

**Submission to the ACT Government Standing Committee on Climate Change,
Environment and Water**

Inquiry into ACT Greenhouse Gas Reduction Targets

From : Peter White (as a private individual)

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1 I wish to make a submission to the inquiry, in particular addressing these points in the Standing Committee reference -

(2) (c) (i) the efficacy of existing programsand the need for additional programs....

(2) (c) (ii)future energy suppliesoptions for sourcing or producing sufficient energy needs.....

(2) (c) (iv)economic issues, costs and opportunities.....

In particular, the comments I have are specifically addressing greenhouse reduction strategies to do with –

- Fuels used in transport vehicles and reducing usage
- Household, vehicle and commercial consumption of electricity

Fuels used in transport vehicles and reducing usage

Private vehicles

2 For a city such as Canberra, the most sustainable and achievable objective for private transport is to encourage the use of plug-in battery electric vehicles, which use green electricity. A very significant proportion of private vehicles in Canberra would never leave the city boundaries and are used just for commuting and local journeys. These are the “city car” vehicles that should be plug-in electric using green power. If 20% of the city’s private vehicles were of this type this would be a major contribution to greenhouse gas reduction.

3 A small number of locally made and cottage industry hand built plug-in electric cars are now running around and larger numbers and more choice will be commercially available on a larger scale in a couple of years. Battery technology, to increase car mileage from a charge and to reduce re-charge times, is rapidly improving. Mitsubishi announced only last week that a new small plug-in electric car is likely to be sold in Australia in 2010. The ACT Government can take action to encourage and prepare for this change to using plug-in electric vehicles using green power.

4 Hybrid electric vehicles are but an interim step along the way towards all-electric vehicles. But for city transport, improved batteries and plenty of electric plug-in points will mean that for a city runabout car, the rational and cost effective choice will be plug-in electric. These must be charged using green power, otherwise the gas emissions are

simply moved to the coal generation station. Green electricity from a plug-in power point, such as ACTEW/AGL 100% wind power provides, is available right now. There are also inbuilt incentives for the private motorist to move to plug-in electric vehicles - no more stops at the petrol station, just plug in your car at a power point and charge her up! No more need to take time off work to get the car to a garage for servicing, as the all electric car just needs the annual safety check, and that's it! Hybrid vehicles should not be encouraged by specific Government policies, because of the life cycle of vehicle-life years (and other reasons), they are just delaying the move to plug-in electrics. But plug-in electric vehicles using green power to re-charge batteries, should be encouraged by Government.

5 As private plug-in electric vehicles become available, the ACT Government could provide a lot of encouragement, such as - provide electric vehicle traffic lanes (eg use the existing transit lanes), provide electric coin operated plug-in battery charge points in car parks, parking stations and at curbsides, provide electric vehicle only parking spaces with cheaper parking fees, ensure government electric fleet purchases are of plug-in electric vehicles and so on. Vehicle registration charges and other taxes should discriminate much more positively towards environmentally friendly electric vehicles, rather than oil using cars or hybrids. All these measures could be made revenue-neutral to the ACT Government.

6 Plug-in electric cars, rather than hybrid petrol/electric cars, must be encouraged within the Commonwealth Government's \$500m green vehicles scheme. The previous Federal Coalition Government's policy made it impossible for cheap all-electric cars to be imported – the design and accreditation rules need to be updated to make these cars readily available in Australia as they are in countries such as Britain. Petrol excise revenue will go down as people switch to electric cars so we need to make sure this doesn't become a reason to discourage their use. Strategies are needed to neutralise the petrol economy vested interests (particularly the big oil companies) who will resist change. Over time, there will also be less business for motor mechanics and petrol station attendants, but 100 years ago who would have thought that horse shoeing and saddle making would be almost non-existent trades today. While these are Commonwealth Government issues, there are inter-government forums where such policies can be pushed by the ACT Government. This would be a no-cost approach for the ACT Government, but potentially could achieve results that would reduce ACT greenhouse gas emissions.

7 Encouraging cycling and walking as alternatives to using motor vehicles are worthy policy objectives for greenhouse gas reduction purposes, but also for their community health and other benefits. Realistically, this is not going to make a big impact, and often distances are too great in Canberra to make cycling or walking possible for more than a small proportion of total journeys. However, we could encourage and facilitate other forms of private transport such as electric (ie battery) cycles, electric tricycles and possibly small motor scooters, to increase the proportion of fuel efficient journeys. More dedicated traffic lanes, more readily available secure parking, increasing the present low power limit on electric cycles, facilitating private sector supply of vehicles and

facilitating demonstrations/hire etc of innovative vehicles (such as battery powered tricycles) are some means of moving in this direction.

