

# 3 Reasons Why Westpac is Wrong on Coal

Westpac’s new Climate Change Action Plan<sup>1</sup> limits new thermal coal lending to existing basins and to projects with an energy content of at least 6,300kCal/kg<sup>2,3</sup>.

If adopted by all financial institutions and applied to current projects, most of Australia’s current coal-fired power generators and energy coal export mines would need to bank overseas.

Rather than setting artificial benchmarks that would damage the Australian economy, financial institutions and policy makers should remain open to technological developments that will allow the more efficient generation of coal-fired electricity.

New coal-fired power stations using ‘ultra-supercritical’ technology could generate reliable baseload electricity while also helping Australia to achieve its emissions reduction targets.

Even though the South Australian Energy Minister Tom Koutsantonis has claimed that “there is no country in the world that is going to be making a 50-year investment decision to produce a new coal-fired power station,”<sup>4</sup> this technology is real, commercial, and could be deployed in Australia with political will.

This would be a sensible solution to the twin issues of how to power the planned development of northern Australia and how to maintain affordable and reliable electricity in the industrial south-east of the country.

## 1. Hundreds of New Coal Power Stations are Being Built and Financed Worldwide

‘Supercritical’ or ‘ultra-supercritical’ generators burn coal at a higher temperature and under higher pressure using less coal for the same, reliable power output.

Using this technology can reduce coal consumption and therefore carbon dioxide emissions by over 30 per cent.<sup>5</sup>

According to the Minerals Council of Australia, 1,015 supercritical or ultra-supercritical generating units are currently in operation worldwide with another 1,231 planned or under construction.<sup>6</sup>

A recent Greenpeace report also confirmed<sup>7</sup> that ten times the amount of world coal-fired power stations

were under construction in January 2017 (a total of 273 gigawatts) than were retired over the previous 12 months (27 gigawatts) and that a total of 62 countries are currently planning or building a combined 842 gigawatts of new coal-fired power stations.<sup>8</sup>

To put this into perspective, Australia’s total coal-fired capacity is currently around 26 gigawatts.<sup>9</sup>

Ecological campaigning organisation BankTrack found in 2015 that global financing for coal mines and power stations was still worth \$141 billion in 2014, virtually unchanged from the previous year.<sup>10</sup>

Even Bloomberg New Energy Finance has found<sup>11</sup> that while the global push for renewables would cost an astonishing \$7.8 trillion between 2016 and 2040, investment in coal and gas power would still equal \$1.2 trillion and \$892 billion over the same period.

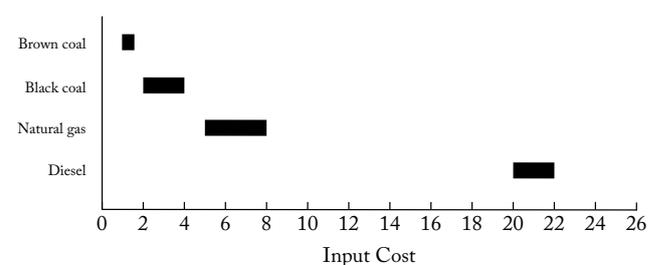
If Australia’s four major banks choose to not fund new coal-fired power, there are a number of other institutions in Asia, Europe and the Americas that would.<sup>12</sup>

## 2. Australian Coal is Abundant and Cost-effective

Coal is the world’s leading source of electricity and this will still be the case in 2040, even if countries adhere to their Paris 2015 climate change targets.<sup>13</sup>

It is plentiful, delivers stable and reliable electricity, and with power plant life of around 50 years<sup>14</sup> can recoup the initial cost of construction over a long period.

### Fuel Input Costs in \$A per Kilojoule<sup>15</sup>



GeoScience Australia estimates that Australia has 110 and 1,095 years’ worth of economically recoverable black and brown coal resources respectively.<sup>16</sup> Gas is relatively less abundant than coal, and using more gas

to generate electricity to replace coal-fired power stations has a negative impact on price and availability in the gas market.

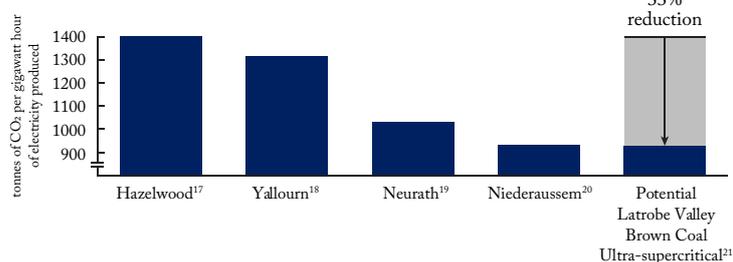
In that tight market additional demand for gas to be used in electricity generation competes with consumer, commercial and industrial sectors of the economy which require gas, as does the globally significant LNG export industry, at a time when there are many legislative restrictions on exploration and development of new gas supplies in Australia.

### 3. New Coal Technology Can Keep the Lights on and Reduce Emissions

As well as keeping the lights on, deploying technology to cut CO<sub>2</sub> emissions by 30 per cent is in line with the Australian Government's current national emissions reduction target of 26 to 28 per cent.

Such improvements are also possible with brown coal, which has a lower energy content per tonne than black coal, but which in Victoria in particular is exceptionally abundant and relatively less expensive to mine - reducing the overall cost per unit of electricity.

#### Potential Brown Coal Power Station CO<sub>2</sub> Emissions Reduction



Upgrading generating units at the Neurath and Niederaussem brown coal power plants in Germany has reduced emissions to 1,031 tonnes of CO<sub>2</sub> per gigawatt hour<sup>22</sup> (TCO<sub>2</sub>/GWh) and 933 TCO<sub>2</sub>/GWh<sup>23</sup>.

This technology, which is also being used to upgrade four generators at the Mae Moh brown coal power station in Thailand<sup>24</sup> would allow Victoria's Latrobe Valley mines and power stations to continue operating.

Using it to build or replace NSW or Queensland black coal power plants could result in CO<sub>2</sub> emissions per gigawatt hour of electricity of 670 to 800 tonnes.<sup>25</sup>

### Conclusion and Recommendations

With its world-class coal, gas and uranium resources, Australia should have the lowest cost electricity in the world. That it doesn't, reflects choices made by policy makers to favour some technology sources over others.

While a new Australian coal-fired power station could cost \$3-4 billion (considerably less if generators at existing plants are replaced) this should be compared to the annual \$2-3 billion cost of subsidies for renewable electricity<sup>26</sup> and the potential economic benefit of the industrial development of northern Australia.

Changing the investment mandate of the Clean Energy Finance Corporation<sup>27</sup> to allow it to invest in new technology coal or seeking Asian investors to fund a new coal-fired power station<sup>28</sup> would help to level this playing field and provide decades of reliable electricity.

It is government that has created political risk for financiers of energy projects, so it is appropriate that there is a role for government in resolving it.

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14 Ibid. p.258

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17 <https://theconversation.com/factcheck-have-eight-of-australias-12-most-emission-intensive-power-stations-closed-in-the-last-five-years-65036>

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