

1. In the hearing on 15 December 2025, the Australia Institute stated that it is not clear what role energy from waste facilities would play in the energy system given they are small-scale and slower than renewable energy facilities. Can you explain this concern?

EfW facilities are inherently small-scale and slow compared with renewables, and the latest evidence shows EfW electricity can be as carbon-intensive as coal, largely due to the fossil-derived plastic content of residual waste. A peer-reviewed study estimates ~1,700 gCO₂-e/kWh for MSW incineration¹ - the highest of any power source examined - while UK BBC analysis² now classifies EfW as the most carbon intensive source on their grid, with several plants matching or exceeding coal per unit of electricity. In the context of a decarbonising grid, building long-lived EfW assets locks in high emissions, competes with recycling for plastics, and slows progress to net zero.

EfW is also slow to deploy because it requires lengthy and complex approval processes, significant community engagement to build social licence, and challenging financing arrangements. The Western Australian Kwinana Energy Recovery Facility illustrates these barriers. Construction began in 2018, but multiple delays, including pandemic related-related disruptions, supply issues and litigation, pushed commissioning out by several years, from an initial 2021 opening to late 2025³. Given that WA EPA's approval for facility commenced in 2012⁴, the project has likely taken more than 15 years to deliver. The project also required substantial public and private financing, including and support from lenders and the Australian Renewable Energy Agency (ARENA). These long timelines contrast sharply with wind, solar and battery projects, which can be approved, financed and built far more quickly and at much larger scale. Additionally, EfW facilities will not contribute meaningfully to the rapid flexibility (in terms of supply and demand) that a modern and evolving electricity grid requires.

¹ PLOS Climate (2023) *Waste incinerators undermine clean energy goals*, available at <https://journals.plos.org/climate/article?id=10.1371/journal.pclm.0000100>

² BBC (2024) *Burning rubbish now UK's dirtiest form of power*, <https://www.bbc.com/news/articles/cp3wxgje5pwo>

³ Waste Management Review (2025) *ACCIONA powers up Australia's first energy recovery facility in Western Australia*, <https://wastemanagementreview.com.au/acciona-powers-up-australias-first-energy-recovery-facility-in-western-australia/>

⁴ WA EPA formal decision Kwinana Waste to Energy Project, available at <https://www.epa.wa.gov.au/proposals/kwinana-waste-energy-project>