2025 consultation

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Doing more. Using less.

NSW Net Zero Commission Consultation Paper Response by A2EP

July 2025

Q3

Not A2EP's area of expertise, however we are not aware of any evidence showing First Nations cultural knowledge and practices that could support commercial and industrial decarbonisation.

Q6

Generation is not A2EP's area of expertise but we do note that the low utilisation of the distribution network at 43% vs 57% in 2006, represents a vital opportunity to improve electricity costs for all electricity consumers. Grid utilisation and productivity targets and plans need to be developed to return the grid to higher productivity. A2EP has modelling on commercial, industrial and freight transport electrification that can support such targets and plans.

Q9

1. Policies to coordinate charging infrastructure so that individual companies do not need to set up their own infrastructure.

2. Government sponsored trials and pilots to show the benefits of electrified freight transport, coupled with research reports and knowledge sharing.

3. Support for industry associations to provide knowledge sharing for electrified transport.

Q10

Ag residues are a hugely untapped resource that have the potential to transform regional areas in the energy hubs that reduce emissions and create jobs. NSW govt has done some mapping of biomass resources but needs to do more research to guide the optimal use of these ag residues and the potential to create fuels to displace diesel. A2EP can show research examples done in Queensland for such work. A2EP can also provide policies and program examples to launch such energy hubs.

Q13

CAPEX support is available from ARENA. Demand for decarbonised products and OPEX support is needed to accelerate decarbonisation.

1. Create demand for decarbonised products and solutions via green premiums in NSW construction tenders. Material efficiency not just lower embodied emissions in materials need to be supported.

2. Allow and encourage network operators (Ausgrid, Essential Energy, Endeavour Energy) to trial programs to improve grid utilisation and productivity (eg dynamic solar soaking tariffs, freight vehicle mapping and charging trials etc)

3. Provide transmission and distribution tariff relief to all major electrification projects (not just hydrogen projects) that add to grid utilisation and productivity (A2EP has modelling to support what is possible here).

4. Overhaul regulations for the development of anaerobic digestion facilities such that planning and approvals costs reduce from >$1.5M to <$200k (as is in Europe) and from 2-3 years to <6 months per project. Extensive research is required to adapt European biogas frameworks to Australian conditions. A2EP has further information on this.

5. Create certainty on income and supply for potential anaerobic digestion feedstocks. For example, ensure that FOGO is made available for anaerobic digestion not just composting.

Q14

Same as for Q13, noting that technical solutions are available today at economical levels if properly designed (heat pumps) or are near to being economical if improved policy support is available (electrode boilers, eTES, biogas / anaerobic digestion plants) and supply chains are developed to be more competitive through improved regulations and knowledge sharing.

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Q15

1. Research to help guide best practice utilisation of waste resources that considers various pathways (waste to energy, landfill, anaerobic digestion, pyrolysis, aerobic composting, anaerobic composting, insect feed, etc)

2. Research the emissions of a waste to energy plant vs a well engineered landfill (with reduced FOGO input due to diversion direct to anaerobic digestion) to show if the carbon liberated from burning plastic in W2E projects has a lower impact compared to going to a landfill.

Q19

Firstly, how many buildings need to electrify? What is the likely electrical demand from this electrification? This is completely unknown so targets and planning cannot be done. The Commercial Building Baseline Study for 2024 is grossly inaccurate when it comes to the number of building and gas usage per building type.

Second, electrification methodology is very poorly understood resulting in very expensive electrification designs (>$8M per MW) compared to compared to optimised designs which are typically <$2.5M per MW. A program needs to be supported to educate designers, owners, facility managers and OEM's on the best practice for heat

pump implementation. A2EP has developed materials for this work but needs government policy support to help roll it out.

Third, energy efficiency is poorly understood by the architectural community as seen by the continuing roll out of 'glass palaces'. Training is needed.

The results of energy efficiency measures are poorly proven and documented which undermines confidence in the investments.

Finally, as has been done in Victoria, all new commercial buildings should have gas banned as economical solutions are available for all heating demands (heat pumps for DHW and space heating, induction for cooking, electrode boilers for sterilisation, etc)

Q21

Natural refrigerants are available for a large range of requirements. A2EP's refrigerant guide shows what is available and suitable.

In short, refrigerants with a GWP >10 need to have an agreed end date of say 2030 with the opportunity to utilise other refrigerants with an increasing penalty.

NSW government also need to give consideration to low GWP refrigerants known as HFOs, that create PFAS upon breaking down in the environment. These also needs to be considered for banning depending out the composition of the breakdown products.

Q23

100% independence from imported fossil fuels.

Design standards updated for weather events with higher severity.

Q26

More data.

How many commercial buildings need to be retrofitted? What size are they

? What electricity demand will they have? How much thermal storage is needed for each building?

Where does the grid need augmentation to support electrification?

What grid utilisation is possible? What tariffs need to be developed to support more flexible demand.

What is the best operational strategies to harmonise with renewable electricity generation?

The list goes on.

A2EP welcomes the opportunity to discuss any of these recommendations with the Net Zero Commission.

Yours sincerely,

Jarrod Leak

Chief Executive Officer

Australian Alliance for Energy Productivity (A2EP)