



## THE POTENTIAL IMPACTS OF CLIMATE CHANGE & CLIMATE CHANGE POLICY ON NEW ZEALAND RETAILERS<sup>1</sup>

### SUMMARY

From January 2008 the Government's emissions trading scheme will hit the New Zealand economy as a key platform to achieve the country's obligations under the Kyoto Protocol with the 1<sup>st</sup> commitment phase starting in 2008. However the pace of change in consumer attitudes to climate change since Al Gore's "An Inconvenient Truth" and the Stern report has seen global retailers and the consumer goods industry taking action to reduce their own carbon footprint and increasingly to influence the purchasing choices of their customers. This paper looks firstly at the impact the NZ Emission Trading Scheme (ETS) policy could have on our New Zealand retail market and secondly considers how retailers around the world are responding to climate change.

### CLIMATE CHANGE POLICY

Emissions trading as outlined by the Government will impact in a phased introduction process:

- 1** Forestry is the first sector to enter the scheme on 1<sup>st</sup> January 2008.
- 2** Liquid fuels including diesel and petrol are required to be part of the scheme from 1<sup>st</sup> January 2009. At today's market price of ~NZ\$30/tonne CO<sub>2</sub> this will increase fuel price by an estimated 8 cents per litre. Fuel providers are liable for trading credits which they will need to collect and then pass on to the Government. The costs associated with this will be passed through the supply chain impacting retailers in increased cost of goods.
- 3** Coal; natural gas and geothermal energy will come on board on 1<sup>st</sup> January 2010. The liability falls on the fuel providers but some electricity generators may opt into the scheme and trade directly. Retailers will see an increase in price come through in their gas, electricity and coal purchases.
- 4** Agriculture does not come on board until 1<sup>st</sup> January 2013 and farmers are not exposed to the full price of their carbon emissions until 2025 however retailers will start to see an increase in the price of farm produce much sooner as transport and processing of produce will be hit by the increased energy prices. After 2013 costs will increase markedly.

**All goods and distribution costs will increase through a hike in energy costs which will lead to an overall price of goods increase. The first inflation spike will come in 2009 with subsequent spikes in 2010, 2013 and ongoing.**

<sup>1</sup> Prepared for the New Zealand Retailers by Lyn Mayes with expert input from Stuart Frazer of leading independent climate change and energy sector consultancy Frazer Lindstrom.

## WHAT SHOULD RETAILERS BE THINKING ABOUT?

- 1** As retailers renegotiate their supply contracts they need to factor in the price of carbon and be careful about what sort of contracts they sign. Some companies will have cost plus contracts as well as a Consumer Price Index (CPI) linked contracts and could be hit twice.
- 2** Once the price of carbon is flowing through the economy, effectively all energy purchased is carbon neutral (because the fuel companies are factoring in the price of carbon). So companies that are already voluntarily offsetting their carbon emissions through EBEX or other schemes will pay again through the CPI increase in 2009. Accordingly businesses which are looking to go carbon zero between now and 2009 need to consider an exit strategy. Brands that adopt carbon neutrality as part of their sustainability leadership may find that the downside of stopping their own voluntary offset scheme is worse than the upside of joining the bandwagon.
- 3** Even if retailers buy renewable electricity to reduce their carbon footprint, they will still be hit by the pass through of carbon pricing so purchasing renewable energy will not be cheaper.

Retailers will not be direct participants in the emissions trading scheme but will be affected by the pass through of carbon trading in the economy. There will be an increase in the direct cost of fuels etc which will drive up the cost of all New Zealand made products and their transportation. The manufacturing costs of imports will not be affected although the cost of transporting them within New Zealand will increase. New Zealand's major trading partners in Asia Pacific, Australia and the UK are not pricing carbon in this way hence goods manufactured locally will likely have a higher price than imports. This may lead to NZ manufacturers moving off shore. Retailers will therefore need to consider ongoing security of supply for their consumer products.

