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To:

Committee Secretary

Senate Standing Committee on Rural and Regional Affairs and Transport

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Submission to the INQUIRY INTO THE INVESTMENT OF COMMONWEALTH AND STATE FUNDS IN PUBLIC PASSENGER TRANSPORT INFRASTRUCTURE AND SERVICES

Summary

In our view, the Australian Federal and State Governments do, indeed, have a significant role to play in promoting and providing public transport systems in this country. Some reasons for this are that:

- It is in the national and global interest to do so.
- Some public transport infrastructure is too costly for States to pay for alone (Federal resources have been used for building highways, so why not public transport facilities?).
- The federal Government has the political, legislative, and financial resources to lead by example.
- Federal and State Governments have a duty to fulfill their commitments to the social and economic welfare of all Australians, as well as to the protection of the environment, and public transport is an integral part of those duties.

Part One of our submission addresses the strategic and policy imperatives for investment in public transport. In this, we note that previous Senate reports have provided strong grounds for believing that it would be unwise to assume that our dependence on imported oil, and with it our over-dependence on getting places by private car, can continue as we've been used to until now.

We also note that fossil fuel-powered transport contributes significantly to carbon dioxide emissions, which are now known to be a major cause of global warming. And we consider the negative social and environmental impact of continuing to develop highway infrastructure to accommodate the rising number of vehicles on our roads.

For all these reasons, we conclude that the Federal Government has not only a duty, also a right, to set guidelines for future public transport options.

Part Two of our submission concerns issues particular to Western Australia, primarily to the Perth metropolitan area. These range from suggestions for large projects in which we believe both the State and Federal Governments should be investing time and money, to local-scale issues that local government, with Federal assistance, could address. Some of these local issues may be common to other States, reinforcing our belief that Federal Government is a vital agent for driving reform in the public transport sector.

PART ONE

Introduction

Environment House Inc. (EH) is a not-for-profit, community-focused organization promoting, and providing information and education on, sustainable living practices. EH's view is that a society's, indeed a nation's, economic and environmental sustainability are irrevocably interlinked, and that the success of both depends at least to some degree on actions taken by individuals acting responsibly.

Strategic directions

Individuals cannot achieve this alone, however, and it is the responsibility of public authorities, including both State and Federal Government, to create the cultural, paradigmatic, and economic framework and incentives within which individuals can effectively take charge of their responsibilities in respect of sustainable life choices.

How we transport ourselves plays a major, and important, part of this vision for sustainability. Emissions from burning fossil fuels in all sectors is estimated to contribute at least 56% of total greenhouse gases (GHG, measured as carbon dioxide equivalent [CO₂ eq.]) contributing to global warming, and the contribution from the transport sector is thought to be at least 13% of the total (IPCC AR4, *Climate Change 2007: Synthesis Report* [Figures are based on 2004 data]). Locally, emissions from burning fossil fuels in transport is a major, if not *the* major, contributor to polluted and unhealthy atmosphere and environment, particularly in cities where the majority of Australia's population lives.

In its report from February 2007, the Senate Rural and Regional Affairs and Transport Committee (RRAT, 2007) noted that:

The IEA's [International Energy Agency] *World Energy Outlook 2006* (WEO 2006) gives serious new warnings about the energy future. It regards current trends as 'neither secure nor sustainable'. It stresses the need for energy policy to be consistent with environmental goals – chiefly, the need to reduce greenhouse gas emissions. (RRAT, 2007 [3.121, 3.122])

Furthermore, because supply of oil will peak and demand will outstrip supply — the 'peak oil' scenario — it would be rash to assume that, GHG emissions and environmental considerations aside, we can in practical terms continue our past and current dependence on fossil fuels for transportation. Opinions about how long oil will remain an economically and logistically feasible transport fuel vary, but the RRAT Committee (2007) reported that:

New field oil discoveries have declined greatly since the 1960s. USGS 2000 estimates of future discoveries, to be realised, would require a drastic turnaround of this declining trend. Peak oil commentators argue that the declining trend of oil discovery reflects geological fundamentals and should be expected to continue.

