Environmental Defenders Office

26 April 2024

Electricity and Energy Sector Plan Taskforce
Department of Climate Change, Energy, the Environment and Water

Submitted via: DCCEEW Consultation Hub

Dear Electricity and Energy Sector Plan Taskforce,

Consultation on the Electricity and Energy Sector Plan Discussion Paper

Environmental Defenders Office (**EDO**) welcomes the opportunity to make a submission on the Electricity and Energy Sector Plan Discussion Paper. EDO supports the development of an Electricity and Energy Sector Plan (**the Plan**) as a means to reaching net zero. With energy accounting for around 85% of Australia's net emissions in 2022-23, and electricity alone accounting for around a third of emissions,[1] it is imperative that the Plan is ambitious, equitable, and brings down emissions as quickly as possible.

EDO notes there is ongoing consultation on Australia's 2035 emissions reductions targets led by the Climate Change Authority, and continues to urge the Government to commit to a more ambitious goal for tackling dangerous climate change.[2] The Plan should reflect the best available science, and aim towards rapid achievement of real net zero. EDO **recommends** a target of net zero by 2035 should be reflected in the Plan (and subsequently our national targets).

Relevantly, the Federal Government has also committed to a target of powering 82% of Australia's major electricity grids with renewable sources by 2030, and has an ambition for Australia to become a renewable energy superpower.[3] To meet this goal, and our emissions targets, the Plan must have measurable timeframes, clear deliverables in terms of achievement towards the targets, and periodic review to ensure that we remain on track.

This submission makes further recommendations in four areas to guide development of the Plan:

1. **Fossil fuels are driving the climate crisis and must be phased out**
2. **Energy planning must be based on real solutions for climate mitigation**
3. **Community support for the renewable energy transition is essential**
4. **Equity must be incorporated into transition planning for the energy sector**

[1] Department of Climate Change, Energy, the Environment and Water, Electricity and Energy Sector Plan Discussion Paper, 8 (**Discussion Paper**).
[2] EDO, submission to the Climate Change Authority on setting, tracking and achieving Australia's emissions reduction targets (June 2023).
[3] Discussion Paper, 10.

1. Fossil fuels are driving the climate crisis and must be phased out

As recommended in EDO's Roadmap for Climate Reform,[4] the Government should strengthen mechanisms for direct regulation for emissions reduction to meet targets including by: *[p]roviding legal clarity on how emissions budgets and targets apply to all projects and sectors. This will involve providing both project and sector specific guidance.*

It is not clear in the Discussion Paper that any additional, direct regulation of emissions or prohibitions on new fossil fuel infrastructure will apply in the energy sector. EDO **recommends** setting enforceable deadlines to phase out domestic reliance on fossil fuels, including prohibiting specified greenhouse gas (**GHG**) emitting activities/projects that will drive exceedance of Australia's 'fair share' of a 1.5°C carbon budget.[5] This requires no new fossil fuel projects or non-renewable energy projects be countenanced in the Plan.

In relation to gas, EDO refers the Taskforce to our submission on the Future Gas Strategy. Gas is a potent greenhouse gas, with methane being 86 times more potent as a greenhouse than carbon dioxide over a 20-year period.[6] EDO is of the view that the only way to reach net zero is to ultimately decarbonise Australia's gas sector, and transition industrial, commercial and domestic energy users away from gas. At the household level, consumers must be able to switch from gas easily and cheaply. EDO **recommends** no new gas projects be approved, and the Plan proceed on this basis.

Further, EDO recognises that the scale of investment in renewable energy technology and infrastructure will need to rapidly increase, and that both public and private investment will play a role. EDO **recommends** public financing should be redirected from government subsidies for high-emissions activities – including fossil fuel production, power generation and use. Identifying and removing subsidies to environmentally harmful activities, including fossil fuel production and consumption, is consistent with various international bodies' recommendations, including the Organisation for Economic Co-operation and Development (**OECD**), World Bank, International Energy Agency and the G20. Given the need to rapidly scale up renewables while also mitigating emissions from fossil fuel projects, the Plan should include direction to phase out public financing for fossil fuel projects as a simple way of reducing fossil fuel supply as well as providing funding for transition activities.

2. Energy planning must be based on real solutions for climate mitigation

EDO does not support carbon capture and storage (**CCS**) as a means to enable new fossil fuel projects, or to mitigate emissions. It should not be relied upon to reduce emissions, particularly under mandatory emissions reductions policies like the Safeguard Mechanism.[7]

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[4] EDO, Roadmap for Climate Reform (2022), recommendation 31.
[5] See, EDO, submission to the Climate Change Authority on setting, tracking and achieving Australia's emissions reduction targets (June 2023) 8 – 9.
[6] G. Myhre, D. Shindell, F.-M. Bréon, W. Collins, J. Fuglestvedt, J. Huang, D. Koch, J.-F. Lamarque, D. Lee, B. Mendoza, T. Nakajima, A. Robock, G. Stephens, T. Takemura and H. Zhang, in Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, ed. T. F. Stocker, D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley, Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 2013.
[7] Discussion Paper, 25.