## WHAT TO DO ABOUT IT? REDUCE OPERATIONAL COSTS

Retailers can reduce their costs by taking steps now to reduce their use of electricity and fossil fuels. Information on how to is available on [www.eeca.govt.nz](http://www.eeca.govt.nz). However key considerations for retailers are:

- 1** Consider energy efficient technology in new store fit outs. There can be a large difference in the energy ratings of store appliances available. Look for appliances with the ENERGY STAR.
- 2** In store lighting can be achieved at lower operational costs by
  - a. using energy saving compact fluorescent lamps (CFL's), particularly for lights used more than four hours a day;
  - b. replacing 36mm fluorescent tubes with 28mm triphosphor tubes; and
  - c. installing light sensitive switches for external and security lighting
- 3** Energy efficiency can be applied to all types of refrigeration equipment such as reach-in, walk-in, and under the counter refrigerators/ freezers. Select the most energy efficient replacements.

## WHAT ARE NEW ZEALAND COMPANIES DOING?

*Retailers, service sector and brand owners.*



The Warehouse has a software program which automatically controls lighting, heating and air conditioning across the entire retail chain from one central office. In seven years, the air-conditioned volume of stores has increased but this has not been matched by a commensurate rise in power usage. Energy consumption is measured each half hour in each store. The stores have no light switches as lighting is controlled by the system, which responds to the lighting levels and time of day.

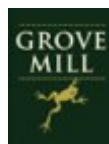


BP New Zealand operates 15 service stations with solar canopies throughout New Zealand.



Accor Hotels has calculated the cost savings from introducing 35W energy saver bulbs for its hotel chain. The five year saving for just one hotel by buying the 5000 energy efficient light bulbs is \$185,000. Over the whole group the power bill saving alone is more than \$1 million.

One hotel uses 5000 common 50 watt light bulbs, burning 4368 hours a year, using 1.092 million kilowatts a year. Their average rated life is 1000 hours. It costs \$110,000 to buy the bulbs over five years, when they'll need replacing 22 times. While energy saver bulbs cost \$223,750 to replace over five years, more than twice the price of ordinary bulbs, their average rated life is 4000 hours each. They need replacing five times over five years. The power cost over five years falls from \$655,200 to \$458,640. Another significant benefit is the engineering time saved in bulb changes. It falls from \$550,000 to just \$125,000 over five years.



Over 5 years, the winery has cut energy consumption by 30% while raising output by 20%. It is the first NZ winery to become carbon neutral through Landcare Research which has resulted in increased sales in UK.

## WHAT IS HAPPENING OVERSEAS FROM ACROSS THE RETAIL SPECTRUM?

### EXAMPLE 1

#### **Boots Group PLC - UK pharmacy introduces energy efficiency in processes and transport**

- Generates virtually all its own power from a highly efficient combined heat and power plant at its Nottingham manufacturing and distribution centre.
- Increased double-deck trailers in fleet to 41 which saves 5.2 million kilometers and around 1340 tonnes of CO2 emissions.

### EXAMPLE 2

#### **Woolworths Australia – Supermarkets improve in store energy efficiency**

- Refrigeration service providers asked to cost-effectively improve system energy efficiency while maintaining product temperature and system up-time. By identifying high output sites and those that could be tuned remotely, substantial improvement was noted in the performance efficiency of many supermarket refrigeration systems (and an associated reduction in operating costs).
- 35 stores were retrofitted with heat reclaim systems that utilised the waste heat out of the refrigeration compressor to provide warm water for heating in store air-conditioning systems.
- Trials to examine the potential to integrate doors into upright freezers that require no frame heating. Heat is still required on the glass on the door but the frame design is made of plastic and does not require heating.
- All grocery aisle lighting use T5 lighting which consumes 40% less energy, has twice the lamp life compared to conventional lighting tubes, and has little degradation (or light output reduction) over its operating life.
- Woolworths, in partnership with a transport service provider in WA is using gas powered trucks from the Distribution Centres to supermarkets. The new trucks run on compressed liquid natural gas (LNG), which produces fewer greenhouse gases and less pollution than diesel fuel.

### EXAMPLE 3

#### **STAPLES – US office products company includes energy management in negotiations with landlords**

Staples sets high standards for new buildings and stores to ensure that they are energy efficient. In negotiations with real estate and landlord partners, company aims for total control over energy management; including submetering stores and other locations so that energy consumption can be measured and costs are not hidden within lease maintenance charges.

### EXAMPLE 4

#### **GAP – US clothing chain tackles energy consumption and minimizes waste**

- Global Distribution Centres have reduced energy usage by resetting thermostats; replacing standard light fixtures with energy-efficient ones; reducing or eliminating excess lighting; and installing automatic controls for shutting off conveyor systems.
- Fly ash (a by-product from burning coal) was used in concrete of GAP building. This diverted 1,800 tons of the ash from landfills and eliminated approximately 2,000 tons of carbon dioxide emissions that would have been generated during cement production.

