

Submission from Transition Kingston

Transition Kingston is a small community group encouraging the transition to a sustainable low-carbon future. We are affiliated with Transition Australia. We aim to help build a resilient local community by educating about the climate crisis; exploring alternatives to fossil-fuels; encouraging sustainable food production and consumption and reducing waste.

One of our current activities is assisting ourselves and others with electrifying households and implementing electrical appliances in place of gas and petrol appliances.

We have tried to match our experiences and opinions to the Terms of Reference:

- (a) the economic opportunities of household electrification, including but not limited to:
(i) long-term reduction of energy price inflation,

From a household point of view, we find that ongoing energy prices are minimised with the investment in solar panels and batteries. The investment encouragement by state governments (rebates /loans) is helpful.

We think that local generation and storage within the local grid will limit price increases and maintain reliability (rather than expensive transmission and distribution with single points of failure) but effort is needed on control management.

Having the electricity retail price rates more accurately align with the electricity wholesale price may also help reduce price inflation. The peak wholesale generation prices are mainly caused when gas generators are in use. It is not clear how price manipulation by generators can be controlled more effectively. The current generation pricing system does not appear to be fit for purpose and does not particularly help reduce price inflation or renewable transition.

- (ii) long-term employment opportunities,

From a household electrification aspect, the establishment of assembly/manufacturing of electrical appliances should be encouraged (eg Earthworkers hot water heat pumps in La Trobe Valley, Essatto induction cooktops in Melbourne...), but manufacture of small scale batteries, and increased Australian electrification of vehicles would also expand employment.

- (iii) the scaling up of domestic capacity;

This is happening with solar installs – both household solar and farms. This needs encouragement, not restriction. The recommendation is for an approach to expand as quickly as possible and make use of excess production - firstly to support supply at other times of day and secondly to facilitate scheduled and industrial use.

It would be useful to try to facilitate Australian innovations -such as solar windows and roof tiles into an Australian manufacturing capability rather than going offshore.

- (b) the macro-barriers to increasing the uptake of home electrification;

We are not sure which barriers you are referring to. The barriers we have encountered are Misinformation, and Investment cost and lack of trust in retailers and plumbing companies. Also, for renters, a scepticism that landlords will do anything.

Misinformation

Many people still have the impression that 'natural gas' is cheap and healthy. They are encouraged in this view by suppliers, and retail information and parts of the media. Ideally banning gas appliances from sale for health and safety reasons would be the clearest solution to this as there are now better electric alternatives. As this approach could be socially and politically risky then an effective but weaker alternative is to legislate that all gas appliances have a large health and emissions warning fixed to them– in a similar way that smoking warnings and energy efficiency labels have been used. Also, that all advertising of gas products has a large health and emissions warning included in the advertising.

Clearly publicising electrification successes in a practical manner would also be part of a recommended approach. Our group attempts to do this at a local level – once some friends and neighbours start to electrify, others follow. It is useful having examples such as “The council has removed all its gas services from its buildings resulting in a healthier environment and lower on-going costs” rather than “The council has reduced its emissions by 42%”.

(c) the total upfront cost and longer-term benefits of household electrification and alternative models for funding and implementation;

We have found that the perceived long-term benefits of electrification can vary in importance with people. Some are motivated by reduction in emissions to reduce climate impact whilst others will implement induction cooktops because they are easier to clean than gas cooktops. Many people are motivated by improved health aspects (e.g. children with asthma).

For people mainly motivated by a ROI and overly concerned with upfront cost – it is extremely difficult to calculate this in detail on an individual basis. We find that the most effective approach is explaining what other households are doing or have done. Also referring to helpful web sites - For example a Facebook blog – My efficient Electric Home

<https://www.facebook.com/groups/MyEfficientElectricHome/>

We would mention there is information about Government rebates/free interest loans etc

<https://www.solar.vic.gov.au/>

and we might refer to the RENEW site for product comparisons, technical advice, and reports

<https://renew.org.au/>

(d) the marginal cost of abatement for household electrification compared to alternative sectors and options to decarbonise the economy;

We are not sure what the reference to marginal cost of rebatement is. All decarbonisation is important. It should not be not a choice – all options should be taken. Household decarbonisation is especially important as the populace needs to be involved in the transition, rather than just waiting for government or business to act. The cost of being slow to act will far outweigh the cost of acting now.

(e) the optimal timeline for household electrification accounting for the likely timing of decarbonising electricity;

We doubt that an optimal timeline can be managed in a scheduled way. Also, the decarbonising electricity generation varies significantly by time of day and place. In Victoria, some EVs are charged and appliances used at night when renewable electricity may only be 20% whilst some EVs are charged and appliances used during the day when renewable electricity may currently be 60% or more. In Tasmania renewable electricity is usually 100% both night and day.

Our recommendation is that the optimal timeline for household electrification is NOW and the focus can be on using the increasingly available daytime decarbonised electricity.

(f) the impacts and opportunities of household electrification for domestic energy security, household energy independence and for balance of international trade;

Clearly implementing household solar and batteries or neighbourhood batteries improves household energy security and independence. The opportunities are immense for implementing neighbourhood batteries and micro grids for financial, reliability and technical reasons. The technical challenges appear small compared to the confused organisational processes involved with the NEM.

We cannot comment much on international trade and National security except to observe how much Australia currently spends on imported oil products and its limited Australian storage. Supplying power by electrification of vehicles would lessen the national supply risk.

(g) the impacts of household electrification on reducing household energy spending and energy inflation as a component of the consumer price index;

No comment

(h) solutions to the economic barriers to electrification for low-income households;

Subsidies can be helpful but unfortunately, subsidies of gas and electric services often mean that the power company can raise prices and they are subsidised as much as the household. The subsidies offered on such items as heat pump hot water systems by the Victorian Government are especially helpful. A common problem is high or unknown plumbing and electrician costs. A main recommendation we promote for low income and rental households is to be prepared with a heat pump hot water quote (and rebate) when the current hot water system fails – rather than reactively changing like for like replacement (as many plumbers recommend).

Another major recommendation for low income and rental households is to buy portable induction cooktops rather than fitted ones – to gain the health and cleaning and safety benefits, but also to save installation costs by using existing electricity sockets. There is the further benefit – especially for renters – of being able to take their cooktop with them if they move.

(i) the effectiveness of existing Australian Federal, state, and local government initiatives to promote and provide market incentives for household electrification

The main effectiveness for us has been the Victorian State initiatives. Unfortunately, many people do not notice government initiatives as much as retail advertising and articles promoting gas use.

It is worth repeating our recommendation to legislate that all gas appliances have a large health and emissions warning fixed to them– in a similar way that smoking warnings and energy efficiency labels have been used. Also, that all advertising of gas products has a large health and emissions warning included in the advertising.

Victoria has implemented an enforcement safety and health check for rental properties. This has the potential of encouraging household electrification. We recommend that the people doing the checks offer helpful information about household electrification.

(j) Australia's current standing against international standards, particularly with respect to the uptake of rooftop solar, batteries and electric household appliances; and

No comment
(k) any other matters.

No

Tom Maher

Transition Kingston