



Transport and carbon emissions: current Australian responses and dilemmas

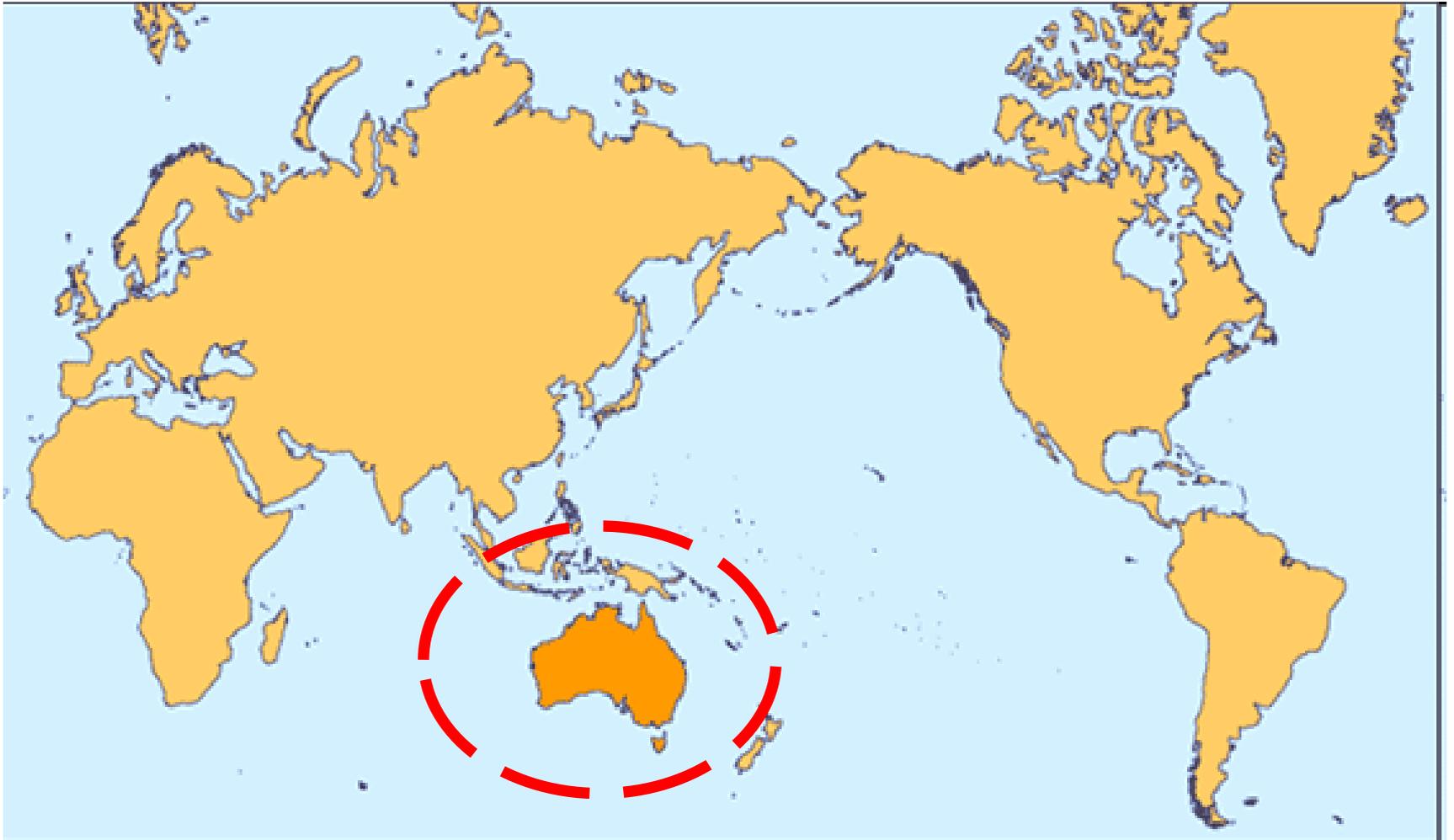
Dr Matthew Burke
Research Fellow

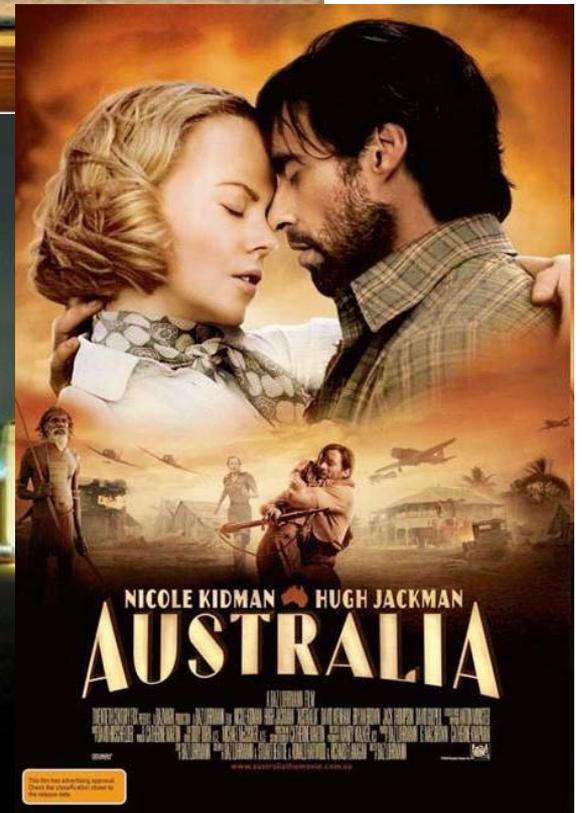
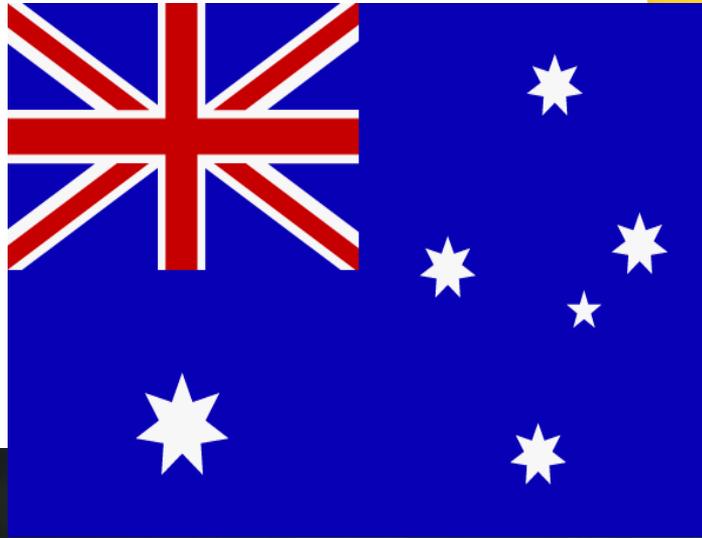
Transport and carbon emissions:

current Australian responses and dilemmas

- Introduction to the Australian context
- Examine the socio-spatial and political context and the dilemmas it creates
- Review Australia's initiatives
 - Living Greener
 - Carbon Tax
 - Parking restraint
 - Intelligent transport systems
 - Behaviour change programs.

Where is Australia?

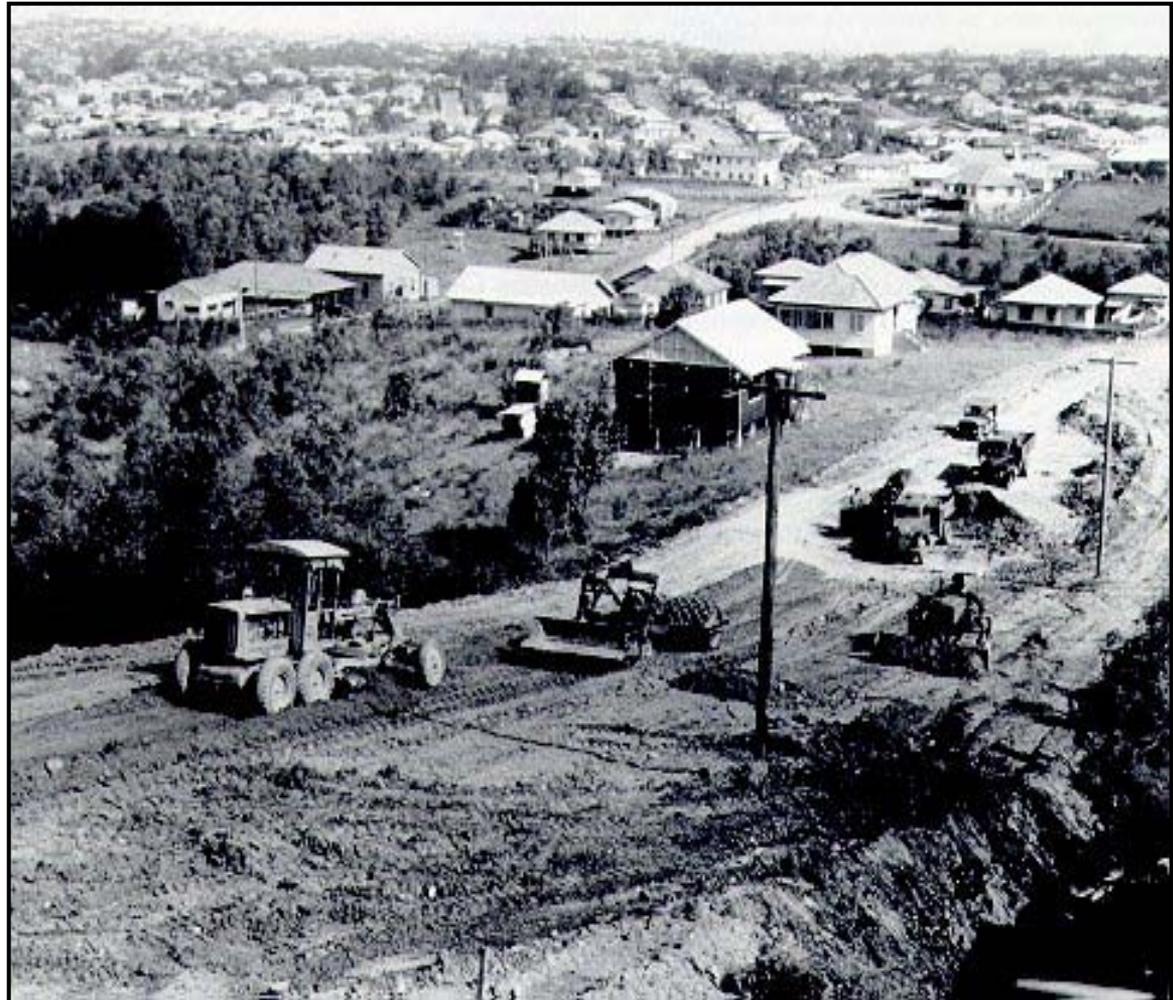




Urban transport is responsible for
~15% of Australia's Greenhouse
Gas Emissions, and growing



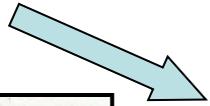
- **Car-based suburbia has been the dominant Australian urban development model for more than five decades**



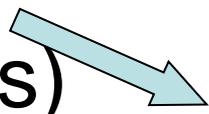
**Suburb
construction,
Brisbane 1952**

Brisbane's Transport History (a very brief summary)

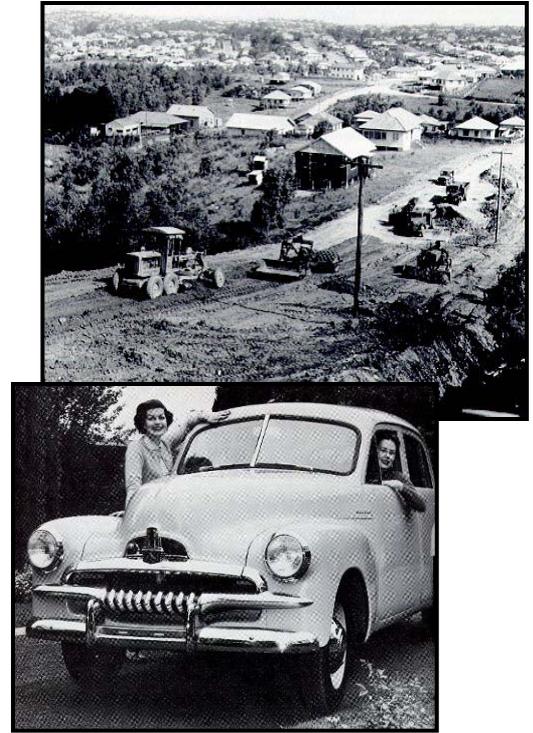
Walking
city



Rail city
(~1900
to 1960s)



