Is National Rail Policy on the Right Track?

Reflections from Canberra

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Overview

- Transport Challenges
- Rail in Transport
- Personal Perspectives
- Accident Issues
The government's view of the economy could be summed up in a few short phrases:

*If it moves, tax it.*
*If it keeps moving, regulate it.*
*And if it stops moving, subsidize it.*

- Ronald Reagan

**Industry's view of the economy?**

**The community's view of the economy?**

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**Transport Challenges**

- Congestion
- Fuel price
- Emissions
  - greenhouse gases
  - NOx, SOx, etc
  - particulates
- Transport Demand
  - Passenger (population)
  - Freight (population and economy)

- GFC
- Climate Change
- Accessibility & Equity
- Workforce Attraction & Retention
- Community & Business Expectations
Optimum Passenger Transport

Density Conditions:
Distance
Density (capacity)
Speed
Terrain

Heavy Rail
Light Rail
Bus or Ferry
Car
Walk

Australian Cities

While all developed economies are challenged, in Australia impacts are greater...

Relative Costs of Congestion

By 2020 for Perth it is estimated\(^1\) that
- population will increase by \textbf{13\%};
- road freight transport will increase by \textbf{34\%};
- traffic delays will increase by \textbf{28\%};
- congestion costs will rise by \textbf{69\%} to $1.2\text{ billion per annum.}$

More people die from transport emissions than road crashes\(^2\)

Sources:
2. BTRE Report WP63: Health Impacts Of Transport Emissions In Australia:
   Economic Costs and Commonwealth Government Road Deaths Australia, 2008 Statistical Summary

City Transport Performance

Our best transport planning and policy gets us \textbf{HERE!}

Source: from BITRE WP71 data
National Rail Freight Performance

Rail Share of Land Freight Transport

- DARWIN: 90%+
- KATHERINE: 80%+
- TENNANT CREEK: 90%+
- BRISBANE: 80%+
- ALICE SPRINGS: 80%+
- TARCOOLA: 80%+
- KALGOORLIE: 80%+
- BROKEN HILL: 80%+
- PERTH: 5%
- ADELAIDE: 5%
- SYDNEY: 5%
- MELBOURNE: 7%

Source: from ARA and BITRE data

Passenger Transport Outlook

Average Growth 2000-2004
- Passenger Rail: 1.6%
- Private road vehicles: 2.3%

Average Growth 2004-2008
- Passenger Rail: 5.1%
- Private road vehicles: 0.3%

What are the reason for these changes?
- fuel price?
- congestion?
- population increase?
- inner city living?
- ‘green’ choices?

Transport planning and policy is based on these forecasts.

Source: from BITRE IS31 data
There is more freight carried by rail, than road.

Source: BTRE 2005
The Future of Transport Emissions

Australian Transport Emissions Forecast

- Aviation
- Maritime
- Rail (non electric)
- Motor Vehicles
- 2050 Total Australian Emissions Target

If we continue what we’ve done in the past, by 2050 transport will contribute more than 2/3 of the total Australian emissions target.

Source: BTRE 2005 forecast, extrapolated

Our Current Transport

- Australian transport fuel use, emissions and transport infrastructure are amongst the highest per capita in the world.
- Nearly 1500 people die on our roads and another 30,000 are injured and road crashes cost over $29.6 billion annually.
- Traffic congestion in cities costs more than $10 billion annually.
- Transport emissions are responsible annually for:
  - the deaths of over 1500 people
  - over 4,500 cases of asthma and other sickness (but could be 40% higher)
  - cost of death and sickness by transport emissions exceeds $2.3 billion annually.
- Personal transport times and costs are increasing as a proportion of available time and disposable income, contributing to family pressure and other social degradation.
- There has been no significant move towards more sustainable modes of transport, until the last four years.
- Fuel usage of passenger cars have not decreased.
Oil and Price Vulnerability

Source: Vulnerability Assessment for Mortgage, Petrol & Inflation Risks & Expenditure, Dodson & Sipe, Griffith Uni, 2008

