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28 June 2020

Mr Iwan Davies
Uungula Wind Farm Planning Officer,
NSW Department of Planning
SYDNEY NSW 2000

Dear Mr Davies,

RE: UUNGULA WIND FARM – SSD 6687

I wish to object to the development approval of Uungula Wind Farm on the following grounds:-

- (i) The long-term costs and misleading and deceptive conduct by the proponents;
- (ii) The cumulative impact of the proposal in the Local Government area with respect to rates;
- (iii) The cumulative impact with respect to endangered species;
- (iv) The fact that overseas corporations have control of essential services and are profiting at the expense of Australian superannuation funds; and
- (v) The length of time this project has been on foot.

Precautionary principle

Justice Preston explained the basic principles to be addressed in an EIS this way:

The environmental impact statement must address the environmental assessment requirements of the Secretary as well as the content requirements in Sch 1, cl 7 of the EPA Regulation, including the likely impact on the environment of the development and the reasons justifying the carrying out of the development, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development (ESD). The principles of ESD are defined to be the precautionary principle, inter-generational equity, conservation of biological diversity and ecological integrity.....¹ His Honour goes on to explain that the consent authority is also required to consider the public interest (s 4.15(1)(e) of the EPA Act).²

In short, there is no justification for this project, either on climate change grounds or any other mistaken belief that it is good for the environment, human health or any one of the other *Rio protocols*.³ It blights the landscape, removes the habitat for endangered species and uses excessive

¹ *Gloucester Resources Limited v Minister for Planning* (2019) NSWLEC 7 at [488]

² *Ibid* at [496].

³ *Report of the United Nations Conference on Environment and Development: Rio Declaration on Environment and Development* (Rio de Janeiro 3 – 14th June 1992)

amounts of greenhouse gas emitting products to build it. It destroys more than what it will ever save. It is not sustainable and it breaches all the precautionary principles. It has a devastating cumulative impact for the reasons set out below.

The long-term costs for Landowners

Whilst CWP should be congratulated for consulting with the community and taking on board some of their concerns, the proposal to construct a Wind Farm or any other large scale renewable energy project causes major disruption within the community.⁴ Long-time residents who have been friends for years will suddenly find they have opposing views. The community is divided into two camps, those for and those against. Landowners and tradesmen, who stand to gain financially or who generally feel the community could benefit from the influx of new people, will be in favour of the development, whilst others nearby may see the value of their property fall and receive no real benefit from the project at all.⁵ Sadly, this has been the legacy of all the large scale renewable energy projects around Wellington and this one is no different.

The ongoing economic stimulus to the Wellington community alleged in the EIS,⁶ is written in vague terms and makes no mention of the estimated income from each wind tower or the way in which neighbour agreements are calculated. Presumably, CWP will say that the information is confidential because they are commercial agreements. It is highly likely that landowners will be misled into believing that they will receive a reasonable income from each tower. They will not be told that they will not receive any income if the tower is not producing electricity and it will be at CWP's discretion to decide which towers are turned on and which are turned off even when the wind is blowing.

There is no reason to doubt that CWP will insist that landowners support the project in its entirety and unconditionally if they enter into any of these agreements. It is highly likely they will be forced to sign confidentiality agreements and forbidden to discuss the terms with anyone other than their lawyers. In my view, this is bribery and should be outlawed. The only clause contained in a confidentiality agreement that has merit in the Courts is the one between solicitor and client. All others are subject to judicial review. The public interest in discovering the truth prevails over the private duty to respect confidence.⁷ Confidentiality clauses of this type are misleading and deceptive and cause enormous damage within communities.

Roads

The EIS spends much of its time on improvements to the bitumen section of Twelve Mile Road and its intersection with Goolma Road. However, very little time is spent on other routes to the project site from Goolma/Dubbo and through Gunnegaldrie. If either of the dirt roads are to be used by staff travelling to the project site, improvements such as fencing and curve straightening/reconstruction to make the road safer should be made in consultation with landowners. The roads are unfenced and are suitable for existing landowners and the mailman and school bus. Any large increase in

<https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_CONF.151_26_Vol.I_Declaration.pdf>.

⁴ S. Yamaguchi, & E. Kuczek, 'The social and economic impact of large-scale energy projects on the local community' (1984) *International Labour Review*, 123(2), [149-166].

⁵ Ibid

⁶ Uungula Wind Farm EIS, 'Economic impact assessment: Ongoing economic stimulus' (2020) *Ethos Urban Pty Ltd* s 3.8

<<https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-6687%2120200520T070926.011%20GMT>>.

⁷ *Baker v Campbell* (1983) 153 CLR 52 at [65].

traffic along these roads would render them unsafe. The other alternative is to ban access to the site along these roads for project staff.

