

APPENDIX 3

NSW Wind Farm Greenhouse Gas Savings Tool – 238 MW

NSW Wind Farm Greenhouse Gas Savings Tool – 425 MW

Sapphire Wind Farm Pty Ltd



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NSW Wind Farm Greenhouse Gas Savings Tool

Greenhouse Gas Savings Summary

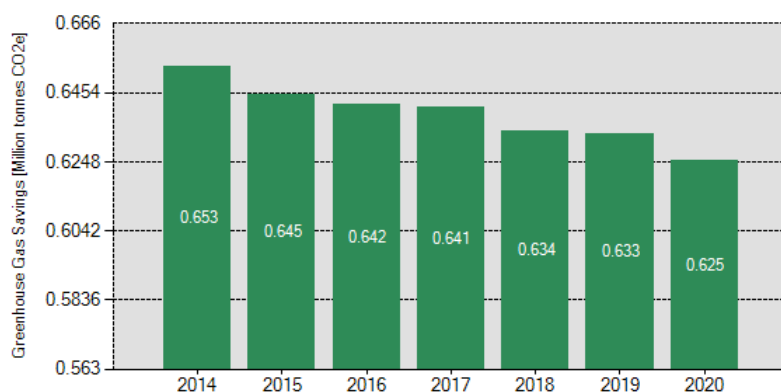
Your wind farm will:

Save 4.5 million tonnes of greenhouse gas emissions by 2020.

Generate 746 gigawatt hours (GWh) of electricity annually.

Produce enough electricity to power 102,100 homes annually. (Based on an average [NSW household electricity consumption](#) of 7.3 MWh annually.)

Annual greenhouse gas savings from a 238 MW wind farm in P1. New England Tablelands.



This graph shows the greenhouse gas savings (in million tonnes of CO2 equivalent) that the wind farm will save.

As the graph shows, wind farms provide significant greenhouse gas savings. These savings are due to wind generation producing electricity, rather than generators with higher emissions, such as coal-fired power stations.

The amount of greenhouse gas emissions saved by NSW wind farms will depend on whether or not the Federal Government introduces an emissions trading scheme or carbon tax. This is because it would require generators to pay for their greenhouse gas emissions.

As gas fired electricity generation has less greenhouse gas emissions than coal fired generation, it will start to become more cost-effective and displace coal-fired generation. In turn, wind farms would start displacing a greater proportion of output from gas fired plants relative to coal fired plants. For the purposes of this modelling work it has been assumed that the Carbon Pollution Reduction Scheme (CPRS) proposed by the Federal Government will start in 2015. This is why the graph tends to slope downwards after 2015, as wind displaces more gas fired electricity generation than coal fired generation.

Consequently, if a carbon price is not implemented through the CPRS (or an alternative emissions trading scheme or carbon tax), the greenhouse gas abatement from NSW wind farms would be higher than projected in this study.

The *NSW Wind Farm Greenhouse Gas Savings Tool* is based on an independent study done by energy modellers, McLennan Magasanik Associates (SKM MMA). Please visit the [Renewable Energy Precinct Resources](#) page to download the study [Estimating Greenhouse Gas Abatement from Wind Farms in NSW](#).



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Greenhouse Gas Savings Summary

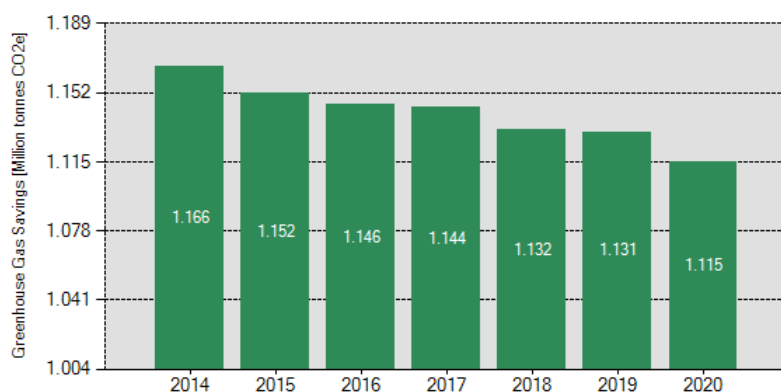
Your wind farm will:

Save 8 million tonnes of greenhouse gas emissions by 2020.

Generate 1,331 gigawatt hours (GWh) of electricity annually.

Produce enough electricity to power 182,400 homes annually. (Based on an average [NSW household electricity consumption](#) of 7.3 MWh annually.)

Annual greenhouse gas savings from a 425 MW wind farm in P1. New England Tablelands.



This graph shows the greenhouse gas savings (in million tonnes of CO₂ equivalent) that the wind farm will save.

As the graph shows, wind farms provide significant greenhouse gas savings. These savings are due to wind generation producing electricity, rather than generators with higher emissions, such as coal-fired power stations.

The amount of greenhouse gas emissions saved by NSW wind farms will depend on whether or not the Federal Government introduces an emissions trading scheme or carbon tax. This is because it would require generators to pay for their greenhouse gas emissions.

As gas fired electricity generation has less greenhouse gas emissions than coal fired generation, it will start to become more cost-effective and displace coal-fired generation. In turn, wind farms would start displacing a greater proportion of output from gas fired plants relative to coal fired plants. For the purposes of this modelling work it has been assumed that the Carbon Pollution Reduction Scheme (CPRS) proposed by the Federal Government will start in 2015. This is why the graph tends to slope downwards after 2015, as wind displaces more gas fired electricity generation than coal fired generation.

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