

## Newstan Mine Extension Project – SSD-10333

### Introduction

This submission is in support of the application and I have made no political donations in the past two years.

It is essential that the proposed extension to the mining operations at Newstan Colliery is approved. The reason for such a statement is simple, NSW needs Newstan's coal to generate electricity at Eraring Power Station.

Figure 1 below is a summary, from the Department of Industry, Science, Energy and Resources showing NSW's energy needs.

## NEW SOUTH WALES In 2018–19

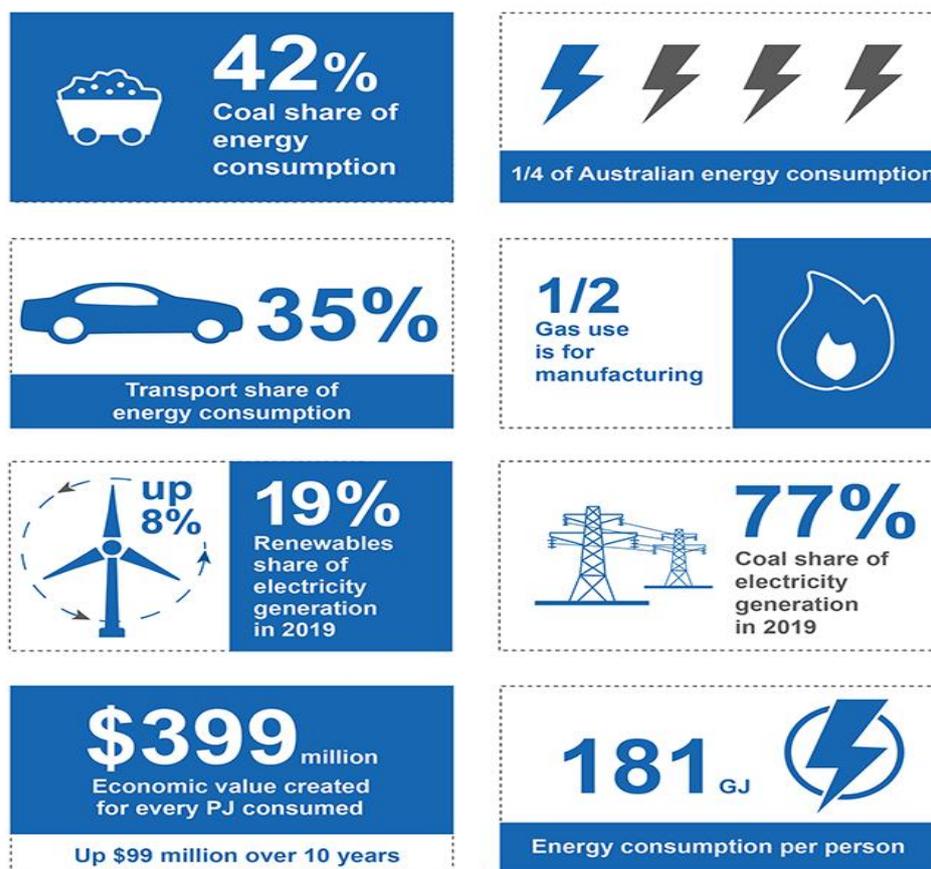


Figure 1 – NSW Energy Summary

It is noted that 77% of our electricity is generated by coal fired power stations. Renewables make up 19% of generation but 7% of this is hydro power so wind & solar account for 12% of generation. The 8% increase in renewables generation from the previous year equates to 1% increase in total generation.

It will be many decades before renewables will be a dominant generation source in NSW.