(RRAT, 2007 [3.38, 3.40, 3.52])

and that:

The committee considers that more needs to be done to reduce Australia's oil dependency in the long term. This is desirable not only because of peak oil concerns, but also for other reasons – to mitigate greenhouse gas emissions; to mitigate the costs of the expected long term decline in Australia's net oil self-sufficiency; and to mitigate the risks of supply disruptions as oil production becomes concentrated in a declining number of major oil-producing countries, some of which are politically unstable. (RRAT, 2007 [3.144])

It's not clear, judging from observations of private car use and the continued 'desirability' of large-engine cars and 4 wheel drive vehicles, that the majority of the Australian public has yet taken these ideas on board.

One way to mitigate future fuel supply crises is simply to reduce consumption, and one way to do this is to reduce the number of fossil fuel-burning vehicles on our roads. An obvious course of action is to shift from private vehicle use to public mass transport.

Added to this is the increasing congestion of our roads, mainly in and around the cities, but also increasingly away from city centres as urban populations grow and suburbia spreads accordingly.

It is quite clear that the volume of traffic on our roads, underpinned by our reliance on private cars — itself founded on the, in our view misguided, assumption of the ‘right’ to drive ourselves wherever and whenever we wish — is unsustainable. It is unsustainable in terms of its contribution to the above global and local detrimental effects, and also in terms of sheer logistics. What, to date, has been our response to increasing traffic congestion? Almost without fail, it has been to build more roads; that is, to expand the traffic infrastructure further and wider, in a vain attempt to stave off the inevitable.

And the inevitable is? Eventually we will simply run out of space. Even here in seemingly space-rich Australia, sustainable major population centres are pragmatically restricted to the habitable coastal zones, and continued expansion of the roading infrastructure must, perhaps sooner rather than later, result in sacrifices to living space, agricultural capacity, water and atmospheric quality, precious environmental habitats, and quality of lifestyle.

It is essential that we, as a mature, responsible, and forward-looking Australian society, wean ourselves off our ‘a car for every adult’ (in many cases more than one car per person) mentality. We must adapt to the reality of a changing world, and one route by which we can make a difference is to embrace public mass transport and non-car dependent active personal transport options.

To do so, we need leadership from both State and Federal governments. In its report from February 2007, the RRAT Committee noted that:

The committee does not suggest that the Commonwealth should take over the States’ basic responsibility to operate public transport services. However there may be a case for Commonwealth assistance to major projects such as rail extensions which are unlikely to happen, or unlikely to happen soon enough, without the involvement of the bigger budget which the Commonwealth commands. (RRAT, 2007 [8.53])

We concur and suggest that the Federal Government of Australia has a responsibility, in the forms of policy and investment in public transport infrastructure, to lead by example and provide guidance for the State Governments. This approach could facilitate a paradigm shift in the way we transport ourselves. Without this leadership, individuals are not sufficiently empowered to enact the change we need.

The remainder of this submission cites examples from the Western Australian metropolitan transport networks, specifically Transperth and other public transport-related systems, as these are what we know best. Some of these ideas may be transferable to other regions of Australia.

PART TWO

Public transport in Western Australia

There are several key elements to successful public transport systems in Australia and elsewhere in the world: convenience, efficiency, reliability, comfort, personal safety, cost-effectiveness (for both passengers and service providers), and disincentives for private vehicle use. The other significant feature of successful public transport systems is their capacity to cater to diverse needs. Successful planning models recognize that one size does not fit all, and different kinds of transport services suit different users with different transport requirements for both their workaday and social/leisure movements.

To have any chance of addressing the strategic directions outlined above, Western Australia, and particularly the Perth metropolitan region, must raise the bar on public transport. Some of the required measures are primarily logistical and require (comparatively) little expenditure. Others require significant capital investment, and for this we encourage partnership between the State and Commonwealth authorities, with the former supplying local knowledge, planning, and a proportion of the funding, and the latter supplying legislative incentives and big-project funding.

Trains

Perth's train system generally functions smoothly and provides a mostly convenient service for people who live near stations. Nevertheless, substantial improvements are needed to increase its practicality and attractiveness of use (additional points are covered in a later section 'Overseas and Australian models').

