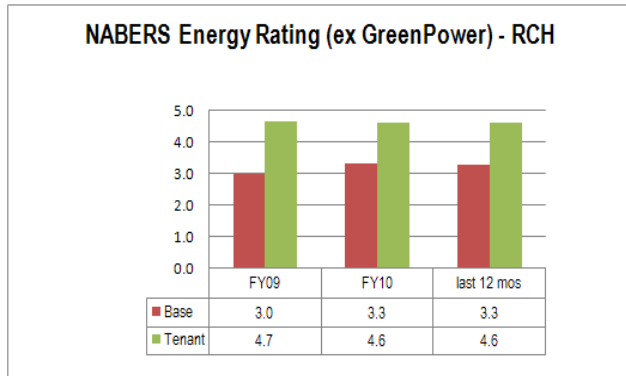
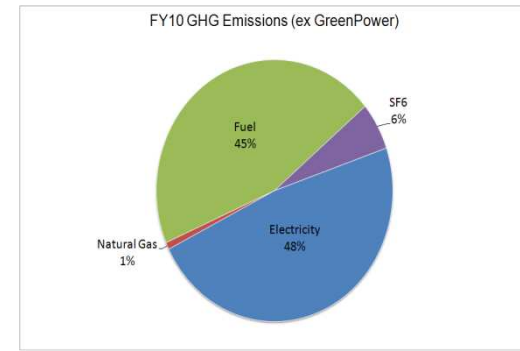


Chart: Average electricity use profile by day type.

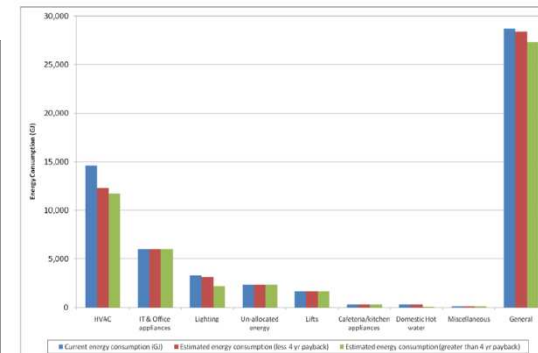
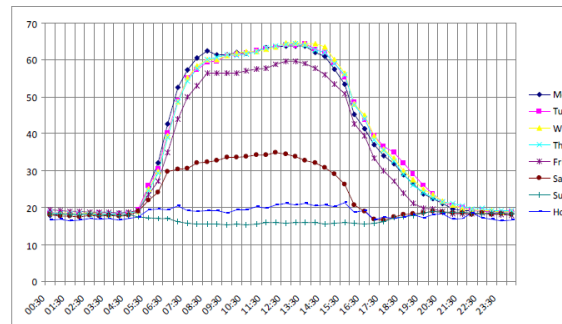
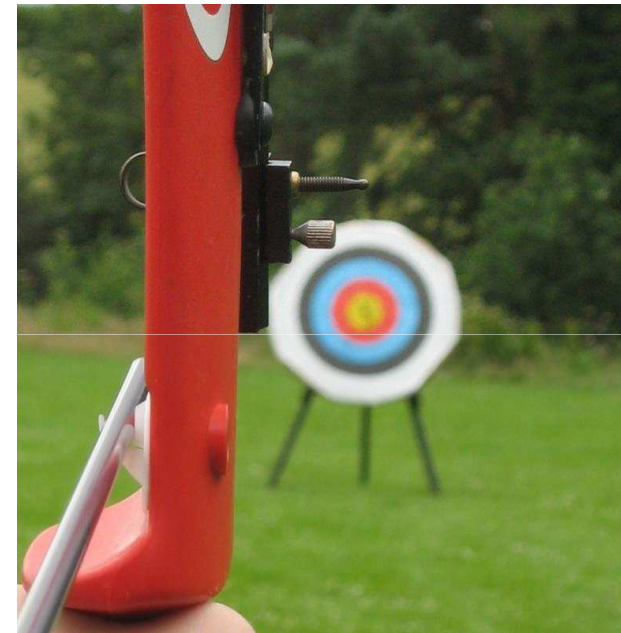


Figure 3-14 Energy consumption analysis by appliance

# Targets

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- Established quantitative reduction targets
  - Increase our average NABERS Energy rating to 4 stars
  - Improve the carbon efficiency of our fleet by 15%
- Provided important focus when developing actions



# Action

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- Focused on key areas – fuel and electricity use
- Some of the key actions were:
  - Vehicle selection guide
  - Eco-driving training
  - Building energy audits
  - Chiller replacement at 2 major sites
  - 6 star GreenStar Learning Centre



