




CLIMATE  
LEADERS  
COALITION

ON A MISSION TO REDUCE  
EMISSIONS IN NEW ZEALAND



**Reducing  
energy use in  
commercial  
buildings**





# We are IAG

Our purpose is to make your world a safer place. A world where we can all live more boldly and enjoy life more freely.

This underpins how we support our people, our customers and our communities. It is evident in the insurance solutions we offer and in the active role we play in New Zealand.

We've been doing this since writing our first policy on the schooner Kiwi back in 1859. And through our brands AMI, State, and NZI, more than 1.5 million people across the country choose us as their insurer. That's about one in every two homes and businesses and three out of every five vehicles.

In total we protect more than \$600 billion worth of New Zealand's assets and pay \$1.2 billion worth of claims each year.

That provides our customers with the confidence to get on with their lives knowing that should something go wrong, we're there for them.

Our purpose also sits at the heart of our response to climate change. Without immediate and sustained action to reduce emissions, the world we live in will not be safe. Reducing energy use in our commercial buildings is an important part of this. That's why we are proud that our Christchurch office currently has the highest NABERSNZ whole building rating in New Zealand.

# Commercial buildings


All of us work in buildings that contribute to New Zealand's greenhouse gas emissions. For some this can be a big part of their carbon footprint. Reducing these emissions is key.

## New Zealand's commercial buildings:

 **6.3**  
Million KWh of energy use  
per year<sup>1</sup>

 **173**  
KWh per square metre  
per year<sup>1</sup>

 **750,000**  
tonnes of carbon produced  
per year<sup>2</sup>

 **19**  
kg of carbon per square metre  
per year<sup>2</sup>

<sup>1</sup> Building Energy End-use Study (BEES) Part 1 Final Report, BRANZ, 2014.

<sup>2</sup> Calculated using the 2014 emission factor for the consumption of purchased electricity published by the Ministry for the Environment.





# Reducing energy use

Green Star buildings are just the beginning. They can be designed to minimise energy use but how they are managed and operated needs to be continually reviewed. Measurement and monitoring are key. Here's how.

**Conduct energy audits.** Energy audits are needed periodically, particularly on large sites, to understand the main components of energy use and recommend improvements.

**Focus on big-ticket items.** Air-conditioning, heating, blinds, and lighting need special focus as they make the biggest impact on energy use. Blind control helps reduce the amount of lighting and cooling needed. LED lighting is now high quality and relatively cheap.

**Optimise Building Management Systems (BMS).** BMS can help with energy reduction but still need monitoring and adjustment to ensure they work optimally, for example, ensuring lighting zone sensors turn on after hours.

**Measure energy use at each site.** It is essential to track energy use at each site every month. Abnormal changes and trends can be tracked and investigated and changes made. It is easy for air-conditioning systems or lighting to be left running at night through faulty programming.

**Consolidate.** Review and consolidate the space use within and across your buildings to ensure each is fully utilised.

**Be flexible.** Consider introducing flexible desking where only 80-85% of desks are needed for the number of staff. Also consider introducing flexible working arrangements so staff can flex their hours, days and work locations, including at home. Less space is needed, along with less energy to run it.

**Work with your landlord.** Where possible agree with your landlord to include energy efficiency targets in your lease agreement.





# Achieving wider benefits

A wider focus on buildings can produce benefits for your staff, your business, and New Zealand's environmental performance.

**Location.** Review your building locations to ensure they are close to public transport hubs to help increase the number of staff that use buses and trains to get to work.

**Facilities.** Provide facilities that encourage biking and walking, for example free bike storage, showers, and lockers.

**Materials.** Use sustainable building materials in your fit out and recycle where possible.

**Quality.** Higher quality materials will generally mean a higher quality finish that lasts much longer with less maintenance. This not only reduces costs in the long-run but reduces the frequency of new fit outs.



# IAG's starting point

IAG has measured its emissions since 2005 and been carbon neutral since 2012. Energy use was our third biggest source of emissions behind fuel and air travel and was growing. 2008 is when this started to change.



**5,416**

MWh of electricity used in our 47 buildings, which equated to 2.61 KWh per employee



**1,056**

tonnes of carbon or 510kg per employee



**30%**

of IAG's total emissions



NZI Centre, Auckland





NZI Centre, Auckland

# The NZI Centre

In 2009 we brought together over 700 of our people into the award-winning NZI Centre, our head office in Auckland. This was our first major step in energy efficiency and remains an exemplar.