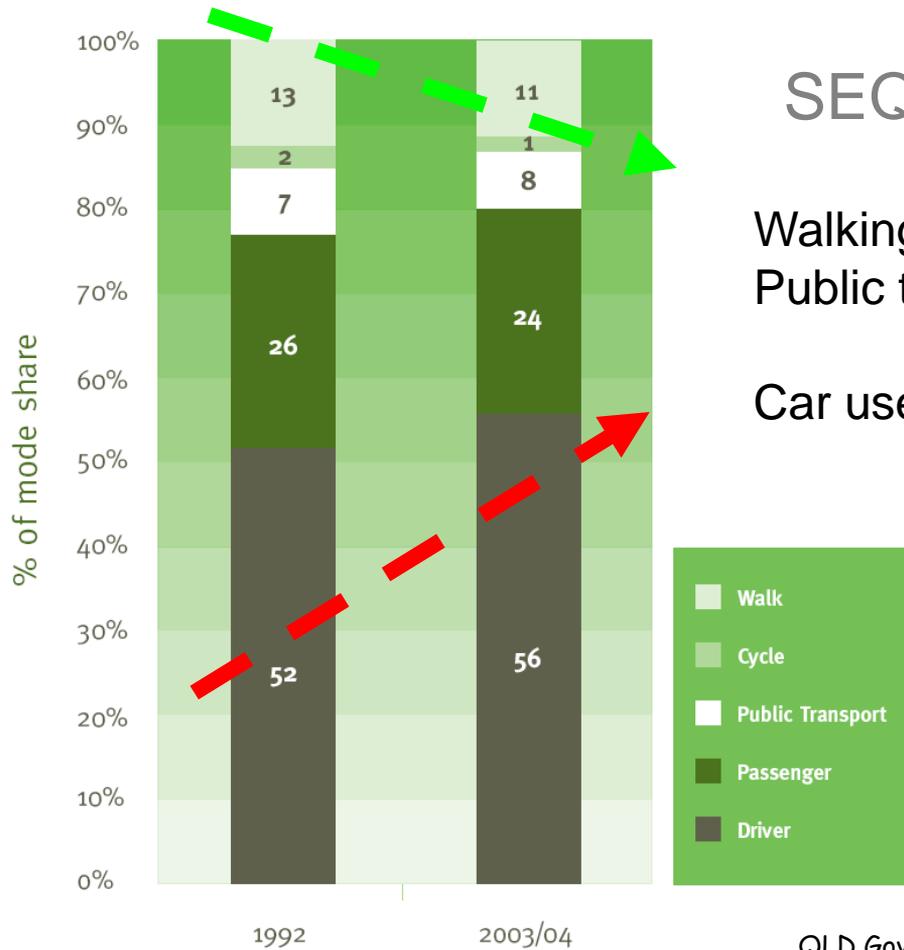
Freeway city
(1960s-
2000s)



SEQ Travel 1992-2004

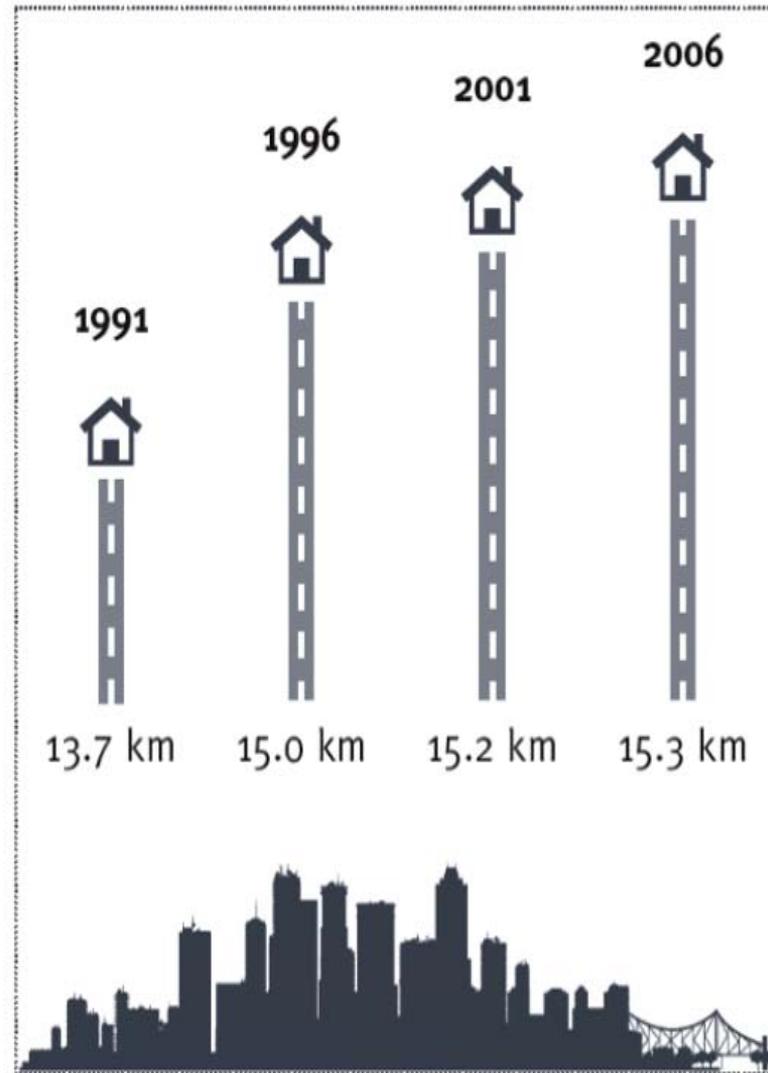
Walking, cycling: **declining**
Public transport: **marginally improving**