- **Crowded peak-hour conditions.** Morning peak-hour commuter trains on some lines, such as the Midland–Perth line, are full to overflowing, with commuters having to simply miss over-full trains and those with mobility aids such as gophers unable to consider boarding. (One of our committee members who is a polio survivor but member of the workforce has lived this nightmare for 14 months since the very well-used Midland line lost carriages to the Mandurah line whose new (faster) trains was not ready.) We appreciate that our Public Transport Authority is in the process of returning more carriages to this line as the new trains come off the production line for the Mandurah line - but we are told this will take up to another 18 months (so there will have been over three years of stress on this line!) More Commonwealth assistance may have enabled vital continuity of service to have happened while new services were added.
- **We recommend Federal assistance for the State Government to invest in new rolling stock** to better meet the needs of existing and future commuter demand and to help ensure that such dramatic and distressing gaps in service as outlined above do not occur. Comfort and convenience are key to encouraging other commuters — who currently travel by private car and are highly likely to be put off by crowded conditions on trains — to use the system.
- **Bikes on trains.** We applaud Transperth's general willingness to accommodate bicycles on trains, and its poster campaign encouraging cyclists to use the trains, but there are two major problems with the present setup.
 - **Restricted times.** Currently bicycles are banned from trains between about 7:00–8:30 AM and 4:30–6:30 PM. This is precisely when many commuters might want to take their bikes on the train, so they can cycle between the train station and work, or home. To get to a 7pm meeting or social event by bike, train, bike eg 30 minute bike ride, is not feasible in many cases, because of this late restriction.
 - **Insufficient bicycle capacity.** One bicycle space, accommodating a maximum of 2 bikes, is allocated on approximately 2 out of every 3 carriages. Bike can also be stood in wheel chair spaces, but this is obviously undesirable. More than 2 bikes per carriage quickly become an obstacle to other passengers.

A clear and convenient alternative is to provide a dedicated bicycle carriage on each route. Successful models for this strategy are found in Germany, Switzerland, the Netherlands, and Denmark. Bikes can either be stacked against each other, standing upright against foldable seats, or can be hung from ceiling hooks.

Dedicated carriages would benefit cyclists, other passengers, and Transperth. More people are likely to combine bicycle and train journeys, it should encourage the use of trains, it should encourage more people to cycle, and it would improve passenger comfort and safety. Dedicated carriages should be supported by signage at each station indicating where the cycle carriage will stop.

A better strategy to cater for bicycles during peak commuter times needs to be found. Dedicated bicycle carriages would go some way towards this. Additional measures might include reserved entry and exist routes for bikes at main train stations. Whatever happens, it seems nonsensical to ban bicycles from trains at times of the day when the service is likely to be in high demand.

Bikes on buses

Western Australia currently has no facilities for combining cycle and bus journeys. This is a serious disadvantage for commuters who live far from train stations and who want to use a bicycle for part of their journey.

- Bicycle-carrying facilities are increasingly being adopted in progressive United States cities such as San Francisco, San Jose, and in New York State. The following websites gives examples and details:
- <http://bicycling.511.org/transit.htm> (<http://www.vta.org/index.html>), (<http://www.tcatbus.com/content/view/bikes-on-buses.html>).
- Bike racks on buses have been successfully instituted in Canberra, where the service has proved both popular and practical. These have also been trialled in Tasmania <http://www.chiefminister.act.gov.au/media.php?v=7538&s=2>).
- Concerns about difficulty loading or unloading bikes from racks attached to the fronts of buses, and possible delays in bus schedules because of this, have proved largely unfounded as the designs of bus-mounted bike rack systems have improved.

We recommend that front-mounted bike racks be trialed and progressively fitted to Transperth bus services. Training should be provided for bus drivers to instruct new users how to most efficiently load their bikes, and, if necessary, Transperth should be encouraged to adjust its bus schedule to allow for possible minor increase in travel time on some popular routes.

Outlying areas and airport connections

Perth's train system is strongly radial. That is, lines run from outlying stations into the city, and back, but no lines exist to take passengers between outlying destinations directly. In addition, the further one travels from the city, the more widely spaced stops along the lines tend to be.

