How Newcastle Australia might respond to climate change

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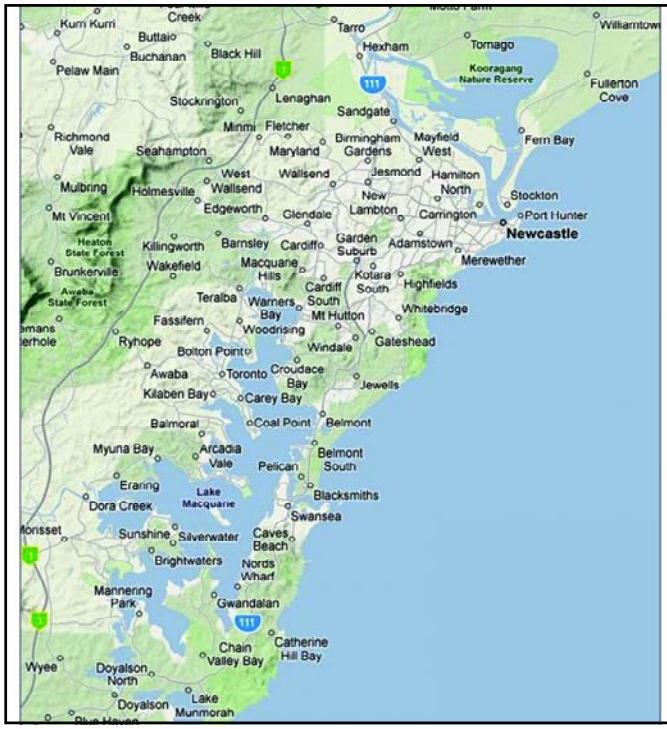
Issues

- Prepare for Peak Oil – more sensible transport – bus, rail, cycling
- Prepare for sea level rise in low lying suburbs
- 2007 saw 1 :100 storm and flood combined with with king tide
- Four storey urban renewal along transport corridors to promote use of public transport
- Tram trains to rejuvenate Newcastle CBD
- Wind farms along the coast line
- Maximise use of solar energy and water tanks
- Plan for zero emission housing
- No new coal fired power stations
- Plan to reduce coal exports – no more coal loaders



Low lying suburbs
Stockton
Swansea
subject
to sea level rise

Nine mile Beach
Wind farm
Opportunity

Newcastle
largest
coal
export port

Retain rail into Newcastle but introduce new technology tram trains to eliminate level crossings and improve connectivity between Honeysuckle and declining CBD

See the light rail revival

Tram trains will resolve Newcastle's on-going rail issue providing fast & efficient rail services while rejuvenating the CBD

Three decades of modern LRT

136 NEW TRAMWAYS IN THREE DECADES...

and 50 more on the way

REPORT BY MICHAEL TAPLIN

Turkey's newest tramway is in Antalya, where visitors in September found the line about to open. CAF supplied the trams. Ch. Balcon

The Canadian city of Edmonton led the way with the first new light rail line of the modern era, and since the 1980s the pace of construction of new tramways and light rail around the world has increased at an incredible rate. There are already ten new systems since this list was last published in January 2008 and more than 50 are in the pipeline, with many more planned.

Of course there have been a few closures as well, some overtaken by events (like the Houten shuttle in the Netherlands, only intended to hold the fort until a heavy rail local service came along) and some (like systems in the former Soviet Union and Romania, put out of business by the new economy and official indifference. However it is good to see that Kazakhstan at least recognises there is a case for new tramways in that part of the world, recently signing a EUR 80m contract with Alstom for a brand new network for its capital, Astana (see *IMUT* 164, December 2009).

In addition to these approaching 150 tramways and LRT projects, another aspect is shown by the nearly 50 new heritage tramways, which may not provide full-time revenue earning service (although some do), but capture affection for the tramway as a fun way to travel. This can be just as vital a factor in city centre rejuvenation.

The worldwide trend to LRT

All these schemes have got where they are today by careful evaluation that has shown the tramway as the best value for money, taking into account its ability to attract passengers (particularly private car users) and the longevity of its assets. How many passengers riding a Brussels PCC today realise they are in a vehicle approaching 60 years old? They certainly would if they were in a 60-year old bus...

In pure number terms, France and the USA lead the way with 20 new systems and more to come in each country (by one count there are some 80 schemes at various stages of planning in the US), what a contrast with Britain's eight and just Edinburgh to come. A nation like Turkey (with its ten new systems and two more to come) puts the UK to shame.

Even 30 years ago, the previous editor of this magazine, W. J. Wyse, asserted that there was no clear dividing line between tramway, light rail and heavy rail, despite the efforts of semantic purists to prove otherwise. The rise of the tram-train only blurs the distinction more, while at the other end of the spectrum rail-guided rubber tyred vehicles are a further challenge to definition.

The lists that follow do not resort to categorisation therefore, but do include some notes to aid identification. Separated lines in cities such as in Paris and Los Angeles are counted individually.

IMUT has also identified 12 key milestones of the last three decades and examines their significance (all project costs are indicative of time of completion).

UNDER CONSTRUCTION

Approved for construction

More cycle ways – on road and along old coal rail corridors

Honeysuckle re-development – more required

Redevelopment at Belmont on lake foreshore – more required

Albany Wind farm

Can you envisage the Belmont wind farm??

Typical Lake Macquarie foreshore which will be impacted by rising sea levels

New lightweight house which can be raised if necessary

Existing houses in Hamilton which can be raised when required

Solar hot water and 1Mw PV solar panels on roof

Conclusion

- Plan for peak oil when the price of fuel will rise dramatically – more cycling, walking
- Improve public transport – tram trains for the Newcastle CBD
- Higher density housing along major bus corridors
- Wind farms and solar energy
- Prepare for rising sea levels
- We have time to adapt to the impact of climate change but we must start now