Car use: **increasing**



QLD Government 'Smart Travel Choices' 2005

SEQ journey to work distance



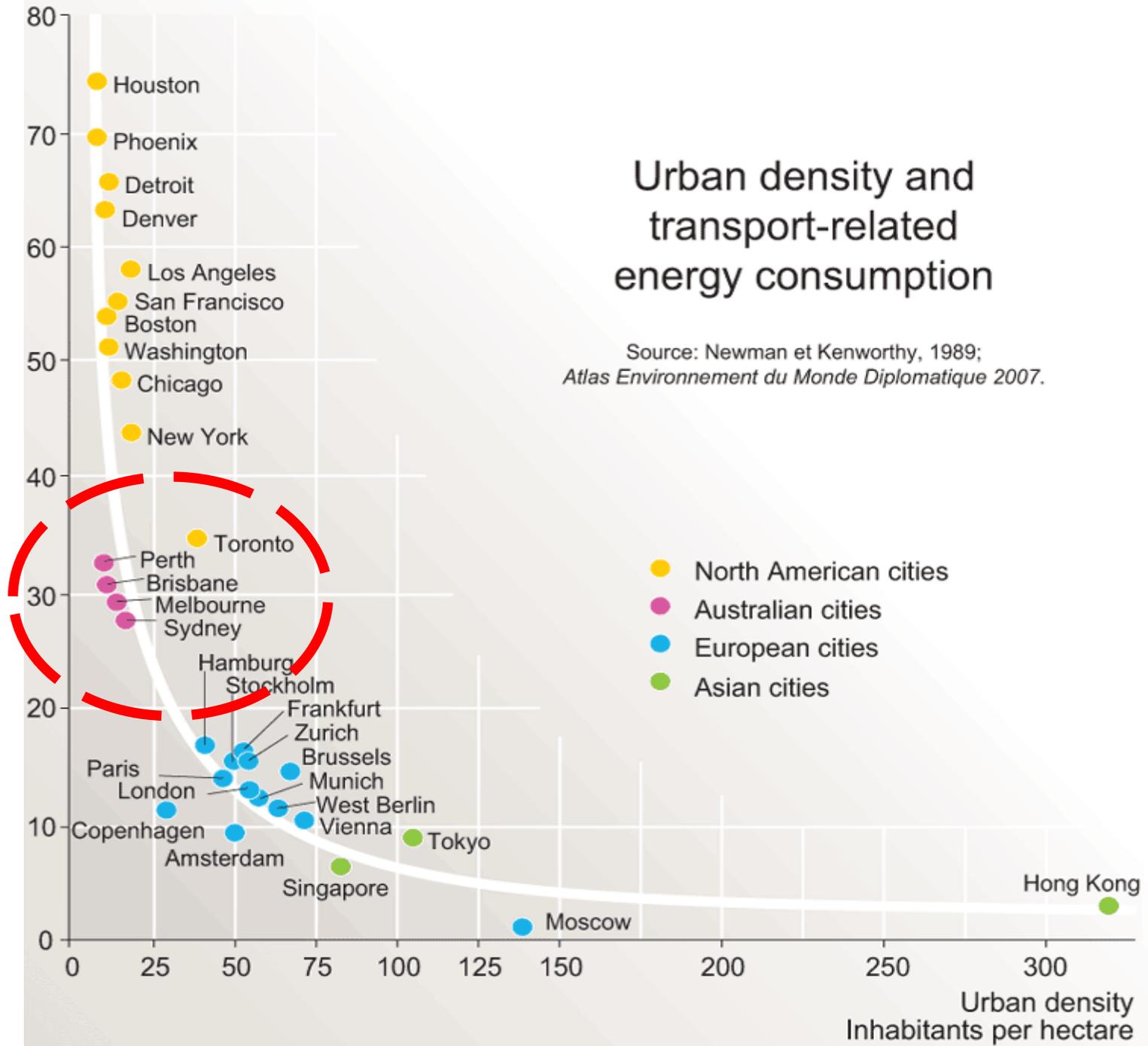
Source: Transport and Main Roads, 2010

Source: Journey to work – ABS Census

Australian housing and streets is mostly designed for cars



Transport-related energy consumption Gigajoules per capita per year



Transport-related emissions could rise to 30.5 million tonnes by 2050

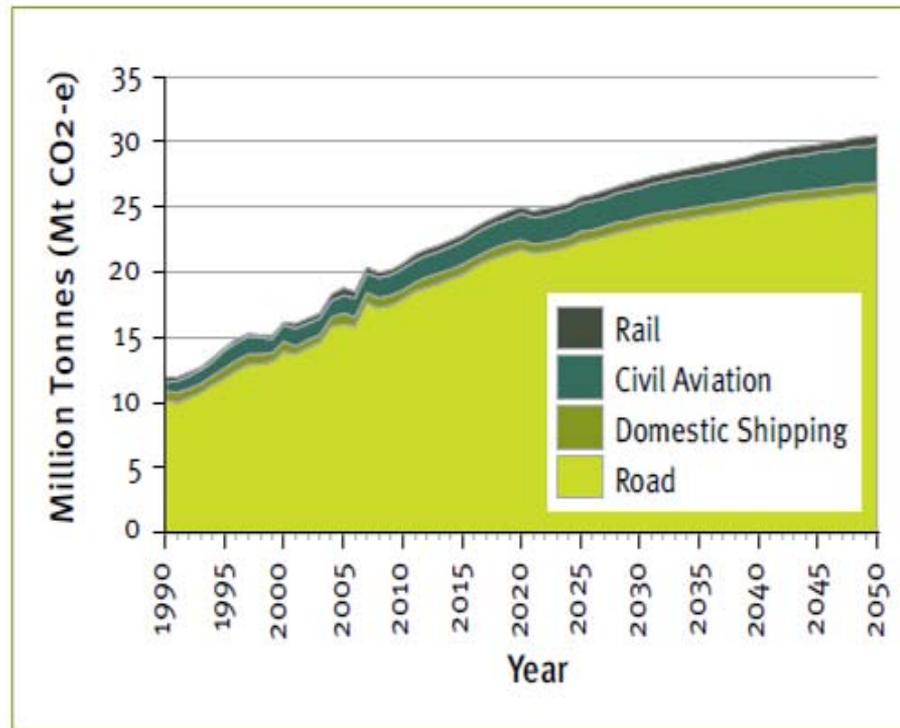


Figure 15.3: Queensland's transport emissions projections to 2050

Source: The Nous Group & SKM, 2008

What are Australians doing about it?