Consequently, the further from the city centre one lives, the further one is likely to have to travel from home to the nearest train station and many people in the outer suburbs still have to drive to their nearest station to access the train lines. Bus services connect with the end-of-line stations but mostly not those stations along the route; a much better integrated system is needed. Options to consider are:

- Redesign of the within-suburb bus route system, and/or installation of a tram network, to more efficiently connect residential areas with train lines. Melbourne's trams run in the middle of the road, fitting in with existing major roads, and have frequent convenient stops. Many of Perth's highways are potentially broad enough to develop a comparable system. Perth's generally flat or low gradient terrain makes the region well suited to trams.
- Overhaul of suburban bus services should give priority to implementing fleets of smaller 'shuttle' buses running more frequently than at present. More, smaller buses may prove more cost-effective over the longer term; smaller buses are more maneuverable in narrower suburban streets, especially compared with articulated buses; and more frequent services will create greater incentive for local residents to use these in place of their own cars.
- Improved bicycle route connections between outlying train stations. Most of the major off-road cycle lanes run parallel to train lines, but fewer off-road cycle-pedestrian shared paths exist to facilitate easy access by bicycle to train stations. Signposted on-road 'cycle networks' exist, for the most part on quieter suburban streets, but few of these have marked cycle lanes, and using them efficiently requires a high level of 'local knowledge' and more courage (for riding on the 'open road' than on dedicated cycle tracks or marked bike lanes.)
- In addition to the suggested residential bus/tram connections with train stations on existing radial routes, we suggest developing a rail circle route complementary to, the existing bus

circle route. Much greater efficiency and convenience, probably leading to greater patronage, could be achieved by this since it would increase people's confidence that travelling by public transport can be at least as convenient as travelling by private car.

- This proposed light rail route need not be as 'heavy' as existing major route trains. Instead, it could be either a light rail or tram system using existing transport corridors including the Reid, Tonkin, Great Eastern, Leach, Canning, Roe, and West Coast Highways, or other major connecting roads.

We recommend that the Federal and State Governments together investigate redesign of the suburban bus routes, and installation of suburban tramlines, to facilitate better travel between residential areas and train stations away from the inner suburban and city areas. Melbourne's tram system is probably a reasonable model around which to design the fundamentals of a tram service suited to Perth's needs.

We recommend that the Federal and State Governments together investigate the long-term cost and feasibility of a light rail circle route for the Perth metropolitan area, complementary to the existing bus circle route.

- Most medium to large cities in Europe, the United States and Canada, and many modern cities in southeast Asia, have major transport hubs at their airports. The lack of this service in Western Australia is a significant oversight that should be rectified with some urgency. As well as the convenience for the public, efficient public transport services to and from airports could ease the problem of more and more land around airports being required for parking for a few days for airline patrons.

We recommend that the Federal and State Governments together place importance on developing an integrated rail-bus system to service Perth's international and domestic airport terminals.

Timetables, route planning, and route maps

As noted above, the success of public transport systems relies partly on its ease of use. Few measures do more to achieve this than easy-to-use route planning and route maps.

Transperth's web-based route finder system works reasonably well — for single, specified journeys only. Planning multi-stage and multi-mode journeys is more of a challenge. A recent experience involved three separate searches for three separate journeys, and about three quarters of an hour on the phone with a Transperth Infoline operator. Less determined people are unlikely to persist, and revert to using a private vehicle instead.

We suggest:

- A return to the service that some members of the public remember from some years ago, of wallet-sized timetables printed on card. EXCELLENT IDEA! One of our members wanted to get her whole ('shopper diversion') bus route timed for stops, both ways, for the whole week. This took two hours on the net, half an hour with a Transperth telephone officer, and three sheets of print (weekday, Sats, Suns) which will have to be completely re-typed to create a wallet sized timetable.
- Development of a web-based journey planning service that allows individuals to plan personalized routes involving several journeys at once, and load these to a template that can then be printed and conveniently folded to fit in a wallet.
- In our experience, it's difficult to mesh the advice given over the phone by Transperth Infoline operators with the online system users see at home. Rationalization of the route

planning system that Infoline operators use with the web-based route planner seems to be required.

- Training of Transperth Infoline operators should emphasize helping passengers help themselves, and become more self-sufficient, rather than supplying the instructions for one particular trip, as tends to be the way at present.
- Transperth has designed a train route plan similar in concept to, though simpler than, those developed by the London underground, Zurich's combined tram-'S-bahn'-train network, and numerous other European cities. This conceptual route plan should be extended to include the bus and ferry routes, creating a fully-integrated route planning tool for all users. The plan would include not only city and suburban public transport, but also show connections to intercity transport routes such as long distance coach arrival/departure points, regional and long-distance trains, and ultimately airport connections as well. An example from Zurich is attached to this submission.
- Availability of route information at train stations and bus stops is currently rather haphazard. The existing display at train stations showing when to expect the next train is of limited value when planning more extensive journeys. Bus passengers are, in general, poorly served for on-the-spot route information. Transperth should set a goal of providing route maps and timetables at every bus stop on every route.
- This is one example where Federal funding to local projects might be viable. Combined with this, it ought to be possible at each rail station to plan a train journey involving several lines. This could be achieved by installing web-based route planning systems similar to those available online via personal computer.