City Area Affects Transport Use

Source: Cities, Area and Transport Energy. B Hughes et al, 26th ATRF, October 2003
City Area is a major determinant of transport
- transport energy
- car use
- transport emissions

In principle, if population increases within urban boundaries, no extra travel occurs

Australians are in love with their cars, but they are more in love with their own land
Our Transport Future

- By 2050 transport emissions will comprise more than 66% of Australia’s entire greenhouse gas emissions target
- Transport congestion costs are increasing at a faster rate than traffic is increasing
  - heavy vehicle transport congestion costs will increase by an additional 100%
  - traffic congestion in cities will cost $20-30 billion annually by 2020
- Road trauma will deteriorate
  - road deaths are not decreasing
  - serious injuries caused by road crashes is rising
  - deaths caused by articulated vehicles is increasing,
  - serious injuries caused by articulated vehicles is not decreasing
- Other factors such as health effects, transport costs and travel time are certain to increase

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Rail Deterioration

Track
Rolling Stock
- locomotives, wagons
Signalling
Information
- data, methods, analysis, research
Organisational Capacity
- government & railways
- staff skill & numbers
**Rail’s Energy and Environmental Advantage**

![Graph showing energy efficiency of different modes of transport]

**Passenger Transport Energy Intensity**

*Source: Final Garnaut Report, 2008*

**Costs of Rail Travel**

- **Passenger and freight rail** provides numerous benefits to the Australian community, business, and the environment, including:
  - Supporting regional communities
  - Reducing community health effects
  - Minimising environmental consequences
  - Reducing the road toll by reducing crashes
  - Limiting local government road maintenance
  - Limiting road investment demands on Treasuries
  - Improving international competitiveness for agriculture
  - Reducing road infrastructure costs for state government road authorities
  - Maintaining robust transport systems to suit a variety of futures, including reduced oil availability.

- **An efficient, effective, safe transport system** is required to meet Australia’s short and long term needs.

- **Compared with historical practice**, *passenger and freight rail must take a much larger proportion of land transport in Australia*.

- **To do so requires** *many and diverse industry and government activities* at substantially higher levels than have occurred previously.

- **However, rail transport is not for its own sake and must be justified against alternatives**.

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**Source:** ARA Industry Report 2007
Benefits from Rail Investment

- Annual 3.8 to 6.2 Mt CO$_2$e emissions reductions
- 11% lower transport emissions by 2030
- Total benefits
  - $27.4 to 41.7b (NPV 2010 -2020)

Source: Transforming Rail: A Key Element in Australia’s Low Pollution Future
CRC for Rail Innovation 2009

There is nothing a Government hates more than to be well-informed; for it makes the process of arriving at decisions much more complicated and difficult.

Keynes
Climate Change Management

Climate Change

Mitigation

Activity
Government
Business
Community

Impact on Systems
Networks
Operations
Demand

Responses
Government policy
Business practice
User behaviour

Adaptation

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Transport and the Carbon Economy

- Travel / Transport less
- Burn less carbon
  - more efficient transport & modes
  - more efficient vehicles
  - more efficient energy sources

Market Issues of an Emissions Trading Scheme

- Market principles
- Market failures
  - Poor information
  - Natural monopoly
  - Externalities
  - Social objectives (eg income distribution or service quality)

So, other strong policies are needed to complement the Emissions Trading Scheme.
CRC for Rail Innovation, 2009

Emissions trading on its own does not work; it needs other actions.
Allan Jones - CEO, London Climate Change Agency
Transport Emissions Market Distortions

- Car driver's costs will not change, but rail public transport costs will increase
- Road freight charges will not change, but rail freight costs will increase
- ETS charges are not market linked to public transport
  - pricing (fares) which may be constrained by political choices and economic regulation
  - infrastructure charges and provision (ie users pay for infrastructure but don't have choices about where improvements are made)
- Car owners costs are discounted by tax rebates or payments by others (business)
- The general community has responded to the market by purchasing small cars, while government (and business to a lesser extent) has not. In other words governments are not responding to the market.
- Businesses will transfer their increased costs to consumers who have no influence over business costs ("Take it or leave it"). So business does not always have much incentive to reduce emissions costs. Governments have even less management incentive
- Commercial drivers are often distant from the usage costs. So a truck or LCV driver can drive in a very fuel inefficient manner and receive no penalty so there is no incentive to change
- Car and truck ET charges are rebated, but freight and passenger railways pay full costs
- Road freight pricing is flawed
- Road pricing not market linked to infrastructure supply

Governments have a major role to play in lowering the economic costs of adjustment to higher oil prices, an emissions price and population growth, through planning for more compact urban forms and rail and public transport.

