

# LIFE AND TIMES OF A WIND TURBINE

## Cradle to the Grave

### Australia's \$1 Billion Electricity Bill Foreign Owned Wind Farm Windfall

By MIA SCHLICHT

"The federal government's wind farm subsidies are enriching foreign corporates and leaving Australians worse off, all in an effort to prop up unreliable and inefficient renewable energy projects," said Mia Schlicht, Research Fellow at the Institute of Public Affairs. Today, the IPA released new research detailing how the federal government's

Large-scale Renewable Energy Target (LRET) guarantees a river of gold for predominantly foreign owned wind farms and how the cost is transferred to electricity consumers. The research found:

- In 2024, through the LRET subsidy scheme, a total of \$1.04 billion was paid by electricity consumers to the 50 largest wind farms operating in Australia.
- 35 of Australia's 50 largest wind farms, 70 per cent, are entirely

or partially foreign owned.

- Australian energy consumers were forced to pay \$689 million to foreign owned wind farms.

"In the middle of a cost-of-living crisis, the federal government is forcing Australian electricity consumers to hand over \$1 billion through hidden charges on their power bills to largely foreign owned companies, all in the name of net zero," said Ms Schlicht. "How can the Prime Minister, having broken

his promise to cut household power bills, justify sending over \$689 million to foreign companies when mainstream Australians cannot afford their power bills?" To meet economy wrecking emissions reduction targets, the federal government forces electricity retailers to purchase large-scale generation certificates from renewable energy producers. This artificially inflates the demand for renewables, with added costs

passed on to consumers. "Australia has previously benefited from some of the lowest consumer electricity prices in the industrialised world, but it now has some of the highest. Decades of poor decision making, based on flawed and misleading advice and ideology, is crushing the most productive sectors of our economy and household budgets," said Ms Schlicht. "We are consistently told that renewable energy is the cheapest form of

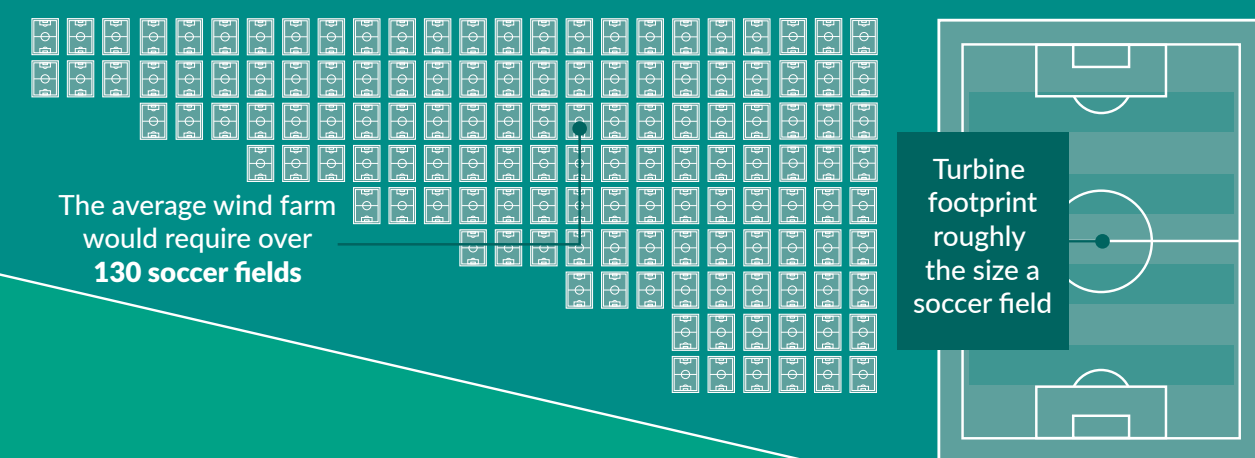
generation, yet it simply cannot stand on its own two feet without outrageous levels of subsidies Australians pay through their taxes and their bills." Previous IPA research has shown that Total System Cost calculations make clear that an energy system led by variable renewable generation is by far the most expensive approach government could take. "The lowest cost power system is the baseload, coal-generation system Australia

already has. The next lowest cost system would be one built on new baseload power plants, whether they be coal or nuclear. It is time Australians were given the facts," said Ms Schlicht. "Australia must recognise that national security is not achievable without energy security. Building an energy system which is affordable and provides sustainably priced 24-7 baseload power is vital for our future success." "Forcing Australians

to line the pockets of foreign corporates demonstrates how out of touch the federal government is with mainstream Australia," said Ms Schlicht.