## CLIMATE CHANGE - THE BIGGER PICTURE FOR RETAILERS

**Sir Terry Leahy, CEO Tesco UK:** *"The market is ready, customers tell us they want our help to do more in the fight against climate change. We have to make sustainability a significant driver of consumption."*

Retailers particularly in Europe and the USA have started to implement strategies to influence consumer behaviour and to reduce their use of the world's resources not just for environmental reasons but to drive economic benefits.

The NZ Institute's "we're right behind you" questions the extent of changing consumer behaviour finding that research confirms the existence of a 'Green Gap': the difference between what people claim they will do and what they are actually doing to lower their contribution to emissions.

## GLOBAL RETAILER RESPONSE

### 1 "FOOD MILES"

This is a high profile issue which is being debated at the scientific, economic and political level. However whatever the science global retailers and brand owners have recognized a marketing edge. UK company Dairy Crest launched a NZ\$50m ad campaign in July 2006 backed by the UK's National Farmers' Union inviting people to think carefully about what butter they choose. Tesco has allocated NZ\$15 million to Oxford University for research on how to calculate the carbon content of its products so that it can introduce a carbon calorie counter on its range of products. Marks & Spencer has committed to labeling products that have been flown in.

*Any company that wants to label products with their manufacturing and distribution carbon impact needs to use a methodology that can be externally verified.*

However this issue is much wider than food. German general merchandise retailer OTTO Group aims that over 70% products are transported by ship or by combined sea-air transport. It cites the example of a single T-shirt which takes six days by air to be freighted from Hong Kong to OTTO's distribution centre in Frankfurt am Main. In the process, over two kilos of carbon dioxide are emitted per T-shirt. Transporting the goods by container ship takes about 23 days, but generates only 0.13 kilos of carbon dioxide emissions per shirt. Apart from the ecological component, this also has a clear economic advantage: according to a review of the years 2000 to 2003, it cut transport costs by 2.16 million euros.

### 2 RETAILER RESPONSIBILITY FOR PACKAGING

The New Zealand Retailers Association is part of the Packaging Accord signed by industry with local and central government and the recycling operators in 2004. One of the key commitments is to reduce the use of plastic bags by 20% over five years.

Globally retailers are putting pressure on suppliers to improve the sustainability of their packaging:

- a. Marks & Spencer (UK) has set a target for all packaging and clothing to be biodegradable or compostable and for all paperboard packaging to be certified to a sustainable forestry accredited scheme.
- b. Walmart (US) has told suppliers to reduce, reuse, recycle packaging *at cost parity or savings.*

### **3 SUSTAINABLE CONSUMPTION – *not consuming less just consuming differently***

Retailers have an opportunity to influence the consumer goods which we buy. Ongoing the New Zealand Government's climate policy is likely to increase product labeling around energy efficiency; fuel efficiency labeling is already planned for our vehicle fleet to bring New Zealand in line with Europe; and incentives may be offered to encourage uptake of newer more energy efficient technology.

There is a daily diet of stories in newspapers and consumer magazines about the comparative impact of consumer products. This is no longer an issue confined to the "green pages". Retail outlets will be expected to provide their customers with information about these "greener" products. Sales staff will be in the front line. Energy Star rated products provide details of their energy efficiency.

In Australia, for example, the website <http://www.comparison.com.au/> helps shoppers to sort TV models by their energy efficiency rating and the amount they cost to run per annum.

In the UK B&Q has introduced wind turbines and solar panels to the list of products sold through its Home and Garden stores which is bringing affordable and green home energy to the mass market for the first time.<sup>2</sup>

### **4 CHANGES IN SEASONALITY**

Climate change is having an impact on when purchases are made. In the UK the DIY market enjoyed a bumper trading period over Easter due to unseasonal hot weather. Clothing retailers are also susceptible to weather patterns and the ability to factor in climate change is likely to become a commercial advantage. Some retailers have incorporated a weather forecast module in their merchandise forecasting to take advantage of the climate by introducing seasonal items at short notice. American retailers, including Liz Claiborne Inc, Target and Kohl's, are turning to climatologists for advice about global warming and what clothes to sell when.