- Australia is the Federal system with three tiers of government. As such we need to consider initiatives at three levels:
 - Commonwealth (Federal) Government
 - State Government
 - Local Government

Federal Government Initiatives

- **Living Greener**
 - Education campaigns targeting households
 - Green vehicle guides
 - Fuel consumption labels
- **Carbon Tax**
 - Putting a price on carbon
- **Green Car Fund**
 - Supported Toyota to produce local Camry hybrid



Australian Government

LivingGreener Information, how-to's & rebates for sustainable living.

.GOV.AU

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Save energy

Save water

Reduce waste

Travel smarter

Take action

Guides

Real stories

Rebates & assistance

Travel smarter

Motor transport

Public transport

Cycling

Walking



Travel smarter

Most Australians rely on motor transport to travel to work or study or to go on holidays. This is convenient but relying on motor transport can have a dramatic effect on the environment.

Did you know?

Please take our 20 question survey to help us improve this site.



Top Performers

Top Sellers

- 1 . Mitsubishi i MIEV ★★★★★
- 2 . Tesla Roadster ★★★★★
- 3 . Toyota Prius Hybrid ★★★★★
- 4 . Lexus CT200h ★★★★★
- 5 . smart fortwo ★★★★★
- 6 . Honda Insight ★★★★★
- 7 . Suzuki Alto ★★★★★
- 8 . Alfa Romeo MiTo ★★★★★
- 9 . Mini One ★★★★★
- 10 . Holden Barina Spark ★★★★★
- 11 . Volkswagen Polo ★★★★★
- 12 . Suzuki Swift ★★★★★
- 13 . Kia Rio ★★★★★
- 14 . Honda Jazz ★★★★★
- 15 . Nissan Micra ★★★★★
- 16 . Hyundai Accent ★★★★★
- 17 . Toyota Yaris ★★★★★
- 18 . Hyundai i20 ★★★★★
- 19 . Toyota Camry Hybrid ★★★★★
- 20 . Volkswagen Golf ★★★★★

Make a smarter choice



By choosing a greener vehicle, you can make a real difference.



The Green Vehicle Guide helps you by rating new Australian vehicles based on greenhouse and air pollution emissions.

The rating is calculated using data provided by manufacturers from testing the vehicle against Australian standards.



Safety Features Information Now Available



Search Older Models (1986-2003)



Electric Vehicle Information



Download Green Vehicle Guide Factsheets



Truck Buyers Guide

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All models

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Overall Rating	Vehicle Details	Fuel Type	Fuel Consumption L/100km			CO ₂ g/km Comb	Greenhouse Rating (10 = Best)	Air Pollution Rating (10 = Best)	<input type="checkbox"/> Select All
			Comb	Urban	Extra				
★★★★★	Skoda Fabia Monte Carlo 77TSI 1.2L 4cyl (T), Man 5 speed Hatch, 5 seats, 2WD	Petrol 95RON	5.5	7.0	4.7	128	8	7.5	<input type="checkbox"/>
★★★★★	Volkswagen Polo GTI 1.4L 4cyl (S), Auto 7 speed Hatch, 5 seats, 2WD	Petrol 98RON	6.1	7.7	5.3	142	7.5	7.5	<input type="checkbox"/>
★★★★★	Volkswagen Polo GTI 1.4L 4cyl (S), Auto 7 speed Hatch, 5 seats, 2WD	Petrol 98RON	6.1	7.7	5.3	142	7.5	7.5	<input type="checkbox"/>
★★★★★	Volkswagen Polo GTI 1.4L 4cyl (T), Auto 7 speed Hatch, 5 seats, 2WD	Petrol 98RON	6.1	7.7	5.3	142	7.5	7.5	<input type="checkbox"/>
★★★★★	Volkswagen Polo GTI 1.4L 4cyl (T), Auto 7 speed Hatch, 5 seats, 2WD	Petrol 98RON	6.1	7.7	5.3	142	7.5	7.5	<input type="checkbox"/>



Carbon price

Home / Clean Energy Future / Carbon price

A price on carbon is the most environmentally effective and economically efficient way to reduce pollution. This means our economy can continue to prosper – without our pollution continuing to grow.



[Transcript](#)

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Questions Answered

[View All Questions »](#)

Q. Where will the money raised from the carbon price go?

A. More than half of the money raised will be used to assist households. The majority of households will receive tax cuts, increased assistance payments or both. With the rest of the money, the Government will be [supporting jobs in the most affected industries](#) and investing in our clean energy future.

Stay connected



News

> [Carbon Expo 2011](#)

04/11/2011 13:04

Australian business leaders, government representatives, community groups and international counterparts ...

> [Solar Cities: A catalyst for change](#)

26/10/2011 16:31

The Australian Government is partnering with the community and industry to ...

What's missing in this graphic?



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CLEAN ENERGY FUTURE ▾

HELPING HOUSEHOLDS ▾

HELPING BUSINESS ▾

WHY WE NEED TO ACT ▾

NEWS

Creating a prosperous and sustainable Australia



Carbon price

+



Renewable energy

+



Energy efficiency

+



Land use

=



View the plan





20 May 2011, 6.58am AEST

Driving off a cliff? The politics of petrol and carbon-pricing

AUTHOR



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Our goal is to ensure the content is not compromised in any way. We therefore ask all authors to disclose any potential conflicts of interest before publication.