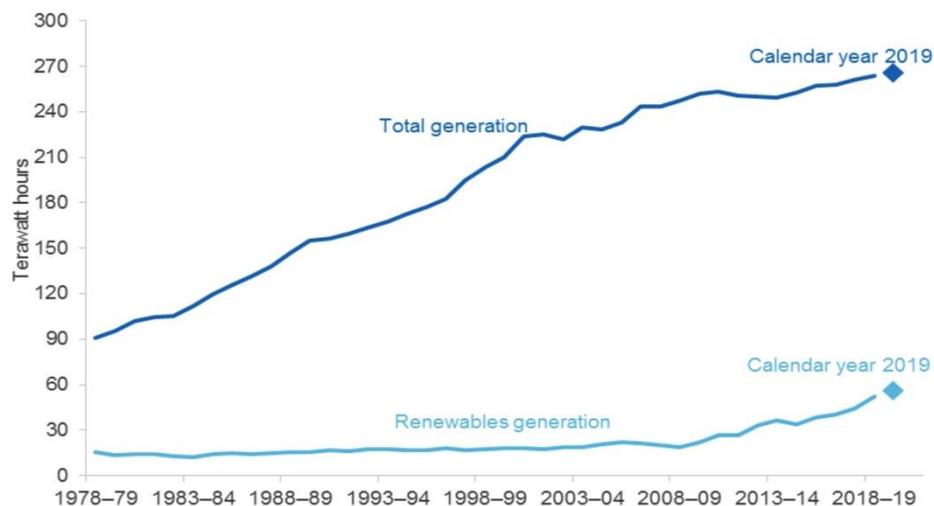
### **Performance of Renewables**

NSW has not been self-sufficient in the generation of electricity since Wallerawang and Munmorah Power Stations closed over 7 years ago.

It is a well known, but false hope that NSW's electricity generation can come mostly from wind and solar farms in about 10 years time. For the past 20 years NSW (and Australia) has been vigorously building wind & solar farms. According to the federal government's Australian Energy Update 2020 report, these wind & solar farms now produce only 12% of Australia's electricity as shown in Figure 2 below. It will be sometime in the second half of this century before renewables will be a dominant generation source.

Until then NSW will require reliable base load generation which can only come from coal and gas.

Figure 3.3: Australian electricity generation



Sources: Department of Industry, Science, Energy and Resources (2020) *Australian Energy Statistics*, Table O, International Energy Agency (2020), *World Energy Balances*

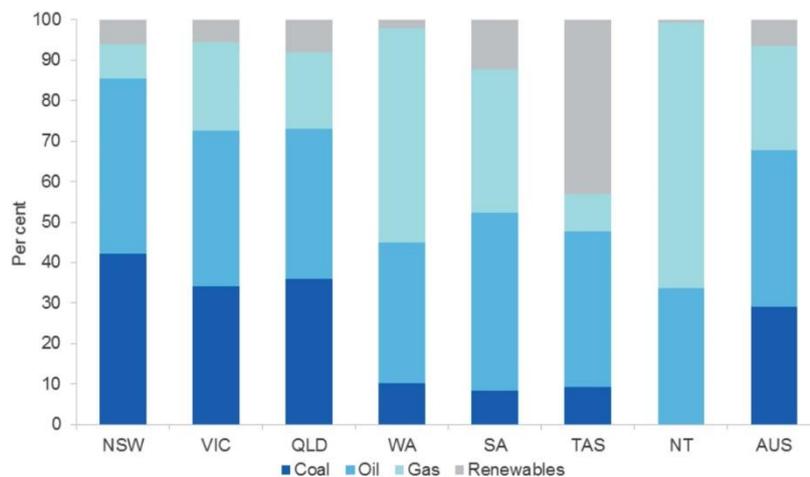
**Figure 2 – Renewables Generation v Total Generation**

Figure 3 below shows the various generation sources of all energy (for electricity, transport, manufacture & heating) consumed in each state and Australia.

Table 1 below lists the percentage contribution which each source makes to the energy demands of NSW and Australia. Renewables generate only 5% of NSW's total energy requirements.

It is apparent that NSW & Australia require fossil fuels to provide affordable and reliable energy sources for sometime to come. We cannot move away from coal – yet. Accordingly application SSD-10333 needs to be approved.

Figure 2.9: Australian energy mix, by state and territory, 2018–19



Source: Department of Industry, Science, Energy and Resources (2020) *Australian Energy Statistics*, Table C

