## Response to Capacity Mechanism Project High-level Design Paper

Healthy Futures is a nationwide network of healthcare workers, students and community members campaigning for a world where communities can thrive with clean air, clean energy and a healthy environment. We welcome the opportunity to make a submission to the ESB regarding the proposed capacity mechanism.

Any reform to energy market rules needs to be based on a clearly identified problem. The ESB has correctly identified that the uncertainty around the closure dates for coal-burning power stations has led to delays in investment decisions for new generation, storage, transmission and other system services. There is common agreement between the United Nations, the World Health Organization, the International Energy Agency and the IPCC that in order to limit warming close to 1.5 degrees countries like Australia need to exit coal by 2030. AEMO's Integrated Systems Plan shows that with enough policy support this timeline is achievable in the National Electricity Market. However, a capacity market that subsidises incumbent fossil fuel generators and risks delaying closure will only serve to fuel further uncertainty for the vast amounts of new generation and storage required in the context of the increasing unreliability of legacy coal generators.

Coal power stations pose substantial risks to human health by emitting fine and coarse particulates, sulphur dioxide, oxides of nitrogen, ozone and air toxins, leading to increased mortality, asthma prevalence and severity of asthma symptoms, chronic bronchitis, ischaemic heart disease and stroke.[1] [2] [3] Populations at greatest risk include people with pre-existing health conditions, children, the elderly and pregnant people. Public concern and scientific understanding of the sources and health impacts of air pollution has significantly increased in recent years, with extensive research by the CSIRO and DPIE finding that in NSW coal power stations cause nearly as much harm to human health as every vehicle on the road.[4] [5] [6] Unlike renewable energy projects, coal power stations also require constant supplies of fuel, which exposes communities to the impacts of mining, including fugitive dust, blasting, coal transport, and mental health impacts associated with land-use and resource conflict.

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[1] Lockwood, A.H., Welker-Hood, K., Rauch, M. and Gottlieb, B. (2009). Coal's assault on human health: a report from Physicians for Social Responsibility. https://www.psr.org/blog/resource/coals-assault-on-human-health/

[2] Amster, E. and Lew Levy, C. (2019). Impact of coal-fired power plant emissions on children's health: a systematic review of the epidemiological literature. Int. J. Environ. Res. Public Health 2019, 16, 2008. https://www.mdpi.com/1660-4601/16/11/2008/htm

[3] Ewald, B., Knibbs, L., & Marks, G. (2021). Opportunity to reduce paediatric asthma in New South Wales through nitrogen dioxide control. Australian and New Zealand journal of public health, 45(4), 400–402. https://doi.org/10.1111/1753-6405.13111

[4] Chang, L., Scorgie, Y., Duc, H., Monk, K., Fuchs, D., & Trieu, T. (2019). Major Source Contributions to Ambient PM2.5 and Exposures within the New South Wales Greater Metropolitan Region. Atmosphere, 10(3), 138. https://doi.org/10.3390/atmos10030138

[5] Duc, Hiep & Chang, Lisa & Trieu, Toan & Salter, David & Scorgie, Yvonne. (2018). Source Contributions to Ozone Formation in the New South Wales Greater Metropolitan Region, Australia. Atmosphere. 9. 443. 10.3390/atmos9110443.

[6] Broome, R., Powell, J., Cope, M., Morgan, G. (2020) The mortality effect of PM2.5 sources in the Greater Metropolitan Region of Sydney, Australia, Environment International, Volume 137, 2020, 105429, ISSN 0160-4120, https://doi.org/10.1016/j.envint.2019.105429

The health benefits of accelerating coal closure can be substantial. For example, we recently produced analysis based on modelled generation in the ISP and air dispersion modelling that found that bringing forward the closure of Loy Yang A from 2045 to 2030 would save around 1500 lives, prevent 32,000 instances of children experiencing asthma symptoms, and 1900 babies from being born underweight.[7] Similar research by NSW Health has found that the health costs of a business-as-usual coal retirement schedule amount to $2.4 billion in economic terms.[8] We request that the ESB factor health externalities into decision-making.

Given the increasingly frequent and extended outages at coal power stations due to maintenance problems, compressor tube leaks, supply chain disruptions and extreme weather, we believe that there is no policy rationale for providing windfall payments to generators that will be less and less likely to be able to provide electricity when needed over time.

Rather than focusing solely on a capacity market, consideration should be given to other solutions such as a Renewable Energy Storage Target, energy efficiency, load-shifting and demand response, and mechanisms to provide certainty around coal closures aligned with coal closure by 2030. Mechanisms such as a storage target can be adopted immediately without waiting until 2025.

If the ESB decides to continue to pursue any form of capacity market, notwithstanding the lack of stakeholder support and desire for a clean break from the approach pursued under the former government, we would urge you to ensure that capacity payments are not made available to fossil fuel generators as they have already been handsomely compensated for the now repealed Clean Energy Future package.

Please do not hesitate to contact us if we can provide any further information to assist you.

[7] https://www.healthyfutures.net.au/loyyanga
[8] Broome et al, cited above