Regional train services

Trains to Geraldton, Albany, south past Bunbury ...we'd love to have them back please!!!

Long-term planning

Public transport is irrevocably linked to long-term town and city planning. With a growing population, Perth and, to a lesser extent, other Western Australian towns are seeing a growing demand for housing. Essentially two options are open to town planners and developers.

- The traditional answer has been to develop more land, typically agricultural land, further from the city centre, for residential use.
- A second option is to adopt a strategy of going up rather than out. That is, encourage mid-rise (2-5 level) housing in areas closer to the metropolitan centre.

The first approach carries with it additional major costs. Not only electric power plus/minus gas, mains water, irrigation, waste water, and other essential municipal infrastructure and services, but also public transport should be extended to these areas.

Where public transport is not extended to these outlying suburbs, more people rely on private vehicles to commute to and from work or social activities, increasing traffic congestion and increasing per capita petrol consumption. Development in the Perth Hills, especially southeast of the city, appears to be an example of this.

However, the extension of public transport to existing outlying areas may itself carry hidden consequences. Transperth's new line to Mandurah (opened in 2008) shows commitment to improving public transport. A side effect (of providing such a long distance commuter service) that must be kept in check by government planners however, is the 'invitation' to residents and developers to move still further from main urban centres. Commuter travel times are ultimately increased, not decreased, and the cost of installing and maintaining the service is high.

Notable examples of mid-level residential building already exist around the periphery of Perth's CBD, and locally around some of its major suburban centres. We suggest that this trend should be actively encouraged.

Contrary to the traditional models discussed above, public transport can actually play a role in encouraging people to live closer to their places of work, and urban centres, by making it easy and more convenient to get around. We suggest that **future public transport development in and around Perth should be designed to encourage people to build and buy as much as possible closer to existing urban centres**, rather than reinforcing the urban sprawl.

SOME INSPIRATION FROM OVERSEAS

Bogotá, Colombia

Between about 1995 and 2005, after the election of a mayor who defined the 'culture of citizenship' as

the sum of habits, behaviors, actions and minimum common rules that generate a sense of belonging, facilitate harmony among citizens, and lead to respect for shared property and heritage and the recognition of citizens' rights and duties.

the city of Bogotá (population approx. 6.8 million) underwent a transformation. Central to this was the development of an integrated public transport system, and facilitation of an extensive cycle network, underpinned by a clear position from the mayor regarding private automobiles as "the worst threat to quality of life of this city."

We recommend to the Senate Committee the following three websites:

<http://www.rideforclimate.com/journals/?p=92>

<http://www.globalurban.org/Issue1PIMag05/Montezuma%20article.htm>

<http://www.abc.net.au/pm/content/2005/s1303555.htm>

These show that although Bogotá's public transport and cycling networks are far from perfect, the move away from the previously overwhelming dependency on private vehicles has brought major benefits for residents and for the city as a whole.

Europe

Many European cities, even those a lot smaller than Perth, have taken a diverse approach to public transport. Perth's combined train-bus-ferry system, and especially the transferable 'Smartcard' electronic ticketing system, are a step in the right direction. Much more is possible.

CONCLUSIONS

In our view, the February 2007 report of the Senate Rural and Regional Affairs and Transport Committee "Australia's future oil supply and alternative transport fuels" got it about right in its discussion of scenarios for future transport fuels, and with strategic directions for mitigating the likely effects of 'peak oil' and over-dependence of Australian transport systems on oil as the principle transport fuel.

However, we feel that report did not go far enough in offering guidelines, recommendations, or solutions for the Federal Government to address the issues raised. We're hopeful that the present inquiry will do this; specifically in reference to further developing Australia's public transport system and related services and activities. We believe the Federal Government needs to lead by example, providing policy and practical structures that support State Government in upgrading, or in some cases establishing, the public transport sector to become an efficient, attractive, user-friendly, and nationally consistently high standard service.