CCS is a false solution to the climate crisis. Globally there are no CCS developments that are operating at the scale required to materially contribute to reducing global GHG emissions.[8] Given the lack of successful large-scale projects over the past decade, it is important that investment in CCS is not used to justify and prolong a carbon-intensive economy. Moreover, IPCC scenarios clearly show global 1.5C trajectories need not use any CCS.[9] EDO **recommends** the Plan not rely on CCS technology to reduce or offset emissions, in order to meet targets or justify new fossil fuel projects.

Hydrogen is also noted in the Discussion Paper as a low-carbon gas that may provide opportunities for decarbonisation in our energy sector. However, despite not being a greenhouse gas itself, hydrogen does have a global warming potential – potentially two to six times higher than previously thought.[10] This is an important consideration in light of the urgent decarbonisation imperative. Moreover, hydrogen may only play a limited role in the longer term, alongside more cost-effective electrification and energy efficiency solutions. Green hydrogen incurs significant energy losses at each stage of the value chain, and in some cases, direct electrification is cheaper and more efficient than converting electricity to hydrogen.[11] Given the amount of renewable energy which will be needed to power the energy transition across all sectors, inefficiency in use of green hydrogen appears an ineffective alternative to electrification or energy efficiency solutions. In line with EDO's submission on the National Hydrogen Strategy, EDO **recommends** the Plan should enable identification of industry and markets where renewable 'green' hydrogen can be used to replace hydrogen produced from fossil fuels as a priority.

3. Community support for the renewable energy transition is essential

EDO agrees that ensuring community support and social licence is a key enabler for the energy transformation.[12] We strongly support the statement that the transition can have the twin benefits of increasing equity and helping us to meet our decarbonisation objectives, and believe that the transition **should** have benefits for the climate, the community, and the environment.

As a starting principle, the renewable energy transition presents an opportunity to engage with environmental concerns, community consultation processes, and First Nations cultural heritage protection in a different way than has been the historical experience in respect to the fossil fuel industry. The expansion of the electrification and renewable energy infrastructure will undoubtably have impacts for communities and for nature, but with best practice laws and policy, this can be mitigated and social licence upheld. In particular, we point the Taskforce to EDO's 12 Principles for Renewable Energy Transition Projects, which sets out best practice principles for decision-making around renewable energy projects and expanded electrification (including, e.g., transmission lines). In our view, social licence will only be secured by ensuring these principles –

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[8] See: EDO submission on Future Gas Strategy (November 2023)

[9] IPCC, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [P.R. Shukla, J. Skea, R. Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, J. Malley, (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA. doi: 10.1017/9781009157926 https://www.ipcc.ch/report/sixth-assessment-report-working-group-3/

[10] Ocko, I. B. and Hamburg, S. P.: Climate consequences of hydrogen emissions, Atmos. Chem. Phys., 22, 9349–9368.

[11] Eriko Shrestha and Tianyi Sun, Environmental Defence Fund, 'Rule #1 of deploying hydrogen: Electrify first' (30 January 2023) https://blogs.edf.org/energyexchange/2023/01/30/rule-1-of-deploying-hydrogen-electrify-first/.

[12] Discussion Paper, 33.

including community consultation, and human rights and environmental justice – are upheld as the necessary transition gathers pace.

4. Equity must be incorporated into transition planning for the energy sector

While climate change impacts disproportionately affect overburdened communities including First Nations communities and people experiencing financial and social disadvantage, so too do the effects of the energy transition.[13] People experiencing poverty or who are under financial stress often miss out on the benefits of the energy transition due to the associated cost of implementing renewable technologies or energy efficiency measures.[14] Moreover, the uptake of transitional measures by other parts of the community may actually raise energy costs, with people experiencing financial disadvantage paying disproportionately more for the energy transition.[15]

Transition policy must leave no sector or community behind. This includes in relation to energy systems, and the provision of energy as an essential service to overburdened communities. As noted in the Discussion Paper, access to affordable and reliable energy is a human right enshrined in the United Nations Sustainable Development Goals, and the transition to electrification and renewable energy systems must ensure that overburdened communities are not disadvantaged when it comes to access, price, or benefit sharing.

First Nations communities in particular are not only more likely to be at risk from the impacts of global warming, but also be disadvantaged from climate policies and measures which lack equity considerations.[16] EDO refers the Taskforce to our submission the First Nations Clean Energy Strategy for consideration of how the energy sector should transition, noting the key principles of free, prior and informed consent; and the right of self-determination.

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Yours sincerely,

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[13] See EDO, Implementing effective independent Environmental Protection Agencies in Australia (Report, 2022) report for further discussion of environmental impacts on overburdened communities.
[14] University of Melbourne and Roy Morgan, Taking the Pulse of the Nation (2023).
[15] See e.g. https://www.afr.com/companies/energy/energy-affordability-exposes-brutal-divide-between-rich-and-poor-20230202-p5chex
[16] Kate Crowley and Oshan Jayawardena, 'Energy disadvantage in Australia: policy obstacles and opportunities' (2017) International Conference on Improving Residential Energy Efficiency, IREE (https://www.sciencedirect.com/science/article/pii/S1876610217334835).