8 Not only as part of a greenhouse gas reduction strategy, it would be very worthwhile encouraging greater use of the 4 wheeled battery powered vehicles we see some aged or disabled people using around town. There are greatly under utilised transport possibilities here, with lots of spin-off benefits. Increased use of such battery vehicles has social and health benefits for the users and the community benefits from reduced use of more environmentally unfriendly transport such as taxis, community transport cars and private vehicles. I am not aware of any incentives toward the use of such vehicles, but incentives could include providing driving and safety training for users, upgrading transport routes (eg cycle paths), improving access to facilities (eg ramps, paths from aged facilities to local paths) and facilitating the new and second hand sales markets. Older age people who are facing increasing difficulties in maintaining a standard driver's licence could be a particular target group for helping move to a more low key means of local transport.

9 The ACT Government should actively pursue with the Commonwealth Government, the elimination of the anomalous situation of free parking provided in the national zones. Removing free parking here should be seen as an opportunity to increase use of public transport, and some innovative approaches to ease the pain might be to provide, for example, quick free or low cost transport over the 2 hour lunch period from these areas to Civic. Reducing the open car parking space should also be part of this approach and this could be complemented by providing more parking at interchanges at Woden, Gungahlin, Belconnen, and Tuggeranong to encourage park and ride. Park and ride clearly reduces private vehicle distances traveled and so greenhouse gases (with by-products of reducing traffic loads on roads and the other benefits so resulting).

Public transport and freight vehicles

10 Public transport in Canberra, given the design of the city and consumer preferences, is realistically never going to be more than a smallish (but hopefully increasing) proportion of city transport. Means to encourage public transport use should continue to be pursued, including the linking of town centres with a green electricity powered light rail network. This will reduce the use of oil or compressed natural gas (CNG) powered public transport vehicles (buses). The policy of using CNG in ACT buses should be extended to using CNG in *all* ACT buses, basically as a better option than oil based fuels (ie petrol, diesel, LNG), and recognising that battery powered vehicles (buses) are not likely in the foreseeable future.

11 The ACT could take a lead in moving the taxi and local freight transport fleet to use CNG in their vehicles. This could be done by extending the fill up stations to several locations in the city, and facilitating the purchase of CNG powered vehicles by local taxi and freight operators. The ACT Government should encourage the Commonwealth Government to stop subsidising the installation of LPG in vehicles, and instead move toward enabling CNG to be used by the road transport fleet in Australia.

Household, vehicle and commercial consumption of electricity

12 There are many things that can and should be done to reduce the use of coal generated electricity and increase the use of green and sustainably generated electricity.

13 The standards of energy efficiency required by ACT Government regulations for new buildings is very inadequate. How can it be possible that 5 star rated new houses, as on display all the time in exhibition villages (such as in Gungahlin), have roofs of black tiles, they have no overhanging eaves, they are not sited on blocks designed with solar efficiency in mind, the blocks are so small that vegetation modification of micro climates is not possible, and all these houses have full air conditioning. Fixing just these problems that are apparent to any layman, to reduce the energy requirement of new housing, should be straightforward and cost neutral to the ACT Government.

14 To achieve significant reductions in coal generated household electricity consumption, it is inadequate to rely on regulations for the small proportion of the housing stock represented by new construction. I strongly support a program of retrofitting the existing housing stock. Unfortunately, doing this is not cost neutral to the ACT Government, and will only occur on the margins if left solely to the initiative of concerned, environmentally aware and relatively affluent, non-renting householders. Most people see the problem of the energy efficiency of their house as being an issue of just heating and cooling. They are addressing this at the moment by installing hugely greenhouse unfriendly air conditioning and heating systems. This must be discouraged, or they must be “encouraged” to use green power. So increasing the energy efficiency of the housing stock is one thing, and useful, but progressively reducing and then eliminating the use of coal generated electricity is more likely to be the better long term approach.