■ This media release was originally published 27 February 2025 by Institute Of Public Affairs at <https://ipa.org.au/>

Right: Western Australian fisherman says no to wind turbines. Photo by SCORPION MEDIA GROUP

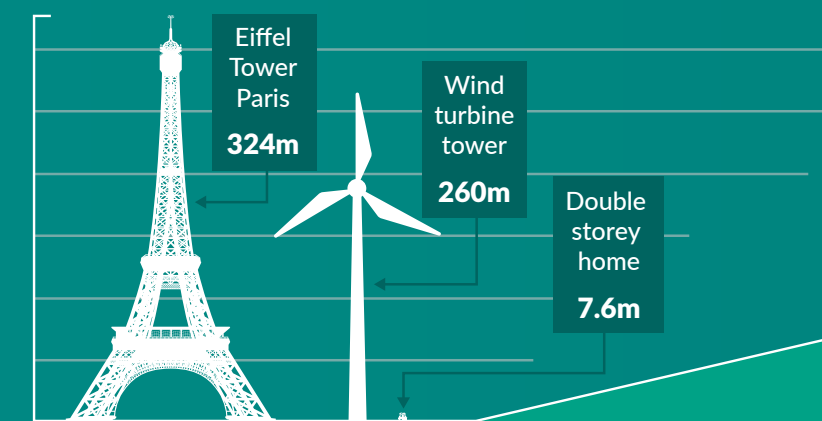


#### 1 The Birth of a Wind Turbine: Costs

Initial costs can be high, depending on size, type, and installation factors with large-scale commercial wind turbines costing around **4 - 7 million** each, depending on whether constructed onshore or offshore (with offshore being more expensive due to seabed foundations and marine logistics). The return on investment can range from **12 - 20 years** and an average wind farm consists of around 150 turbines with each requiring a footprint of about **1.5 acres** (thus needing over 200 acres). Each turbine also requires around **300 litres** of synthetic oil for lubrication which must be replaced annually.

#### 2 Erecting Giants: Construction's Footprint on Land and Sea

The clear felling of forests or displacing agricultural land for wind turbine sites, roads, and infrastructure can fragment or destroy local ecosystems and significantly alter landscapes. The large scale turbine blades can span up to **115 meters** long or more, with towers reaching **260 metres** tall, making them highly visible, especially in open, rural, or coastal areas. A single turbine can be seen from **30-50 kilometers** away and large wind farms with hundreds of turbines that dominate entire skylines. These permanent eyesores can hurt tourism by disrupting pristine or culturally significant landscapes.