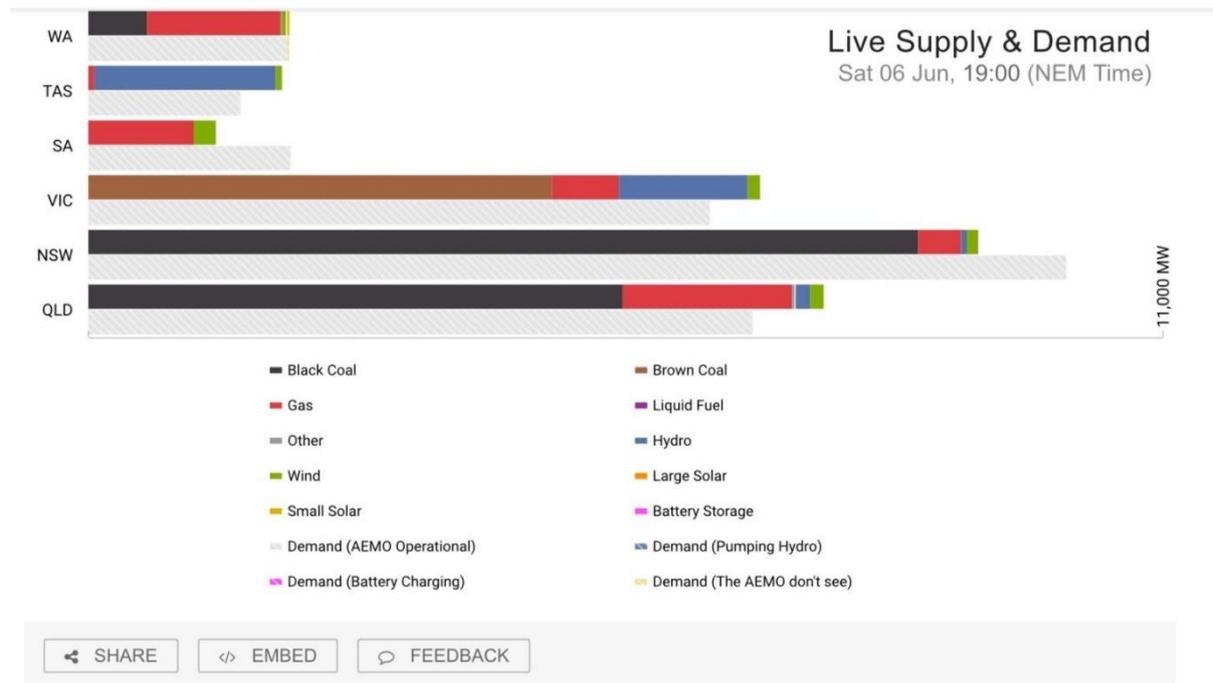
**Figure 3 – Total Energy Generation by Source**

Generation Source	NSW	Australia
Renewables	5%	6%
Gas	8%	26%
Oil	45%	40%
Coal	42%	28%
Total	100%	100%

**Table 1 – Percentages of Total Energy Generation by Source**

There are times, on windless nights, when renewables provide as little as 2% of our electricity. Overnight Australia consumes 250,000 Megawatt hours and during these nights coal and gas produce over 95% of our electricity.

Figure 4 is taken from a live website at 7pm on a windless night in June when renewables contribution to Australia's electricity supply is nearly non-existent. Table 2 is a statistical summary of the sources of generation at that time.



### Generation

Region	Black Coal	Brown Coal	Gas	Liquid Fuel	Other	Hydro	Wind	Large Solar	Small Solar	Battery Storage	Total
Western Australia	600	-	1,373	0	12	-	43	-	28	-	2,055
Tasmania	-	-	57	-	0	1,857	66	-	0	-	1,980
South Australia	-	-	1,083	0	0	-	224	0	2	0	1,310
Victoria	-	4,737	694	-	0	1,313	126	0	0	6	6,876
New South Wales	8,495	-	439	0	0	62	110	0	2	-	9,108
Queensland	5,470	-	1,730	0	31	153	139	1	2	-	7,526
Total	14,565	4,737	5,377	0	43	3,385	707	1	34	6	28,855