15 Avoiding, or at least reducing, the use of coal powered electricity in the ACT should be a prime objective of the ACT Government. The mandated level of green power that utilities are required to supply should be subject to a staged, progressive increase, so that by a certain date, 100% of the electric power supplied by any utility in Canberra will be “green” and the cost shared across all consumers. The existing levels and objectives are far too modest. In parallel, measures need to be taken to ensure that consumers do not significantly switch to the less environmentally friendly use of CNG. Forcing everyone to buy green electricity is not the end of the world as we know it. It would happen in a staged way over a number of years. Also, the cost of green power is coming down with new technology, and large scale purchases by utilities will facilitate that trend. There are a significant number of ACT consumers now buying the easily available 100 % green power. If a householder wants to install an aircon unit in a house, perhaps as an alternative to spending a lot of money on retrofitting, then that is fine if that unit is powered by green electricity supplied by the utility. Perhaps the use of domestic air conditioning could be made dependant upon purchase of green electricity until such time as 100% of utility supply is “green”.

16 Subsidising the installation of mini power stations (solar panels) on the roof of Canberra houses is not the way to go. This is a current fad that is receiving irrational

Commonwealth funding. It is based on the outdated policy of the previous Commonwealth Government, that requires that individuals should look after themselves and solving these sort of energy problems is an individual matter, rather than it being a community or group issue to address. The recent ACT Government conversion to supporting feed-in tariffs, although not a complete waste of effort, is also a diversion from the main game. The additional cost of the high rate feed-in tariff is paid for by extra charges to consumers who do not have the capital to pay for a mini power station on their roof, not by the ACT Government. Assume that the feed-in tariff policy was successful in getting a large proportion of consumers (say 50%, for arguments sake) to generate their own power (although this is very unlikely). Then, the other 50% of consumers will pay for the feed-in tariff payment of 3.88 times retail prices to the affluent, who have solar power stations on their roof. This will result in a completely inequitable burden on those who can least afford it – renters and lower income people who can't afford a power station on their roof. This would be far more costly for renters and low income households than if utilities were required to eventually supply 100% green power. A far better approach is as I have suggested in the paragraph above – green power supplied by the utilities with the additional cost spread across all consumers of power. However, some people do get a good feeling from generating their own power, but it's only the affluent few who can afford to make the financial decision to invest in such things. While much supposed enthusiasm for roof top power generation appears in the media, it will be highly successful if even 5% of households put these solar panels on their roof, so that won't do much to reduce greenhouse gases. A parallel situation here relates to the highly effective solar hot water systems - only a very small proportion of households have these on their roof after many years of availability, relatively low cost and a relatively efficient pay back period (ie a very low take up rate). So it is not reasonable to expect any different results from putting solar panels on domestic roofs. In summary, solar panels on domestic roofs will have a minor effect in reducing greenhouse gases and will disadvantage renters and low income households.

17 If Governments wish to encourage individual involvement in power generation – as an alternative to simply purchasing 100% green power from a utility, then a better approach would be for the ACT Government to set aside some broad-acre land on which such solar plants could be built. We have plenty of suitable land. Or the large roof space on commercial buildings could be used. Basic economics tells us that it is cheaper and more solar efficient for one large solar plant (eg a bank of solar panels) to be installed rather than 100 individual households putting a plant of $1/100^{\text{th}}$ the size, each on their own roof. Simple economies of scale apply here. This would mean that the Commonwealth subsidy scheme should encourage and allow a community/group based approach, rather than the present approach tailored to individual houses. I suspect that most people would prefer to join a group, community based scheme, at a considerable lower cost to them, particularly if everything else remains the same (such as the dollar return from a feed-in tariff). As I say, it is even better if the utilities themselves build the solar (or other types of green) power plants which can provide for thousands of households at a lower unit capital and ongoing power cost. An argument could be made for providing free broad acre land for any power utilities that were prepared to build solar power stations (of whatever type – there are many options) in the ACT. This could be

cost neutral for the ACT Government and provide employment and industry opportunities as well as environmental benefits. There is no need for a large amount of public funds to be spent to achieve these objectives.

18 Most of the above suggested actions require ACT (and Commonwealth) Government action and may be seen as coercive. But the time has passed for inaction and reliance on individual action and the so-called “market”. The reality is that individual actions will not be significant enough to make an impact on reducing greenhouse gas emissions in the necessary time frame. The idea that individual actions can make a difference is correct only to the extent that they are able to make governments change policies. The largest proportion of the population will not sufficiently change their habits without government encouragement, and government action. Government action is needed to put the necessary regulatory and legislative framework in place. That people want legislators to take action was very clearly stated by the electorate in the results of the last Federal election and the recent ACT election. Conservative and timid approaches are out, decisive and swift action is needed.

Summary of suggestions

Para 3, 5 ACT Government to take action to encourage and prepare for the change to using plug-in electric vehicles using green power.

Para 4, 6 ACT Government to lobby the Commonwealth Government to change emphasis from encouraging hybrid vehicles to plug-in electric vehicles as the city car of choice.