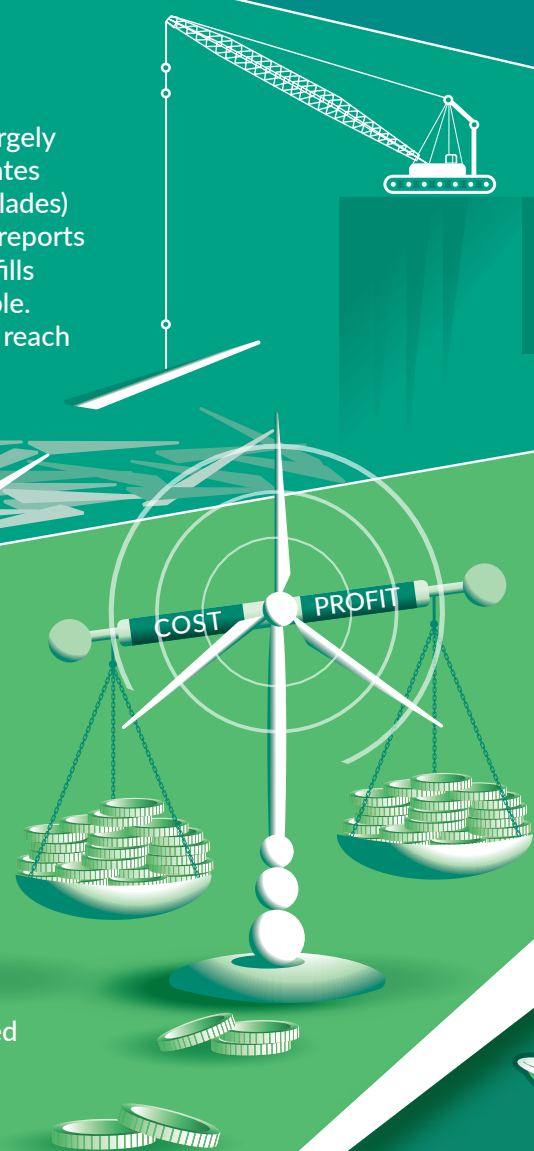
#### 7 Waste in the Wind: Turbine Blade Disposal

Currently there are no established recycling solutions and most wind turbine blades are largely disposed of by way of landfill. Globally, estimates indicate that some **12,600 turbines** (37,800 blades) have been decommissioned since 1980, with reports of **800,000 tons** of blade waste entering landfills annually, as most of the waste is non-recyclable. The problem will likely grow as more turbines reach end-of-life.

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#### 6 The End of the Spin: Decommissioning

At the end of a turbine's life (20-30 years), decommissioning of land and sea, site restoration costs can range from **\$400,000** to **\$600,000** per turbine. While recycling of materials (steel, copper etc.) may offset some expenses, the total costs could possibly exceed landowners earnings over the life cycle of the wind turbine and they are often solely responsible for decommissioning.



Over the life cycle of a turbine, running costs may exceed earnings

#### 5 Ocean Giants: Offshore Turbines and Marine Ecosystem Impacts

Offshore wind farms affect marine life, fishing industries and underwater ecosystems. The initial construction and ongoing servicing create extra logistical challenges as seabed foundations and underwater cables can alter habitats - affecting fish, crustaceans, and marine mammals. Noise from construction (such as pile driving) can disrupt natural life cycles of marine species such as whales. Undersea cables also generate electromagnetic fields that may affect navigation or migration patterns of marine species.

Marine species may struggle to deal with electromagnetic fields, affecting navigation or migration patterns

Turbine annual maintenance costs **\$40,000 - \$100,000**

As much as **500,000 birds** killed annually

#### 3 Whizzing Through Time: The Operational Life of a Turbine

Operation and maintenance costs constitute a sizeable share of the total annual costs and a new turbine can easily make up **20-25 per cent** of the total levelised cost per kilowatt-hour produced over the turbine's average lifespan of 20 years. Costs range from estimates of **\$40,000 - \$60,000** annually for onshore turbines and up to **\$100,000** of offshore turbines. Maintenance includes blade repairs, gearbox replacements (every 5 - 10 years) and each gearbox of a wind turbine initially requires around **3000 litres** of synthetic oil with added annual consumption of **300 litres**.

#### 4 Silent Hum: Inside the Kill Zone - Infrasound & Effects on Health & Wildlife

The constant low-frequency noise from turbines is a virtual kill zone within close proximity. This noise wrecks local ecosystems and negatively impacts livestock, wildlife, plant life and human health. The blades also kill wildlife directly, particularly birds and bats through collisions with blades or towers. Studies in the US estimate that wind turbines kill between **140,000** and **500,000** birds annually, with bats also significantly affected. Raptors, songbirds, and migratory species are particularly vulnerable and offshore turbines pose risks to marine birds with potential impact on migratory patterns of marine mammals.