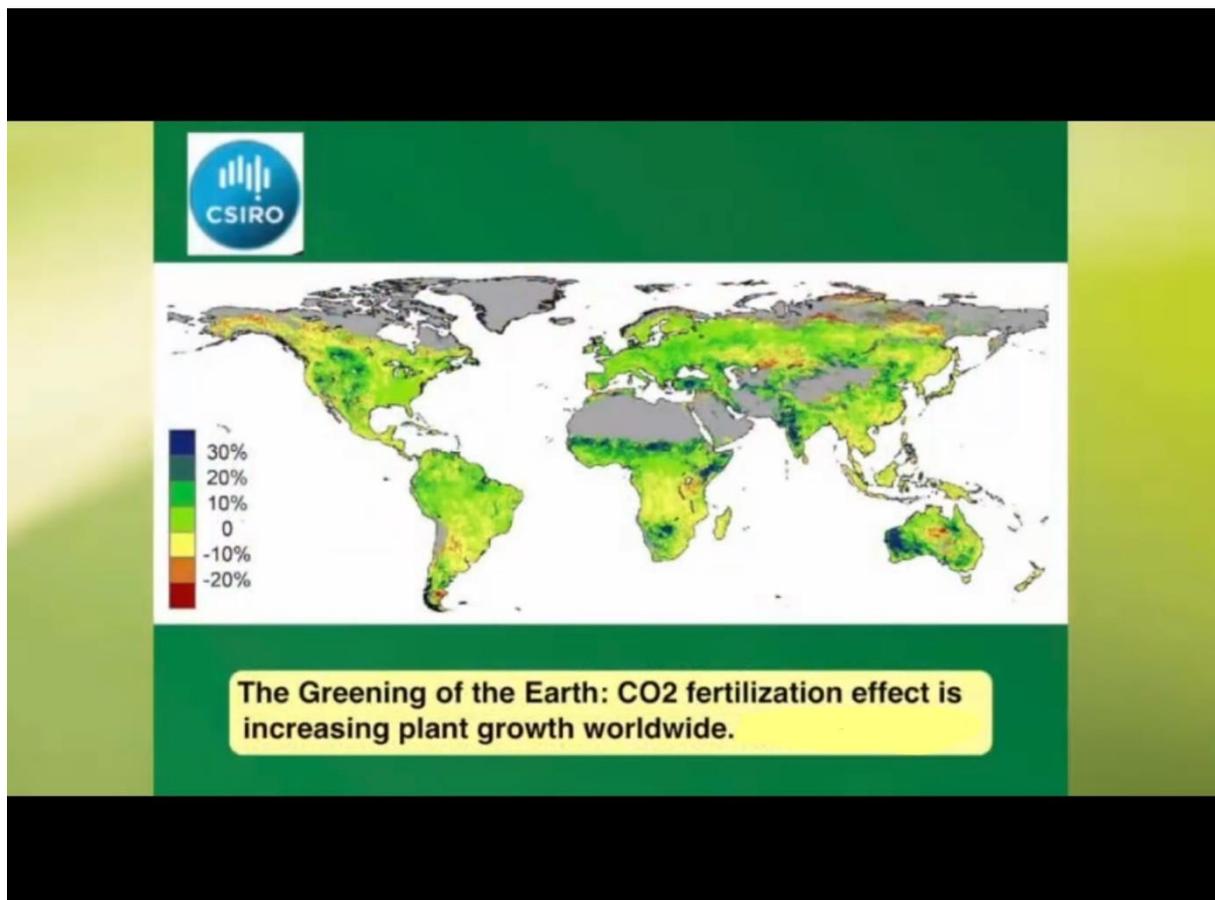
**Figure 4 – Electricity Generation by Source for Each State – Live Website**

Generation Source	NSW	Australia
Renewables	1.2%	2.6%
Fossil Fuels	98%	85%

**Table 2 – Percentages of Generation Sources on a June evening at 7pm**

## Carbon Dioxide Emissions Are Not All Bad

It is acknowledged that carbon dioxide emissions make a contribution to global warming. However carbon dioxide is a very essential gas for life on earth. If carbon dioxide was removed from our atmosphere life would cease to exist on our planet. Carbon dioxide is required for plants to grow & flourish. CSIRO has carried out research which indicates that plant life on Earth has increased over the past 30 years as shown in Figure 5 due to the increase of carbon dioxide in the atmosphere.



**Figure 5 – Showing Results of CSIRO’s Research on Global Increase in Plant Life over the past 30 Years**

## Global Warming/Change

Figure 6 below shows the increase in Australia's annual medium temperature over the last century. The notation below the graph states that 'the recent warming can only be explained by human-caused emissions'. What caused the warming which is not recent, let's say in the first half of the 20<sup>th</sup> century? We need to consider the role of the Sun which has dominated the Earth's climate for millions of years.