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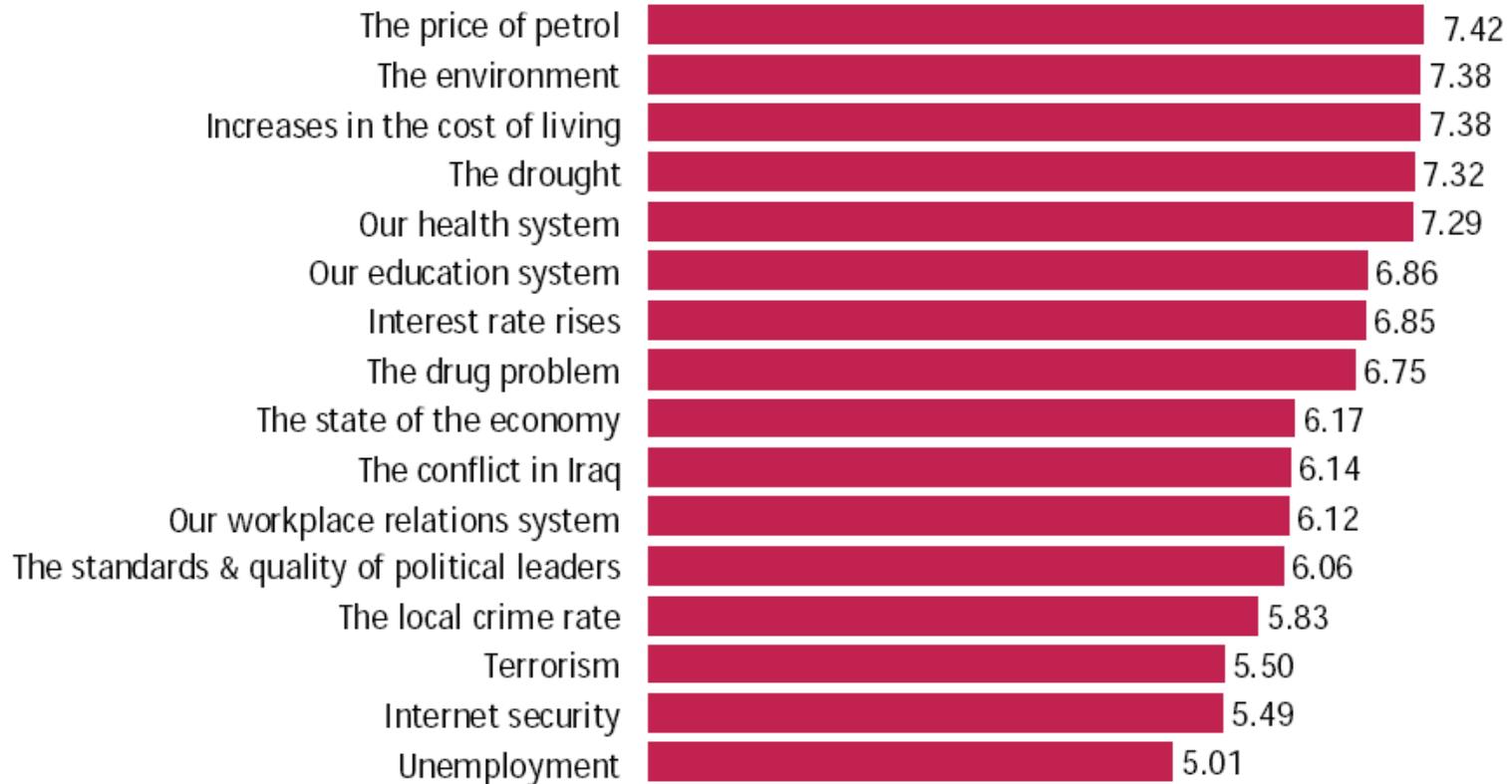
July 29, 2011

[Don't be Shanghaied! China has started down the carbon cutting highway](#)

TAGS

[Fossil fuels](#), [Transport](#), [Carbon tax](#)

Concerns February 2008



Q. On a scale of one to 10 - where '1' means you are not concerned at all and '10' means you are very concerned - how concerned are you about...

SOURCE: Sensis® *Consumer Report*. Sweeney Research - February 2008

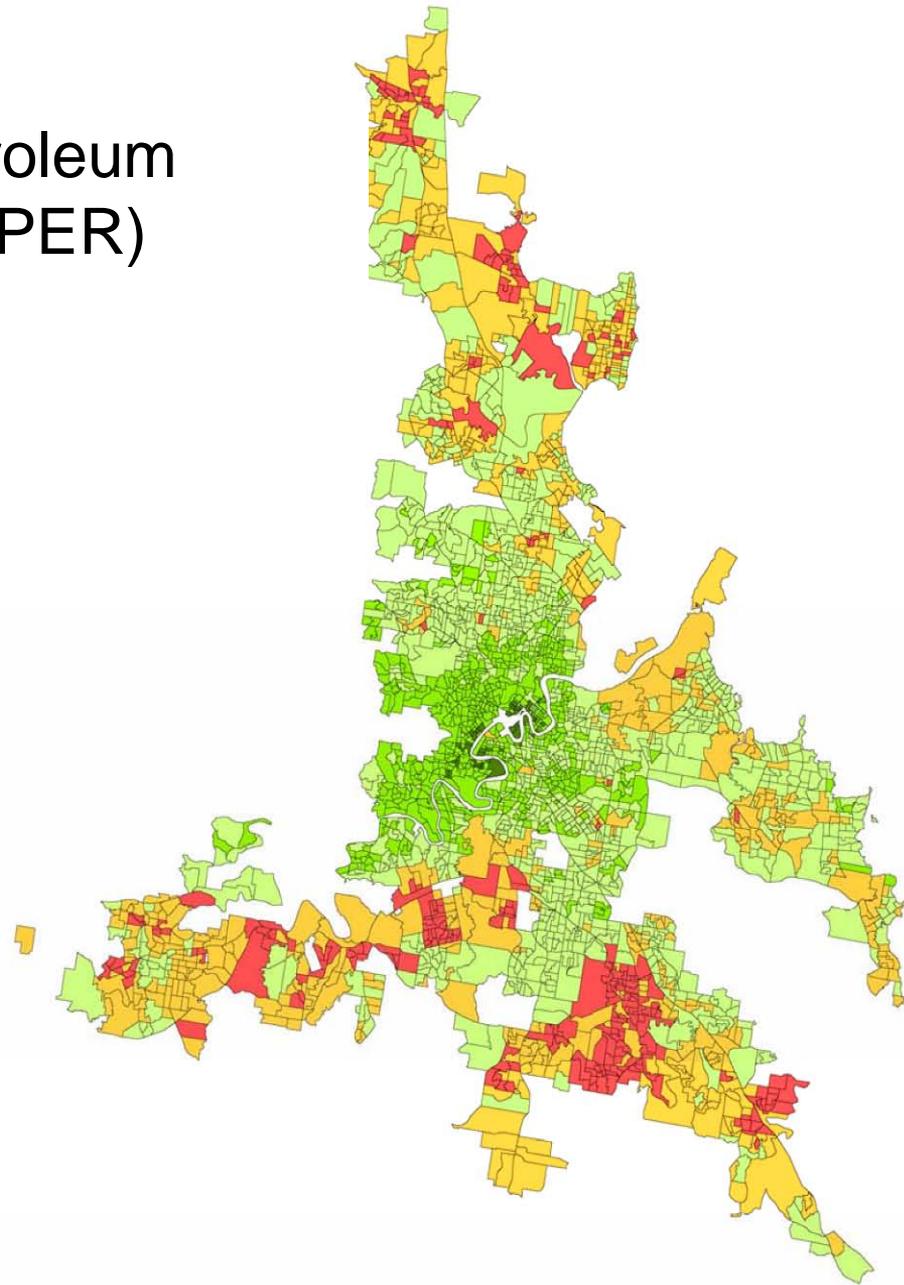
Vulnerability Index for Petroleum Risks and Expenditure (VIPER)