Mode shift may account for a quarter of emissions reductions in urban passenger transport, lowering the cost of transition and delivering multiple benefits to the community.

(Professor Ross Garnaut, Final Report, Sept 2008)
Government Objectives

➢ A national rail freight network
devolution of our rail networks so that
more freight can be moved by rail

➢ Transforming our cities
increasing public transport capacity in our
cities and making better use of existing
transport infrastructure

(Infrastructure Australia, May 2009)

Where is Australian Transport Going?

➢ Performance
Criteria
  ▪ Capacity / utilisation
  ▪ Speed
  ▪ Safety
Believing as I do, …
that market forces deliver
the lowest cost and most effective solution
to economic challenges,…

➢ So what about:
  ▪ Government infrastructure funding
  ▪ regulation
  ▪ subsidies
  ▪ information, education and marketing
  ▪ research, training and innovation
A New Planning Paradigm

**Current Perspective**
- microanalysis
- short term
- narrow focused
- detailed / fragmented
- historical
- quantitative
- separate mode view
- infrastructure solutions
- commodity view
- incremental & evolutionary
- environmental & social benefits largely ignored

**New Planning Paradigm**
- strategic
- holistic
- long term
- broad
- integrated
- multifaceted
- future oriented
- qualitative & quantitative
- customer view
- logistics chain analysis
- quantum change & revolutionary
- environmental & social benefits described

“the mystery of Government is not how it works, but how to make it stop”.

P.J. O’Rourke
Government Weaknesses

- **Leadership**
  - No major policy improvements since truck charging and rail commercialisation in 1990’s

- **Policy, Strategy and Planning**
  - Commonwealth Major Cities Unit
  - WA grain rail reform

- **Co-operation**
  - eg State - Commonwealth, State v State

- **Research**

- **Capability**
  - Skills, knowledge and experience
  - Data and information
  - Number of people

Rail Industry Weaknesses

- **Leadership**
  - eg continuous reorganisation

- **Policy, Strategy and Planning**
  - eg typical 4 year business outlook

- **Capability**
  - eg transport economists

- **Research**

- **Co-operation**
  - eg national working rules
Economic Opportunities

- Further investment
- Incentives & taxation reform
- Reducing regulatory burden
- Legislation

Transport Economics Research for Treasury

- FBT reform
  - eliminate perverse incentives to drive further
- Charge for cars for congestion
- Reform truck charges
  - Improve accuracy (eg road use damage relationship)
  - Include congestion
  - Eliminate undercharging of heavily used vehicles
  - Include unpriced externalities

Canberra’s View of WA

- A cash cow
- Doesn’t understand
- Much greater challenges on East Coast
  - Economic (eg fiscal limitations)
  - Transport pressures (demand, performance, consequences, asset age, etc)
  - Geographic challenges (topography, close towns, sandstone, etc)
  - Political (sensitivity and size)

Personal Perspectives

- WA is doing very well
  - economically
  - transport policy, planning & practice
- Don’t believe all the advocacy
  - (where's the money?)
- Hyperactive policy
- *Engineers Make it Happen*
Transport Safety Future?

**Upward Pressures**
- transport demand
- vehicle power
- driver attitudes
- treatment costs

**Downward Influences**
- vehicle safety
- infrastructure quality
- safety awareness

**Uncertainties**
- diminishing returns
- congestion
- enforcement

Transport Safety Policy

- 'Externality' assessment
- Historical analysis
- Incident investigations
- No recent reform
- Micro-policy perspective, not mainstream policy
- Exceptions
  - WA 'Towards Zero'
Multi-disciplined

Strong analytical base

Independent

Multimodal