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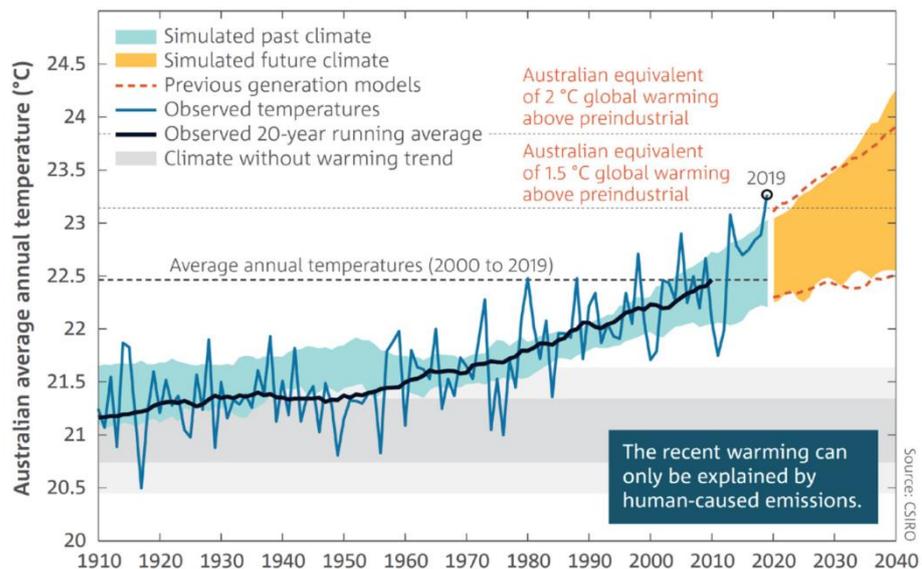
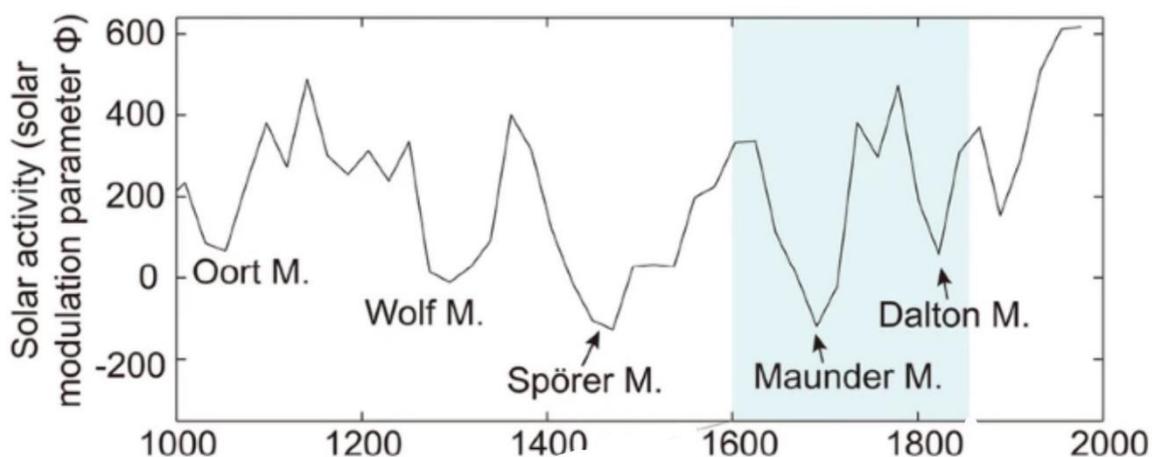


Figure 6 – CSIRO's Graph of Australia's Temperature Rise Since 1910

Figure 7 shows the activity of the Sun's solar flares and sunspots between 1000AD and 2000AD. It is worth noting that the low level of sun activity between 1650 and 1750 (known as the Little Ice Age) led to weather records in London showing that the Thames River regularly froze over in winter. The Baltic Sea and many other rivers in Europe also froze during these winters.

The Sun's activity started increasing in 1900 and Australia's temperature started increasing at the same time as shown in Figure 6. At present the Sun's activity is at its highest in over 1000 years. It is not inconceivable that some if not most of the Earth's warming is a result of the Sun's increased activity and that carbon dioxide emissions only make a small contribution to global warming.



**Figure 7 – Graph of the Sun's Activity over the last 1000 years**

## Conclusion

An objective of the NSW Electricity Infrastructure Investment Act 2020 is:-

- to improve the affordability, reliability, security and sustainability of NSW's electricity supply.

This objective is an imperative for NSW's economic and social well-being. As a modern sophisticated society NSW must have a 24/7 power supply. For the foreseeable future renewables can only provide a small percentage of the generation of our electricity while coal fired power stations (who currently provide 77% of our power) will be required for at least the next several decades.

Under the Environmental Planning & Assessment Act, one of the matters of consideration in evaluating a State Significant Development application is the public interest. It is contended that the ongoing provision of reliable and affordable electricity supply to NSW is a very significant public interest matter.

It imperative that the Newstan Mine Extension Project is approved.