High vulnerability in:

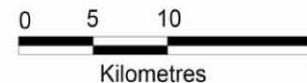
- Outer areas
- Low socio-economic status areas
- Areas with poor PT

Low vulnerability in:

- Inner areas
- Higher socio-economic status areas
- Better PT services



Oil Vulnerability Index for Brisbane



House, land and fuel package, Brisbane

FREE FUEL FOR 2 YEARS*



\$317,000* on 677m² Homesite

\$10,000 free fuel**



**COTTAGE
GARDEN**
at Cashmere

- Limited to 12 packages only
- Turnkey packages - no more to do but move in
- Offer ends Dec 1st 2005
- Homesites ranging from 608m² - 965m²

*Price subject to site costs.
**\$10,000 limit. Free fuel will be a fuel debit card upon settlement of land.
Images are indicative only and to be used as a guide. Homes are yet to be constructed.

www.cottagegardenestate.com.au

Cnr Ira Buckley & Hayward Av, Cashmere (UBD: 97.L15)



\$323,000* on 637m² Homesite



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Fortitude Valley

P1748 - www.oliverhume.com.au

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Green Car Innovation Fund

- Ran from 2009-2011
- Provided assistance to companies for research & development, and commercialisation
- Targeted technologies that reduce fuel consumption and/or greenhouse gas emissions of passenger cars
- \$1 of government funding for every \$3 contributed by the company

Toyota Hybrid: Australia's First Green Car

Motoring Channel Staff - 10/June/2008

Melbourne, Australia — Toyota will today announce a new plan to build Australia's first home-grown hybrid car.

Update: *It's official, Toyota will build Australia's first hybrid car, the Camry sedan, in early 2010.*

It's Altona plant in Victoria will be the place of manufacture, and 10,000 vehicles will be built annually to be sold in Australia.

Toyota's President Mr Katsuaki Watanabe conveyed his company's decision to start building hybrid cars in Australia directly to the Australian Prime Minister, Kevin Rudd, at a meeting in Nagoya Japan today.

"We decided to build the Camry Hybrid in Australia because Australians are keenly aware of environmental issues including global warming, and we are confident that the Camry Hybrid will be well received," said Toyota President Mr Katsuaki Watanabe, one of the global car industry's most powerful men.

"Toyota intends to make further efforts toward popularizing hybrid vehicles," added Mr Watanabe at the press conference in Japan, which was attended by the Australian PM and the Minister for Innovation, Industry, Science and Research, Kim Carr.

Update: *The Australian government has pledged to subsidise Toyota, who will build the new hybrid Camry, to the tune of \$35 million.*

The money will come from the Rudd Government's Green Car Fund.

Australia will join Japan and the United States as the only countries building the hybrid Camry.

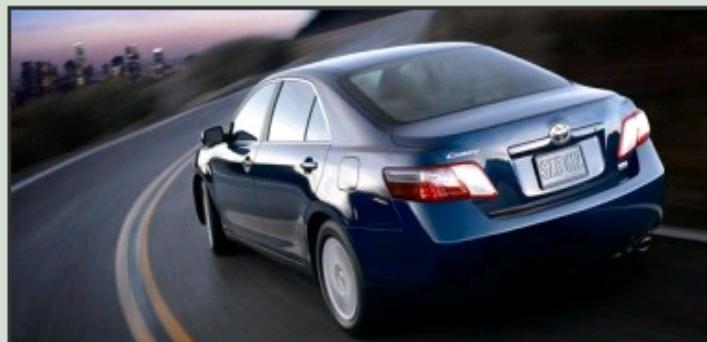
At home, Toyota Australia's President and CEO Max Yasuda was very pleased with the news. His company released a document stating the decision was "the culmination of an intensive study conducted during the past year which included discussions with the Federal and Victorian governments".



Toyota Camry Hybrid



Expected by 2010, the Toyota Camry Hybrid could provide fuel savings of up to 40 percent



State Government Initiatives

- Lots of investments:
 - Electric vehicle policies
 - ITS for improved traffic flow
 - ITS freight initiatives
 - Vehicle Offsets Contribution Scheme.
 - TravelSmart behaviour change interventions
 - Walking/cycling investments
 - Public transport investments
 - Low emission bus trials
 - Taxi vehicle improvements
- But no meaningful car restraint

‘Balanced’ transport infrastructure investment



Vehicle Offsets Contribution Scheme

About this scheme

In 2007, the transport sector was the fourth largest source of greenhouse gas emissions in Queensland, generating approximately 10.4 per cent of statewide emissions

In a large decentralised state like Queensland, sustainable transport (such as public transport, walking, cycling or car pooling) is not always feasible.

In recognising this, Queenslanders are being given an opportunity to minimise the environmental impact of their vehicles.