Para 7, 8 ACT Government to encourage the use of small scale battery electric vehicles (cycles, trikes, scooters, older people 4 wheel mobility units).

Para 9 ACT Government to work with the Commonwealth to eliminate free parking in all inner Canberra national zones, reduce parking space and put in place policies to enhance Park and Ride and the use of public transport as a replacement.

Para 10 Build a green electricity powered light rail network connecting the 10 main employment and shopping centres in the ACT/Queanbeyan

Para 10 Run all ACT Government buses on CNG

Para 11 Encourage all ACT taxi and local freight transport to move to using CNG fuel and lobby the Commonwealth Government to facilitate this happening in the ACT and Australia-wide

Para 13 The energy efficiency building regulations and broad-acre development design and siting requirements for new housing need major improvements.

Para 15 Plan for a move towards the mandated supply by utilities or community-based schemes, of 100% green electricity in the ACT.

Paras 15, 16, 17 Lobby the Commonwealth Government, and take ACT specific action where possible, to de-emphasise using solar panel power stations by households and conversely encourage more efficient and lower cost group arrangements to generate green power, using broad acre areas of the ACT.

Peter White

An indulgent postscript : a (partial) vision for Canberra's future

1 All these changes could happen in a very short time if there is Commonwealth and ACT Government willpower to get the legislative and physical infrastructure in place. The longer term could also see **many more** big changes to the way we get around and live in Canberra. What might the future look like in 2025 ? This is my vision.

2 In 2025 a fast and frequent electric light rail network interconnects all our 10 major employment, commercial and shopping nodes in Canberra/Queanbeyan. A fleet of public (ideally battery driven electric) vehicles provides a network of local transport services connecting to each of these 10 main nodes. Parking is cheap and plentiful at suburban centres, but very expensive and scarce at the main centres, for non-electric vehicles. A typical journey to work in 2008 by car, is now by plug-in electric vehicle, cycle or electric bike/trike to the nearest light rail connection, then by very fast light rail to any of the 10 interconnected main employment centres. Private cars are all small plug-in electric vehicles. Coin in slot plug-in charging points for electric vehicles are everywhere. Coal generated electricity supplied to households has largely been replaced by green electricity from sun, wind, wave, geothermal and other renewable sources.

3 In 2025 a fleet of electric vehicles is parked around many places in the city and electric cars can be readily hired by residents to use for city trips when they don't have their own vehicle (Paris is introducing such a scheme in 2009 with 4,000 electric vehicles). Some people still have their own hybrid electric/petrol cars for trips outside Canberra, but most people hire a hybrid vehicle as needed from the convenient local hire garage, which ends up being a much cheaper option than owning your own hybrid vehicle.

4 With changes to transport systems and the way we get around the city, the form and structure of the city has also changed by 2025. The ACT Government has not built any more large trunk roads for many years as now most private vehicle travel is in suburban areas and most people use the fast and efficient public transport to get to work. Most of the Civic car parks are now built over with offices, apartments, community and

entertainment facilities - generating a lot of rates revenue. Urban infill close to transport nodes has intensified. The town is more lively and energetic with many more people now living in medium density units. As the volume of traffic in the main town centres is now much reduced, many city streets are now pedestrianised and park-like with trees and gardens, outdoor cafes, community meeting places and communal facilities. People, not cars, are now the dominating feature of our town centres. As public transport use has increased dramatically, it has become viable to provide frequent public transport to the many outdoor recreation areas along the Murrumbidgee and Cotter Rivers and at Tidbinbilla and Namadgi National Park.

5 The 10 year old fast rail link gets us to Sydney in 1 hour for the odd weekend away or for a working day meeting. Sydney – Canberra flights have almost ceased, freeing up a lot of pressure on Sydney airport and eliminating the need for a new and costly Sydney airport.

6 All our homes are now much more comfortable in the increasingly hot summers as the housing retrofitting program has enabled us all to have affordable double glazing, sun shading and full roof and wall insulation. Air conditioning is only used in some older dwellings where retrofitting results were smaller, and in many commercial applications. Almost all our energy is derived from locally generated sustainable electricity or from other green sources that have boomed all over Australia. CNG meets the need where electricity can't provide the power source. Hundreds of well paid researchers and trades people are employed in Canberra in the hi-tech sustainable energy industry, for which the city has become a world leader.

7 Is this an unrealistic vision of what Canberra might look like in 2025 ? I don't think so. What is the alternative? Do we have one ?

Peter White