## The NZI Centre is:

**5½ star** NABERSNZ base build rating (2015).

**5 Green Star** Design, 5 Green Star fit out.

**Winner** of the 2010 New Zealand Institute of Architecture sustainability award.

**Winner** of the 2010 Property Council of New Zealand Supreme Award.

## Through this move we achieved:



# 40%

reduction in energy use  
on previous buildings



# Refitting Show Place

In 2015 we completed a new fit out of 14 Showplace, our main office in Christchurch and home to 700 of our people. This was made possible by a lease agreement that commits us and our landlord to a 4 to 5-star NABERSNZ rating.

## The refit included:

**Lighting.** Introducing LED lighting, zone occupancy sensors, and daylight harvesting that adjusts lighting depending on natural light levels.

**Air-conditioning/Heating.** Installing a new heating, ventilation and air conditioning (HVAC) system and CO<sub>2</sub> sensors, which also helped to double fresh air supply.

**Water Heating.** Installing a new heat pump system.

**BMS.** Installing an intelligent Building Management System.

## Through this refit we achieved:



# 38%

reduction in energy use, from  
178 KWh per m<sup>2</sup> to 116 KWh per m<sup>2</sup>



# 5½ star

NABERSNZ whole building rating,  
the highest in New Zealand







20 Customhouse Quay, Wellington

## 20 Customhouse Quay

In 2018 we moved into 20 Customhouse Quay, our main office in Wellington and home to over 300 of our people. The move provided a safer and more flexible workspace for our people.

**20 Customhouse Quay is:**

**5 Green Star** Base Build Design.

**100%** Flexispace.

**180%** of Building Code for Seismic Strategy.

**Through this move we achieved:**



**25%**

reduction in floorspace  
on previous building



**18%**

reduction in lease and  
operating costs on  
previous building



**50%**

reduction in energy use  
on previous building

# Moving into Sylvia Park and Albany Hubs

By 2019 we will have future-proofed the business by consolidating over 700 of our people into two new buildings in the hub areas of Albany and Sylvia Park, bringing benefits to our people, business and the environment.

## Moving into the hubs includes:

**Consolidating** 8 sites across Auckland into 2 new hubs.

**100% Flexible desking** arrangements.

**Proximity** to public transport and other amenities.

## Through this consolidation we expect to achieve:



**36%**

reduction in floorspace  
on previous buildings



**37%**

reduction in lease and  
operating costs on  
previous buildings



**40%**

reduction in energy use  
on previous buildings







NZI Centre interior, Auckland

## IAG's outcomes

Since 2008 IAG's property portfolio has undergone significant growth and turnover. We now lease 79 buildings, ranging from small rural stores within our AMI network, through to large call centres and offices. A steady focus on improving energy efficiency through new fit outs and the leasing of new Green Star buildings has been rewarded.

Since 2008 we have achieved:



**25%**

reduction in energy per person,  
from 2.61 KWh to 1.97 KWh<sup>1</sup>



**19%**

reduction in energy per m<sup>2</sup>,  
from 0.159 KWh to 0.129 KWh<sup>1</sup>

<sup>1</sup> Excludes outsourced data centres to ensure like-for-like comparison.



# NABERSNZ

NABERSNZ is a tool to rate the energy performance of buildings. It uses a star rating to show your energy performance and how it compares to other businesses and buildings.

## Three types of ratings are available:

**Base Building energy use** measures the energy performance of a building's core services – lifts, stairwell lighting, common toilets, air-conditioning and ventilation etc.

**Tenant energy use** measures the floors or areas occupied exclusively by the tenant, including energy use such as computers, lighting, data centres and staff kitchens.

**Whole building** combines base building and tenant energy use.

## Buildings are rated on a 6-star scale:

- 0 stars** very poor performance
- 1 star** poor performance
- 2 stars** below average performance
- 3 stars** good performance
- 4 stars** excellent performance
- 5 stars** market-leading performance
- 6 stars** aspirational performance

Adapted from the National Australian Built Environment Rating System, NABERSNZ is licensed by EECA Business and administered by the New Zealand Green Building Council.





# Access to expertise

Please contact Tim Griffith on [tim.griffith@iag.co.nz](mailto:tim.griffith@iag.co.nz) if you'd like to know more.

For more information refer to:

[www.eecabusiness.govt.nz](http://www.eecabusiness.govt.nz)

[www.nzgbc.org.nz](http://www.nzgbc.org.nz)

[www.nabernsnz.govt.nz](http://www.nabernsnz.govt.nz)

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