Rationale

The implementation of this initiative aims to give Queenslanders the opportunity to effectively 'cancel out' the greenhouse gas emissions related to their vehicle use.

The Queensland Government's dollar-for-dollar matching contribution, up to a funding limit of \$4.5 million, provides an incentive for people to offset their vehicles' emissions by halving the offset cost to motorists.

Intelligent Transport Systems

- The Queensland Government is investing ~US\$40M in state-of-the-art Intelligent Transport Systems on roads
 - Managed motorways
 - Ramp metering
 - Dynamic real-time information



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A centre for the research and development of innovative smart transport solutions

The Smart Transport Research Centre is a world-class collaborative research centre focusing on smart transport systems which will reduce traffic congestion and deliver multi-modal network optimisation for Australian and international cities.



Delivering National Transport Solutions

The Smart Transport Research Centre (STRC) is undertaking collaborative research to develop innovative technologies, services, products and policy solutions to combat congestion and improve multimodal network operations. It combines academic expertise from leading Australian universities with international private and government sector innovation, resources and experience.

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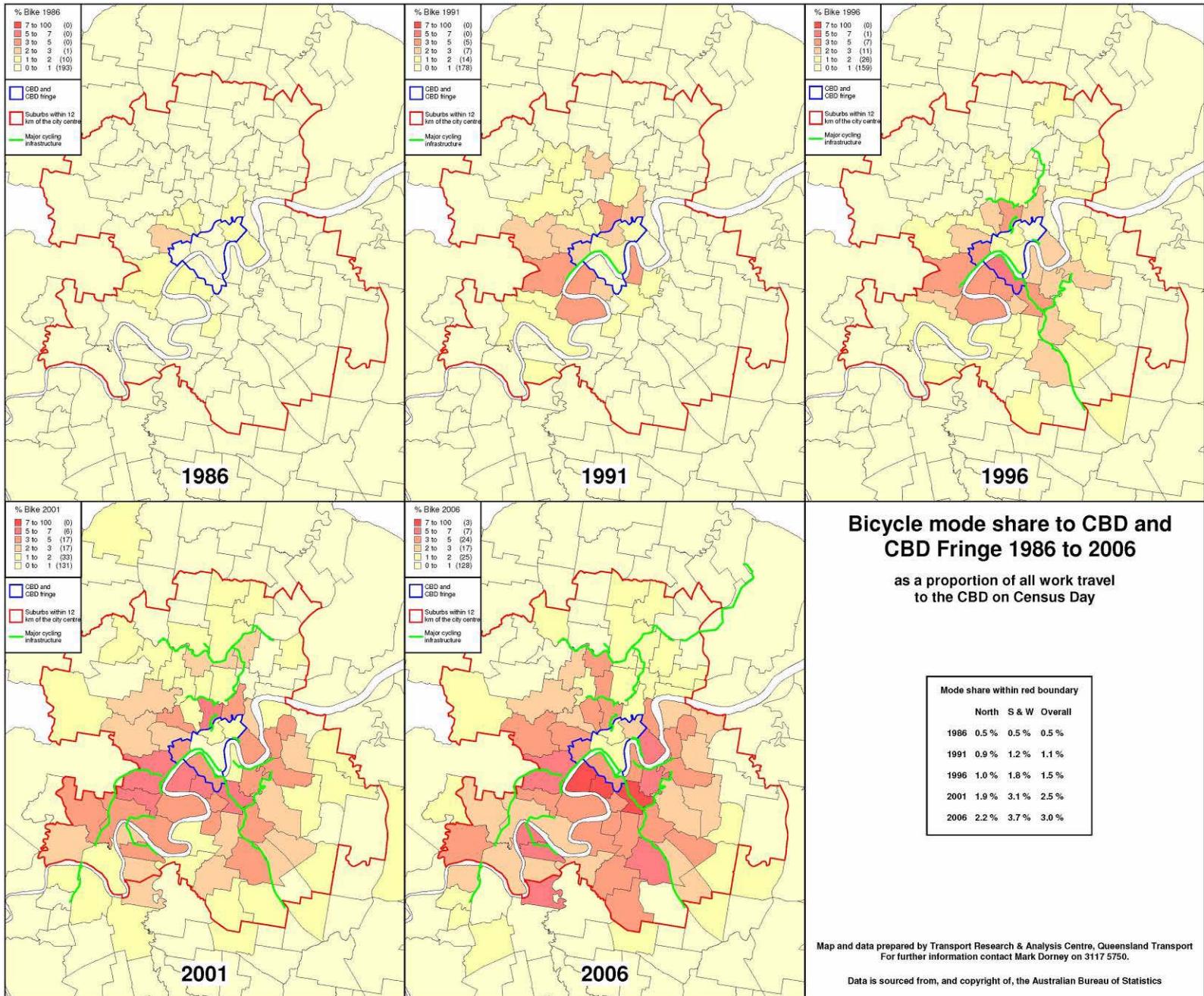
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ITS News

[Congress on Intelligent Transport Systems Features Live Demos - Environment News Service](#)
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[The net gain if Ireland deploys smarter infrastructure - Siliconrepublic.com](#)
Thu, 03 Nov 2011 06:02:49 GMT
[Consultants to draw up master plan for transport - Gulf Times](#)
Tue, 25 Oct 2011 22:14:39 GMT
[ARS Soft talking to States on intelligent transport tech use - Hindu Business Line](#)
Thu, 13 Oct 2011 13:49:10 GMT
[Road safety precautions and intelligent transport systems top priority says IEEE - Rush Lane](#)
Wed, 19 Oct 2011 11:14:25 GMT
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Local Government Initiatives

- Most are small scale 'grass-roots' attempts
- Walking/cycling investments
- Co-operative agreements



Map and data prepared by Transport Research & Analysis Centre, Queensland Transport
For further information contact Mark Dorney on 3117 5750.

Data is sourced from, and copyright of, the Australian Bureau of Statistics

Parking in city centres has been limited & priced heavily



and some people aren't happy...



Some projections...

- Australians remain 'locked-in' to private vehicle motoring
- Some limited signs of hope
- Many signs of failure; relying on 'fixes' from elsewhere
- Current strategies will not realise meaningful gains in greenhouse gas reduction from urban transport

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