# Feedback

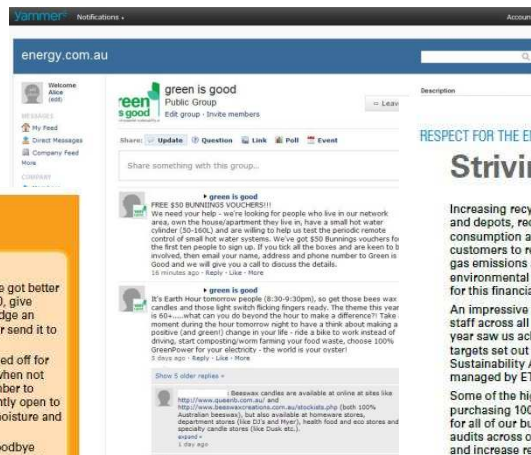
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- Measured and communicated results to staff
  - Operational staff eager to understand performance of individual projects
- Surveyed staff on their opinions – helps to build acceptance
  - Opportunity also to educate staff on changes



# Staff engagement

- Reinforced that energy efficiency and sustainability are not bolt-on, but business as usual
- Encouraged ongoing staff participation
- Educated staff to get the facts right
- Created two way communication to learn and adapt



### Second fridge challenge

If you have a second fridge that you use, our Demand Management & Sustainability group needs your help. Energy Efficiency Consultant **Robert Simpson** said we need staff to volunteer in a program to gather data about energy consumption.

"The data will be used for an on-line calculator that will assist our customers to reduce their energy use," Robert said.

"A second fridge over 15 years old, tucked out back on the veranda or in the garage, could be costing you more than \$250 a year in energy bills.

"In 2008 we surveyed our customers and found that around 30 per cent of households own a plugged-in second fridge that is rarely used.

"To help us understand how much the average second fridge costs to run, we want our people to volunteer their second fridge for an energy-use test."

"The results will be used to help our customers save on bills and tell you what your second fridge is costing."

**How you can help**  
If you are interested, email your name and the estimated age of your second fridge to 'Green is Good'. You will be given an electricity logger. All you have to do is plug it in with your fridge for a month, then return the logger to us.

A report will be sent to you telling you how much your second fridge is adding to your energy bill.

**Fridge tips**

- If you decide you've got better ways to spend \$250, give your old second fridge an extended holiday or send it to be recycled.
- Fridges can be turned off for extended periods when not needed, but remember to leave the door slightly open to avoid build up of moisture and mould.
- If it's time to say goodbye contact [www.fridgebuyback.com.au](http://www.fridgebuyback.com.au) or your local Council for fridge recycling options.

## RESPECT FOR THE ENVIRONMENT Striving for sustainability

Increasing recycling in our offices and depots, reducing water consumption and supporting our customers to reduce their greenhouse gas emissions are all on our environmental sustainability agenda for this financial year.

An impressive combined effort from staff across all divisions last financial year saw us achieve 99 per cent of all targets set out in the Environmental Sustainability Action Plan, which is managed by ET&T.

Some of the highlights included purchasing 100 per cent GreenPower for all of our buildings, carrying out audits across our sites to reduce waste and increase recycling, promoting electronic billing for customers and launching the successful hairdressing salon downlight replacement program.

Manager for Demand Management **Neil Gordon** said last year's results



had helped to develop our reputation as a leader on environmental sustainability.

"While we have always been pretty responsible in our business activities, our efforts in previous years have been disjointed," Neil said.

"So last year we developed a single, organisational wide strategy with specific action plans for each division.

"We hope another company-wide effort can repeat the same positive results again this year, and one of our key actions is to use the information we have gathered to revise the strategy with more specific, measurable, long-term targets.

"Our focus is on reducing our own greenhouse emissions, minimising environmental impact and supporting greenhouse gas reductions in the wider community."

If you would like more information or would like to be actively involved in the 2010 action plan, contact [greenisgood@energy.com.au](mailto:greenisgood@energy.com.au)

# What have we learned so far?

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- Corporate commitment was relatively easy once a clear vision was articulated
- Mixture of enthusiasm and indifference from staff – strategies for motivating staff important
- Measurement and understanding a continuous effort
- Staff training important to ensure improvements locked down
- External consultants can add considerable value but often require considerable staff time
- Need to use broad mix of communications channels for staff engagement – managers briefings best
- Target easy wins early to build momentum and acceptance

# Generation – Our experience

- Ausgrid owns and operates:
  - 6 solar power stations (550 kW total)
  - 1 wind turbine (600 kW)
  - 1 trigeneration plant (350 kW)
- Reliability is more important than efficiency
- Maintenance and operating costs are significant
- Grid connection issues – Ausgrid has license obligations to consider:
  - Public safety
  - Reliability of supply
  - Power quality



# Questions?

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