Wage Stimulus

CWP Renewables estimate that 50% of construction jobs (125 jobs) are likely to be sourced from outside the Study Area, particularly specialist and management positions.⁸ Only rarely are many locals employed because employment agencies can be contracted to find a given amount of workers at a specified price and bid for the opportunity to supply the employment needs of the project. Often specialist management positions are held by fly in fly out managers who can carry with them Covid-19.⁹

Whilst the preference may be to employ 50% of the workforce from the local community, there will inevitably be a mismatch between the employment requirements of a project and the skills available in the local community. Where unskilled labour can be used, higher wages can and are often paid. This will no doubt impact farmers who will have great difficulty in finding available labour at peak workload periods such as harvesting or shearing and will not have the capacity to pay the higher rates.

Housing

The increased demand for housing, combined with inadequate supply results in higher prices for houses and lots, and in higher rents. Over the last year house prices and rents have risen substantially in Wellington as large scale Solar and Wind Farms are being constructed. Absorption into surrounding communities, such as Dubbo and Mudgee has occurred and rents and house prices have risen substantially in those towns as well. This has a particularly adverse impact on the most vulnerable in society, particularly Wellington's substantial aged population who cannot afford steep increases in rates and rent.¹⁰

Information supplied by CWP Renewables indicates that up to 125 non-local staff may need to be accommodated in the region at the project's peak. These staff will comprise a range of occupations, including managers and specialist technicians. Contract lengths will vary. There will be a need for a number of types of accommodation which would be expected to range from higher-end options for professional staff on longer-term contracts, to convenient low-cost options for those on short-term contracts.¹¹ All will be competing against the most vulnerable in society for the limited housing.

The cumulative impact of the proposal in the Local Government area with respect to rates

Under the former Wellington Council's Section 94A Developer Contribution Plan 2012, levies are payable at the rate of 1% of the proposed development cost. Given that CWP is yet to announce the capital investment cost of the proposal, we do not know what a fair and reasonable levy would be.

⁸Uungula Wind Farm EIS, 'Economic impact assessment, 'Local wage spending stimulus' (2020) *Ethos Urban Pty Ltd* s 3.6.

⁹ Nadine Morton, 'Coronavirus, Covid-19: Bodangora Wind Farm employees put into self-isolation' *Wellington Times* 20 March 2020 <<https://www.wellingtontimes.com.au/story/6689277/visitor-with-covid-19-forces-employees-into-self-isolation/>>.

¹⁰ Australian Bureau of Statistics, '2016, Census QuickStats, Wellington' (2016) <https://quickstats.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/SSC14221>.

¹¹ Uungula Wind Farm EIS, 'Economic impact assessment: Housing and commercial accommodation sector impacts' (2020) *Ethos Urban Pty Ltd* s 3.5 <<https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-6687%2120200520T070926.011%20GMT>>.

However, we do know that it will be substantially more than Bodangora Wind Farm because there are more than three times the number of wind turbines. We also know that Bodangora Wind Farm entered into a Voluntary Planning Agreement of \$85,000.00 per year indexed for the life of the project.¹² DRC has proposed that solar farms in the local government area will pay them thousands of dollars per megawatt of generated energy.¹³ Whether or not CWP will do the same thing and come to the party is yet to be seen.

The Section 94A Contribution Plan does make exemptions for development "... where there is no increase in future demand on public amenities and services." It is likely Council will acknowledge that following the initial construction of the wind farm there will be negligible impact upon public amenities and services. However, it is also likely that DRC will maintain the view that the subject development will have an impact on the loss of viable RU1 land and habitat for endangered species from the available Wellington land supply chain.

This is exacerbated by other renewable energy projects already approved and being constructed or are in the planning phase. The DRC local government area is a designated renewable energy hub.¹⁴ There are 6 large scale solar farms either approved or under assessment and two wind farms.¹⁵ Bodangora, Crudine and Uungula Wind Farms are all in relatively close proximity despite Crudine being in another local government area. Relevantly, Crudine is also being developed by CWP and construction has already commenced.

Salinity

There is absolutely no discussion in the EIS about the levels of salinity that are likely to leach into Burrendong Dam once the turbines are constructed. The amount of concrete to secure the towers is excessive and will inevitably leach into Burrendong Dam and the underground aquifers.

The salinity levels at Burrendong Dam range from just over 100 mg/L after periods of high inflows relative to storage volume, increasing gradually to over 300 mg/L after an extended period of low inflows, and presumably high evaporation relative to storage volume. The median salinity for this data is 165 mg/L, which is slightly lower than that upstream. This phenomenon would be because of the averaging effects of the storage.¹⁶

The overall rates of change are primarily a function of the rate of groundwater level rise. Assessed on the basis of geological units within secondary basins, these rates of groundwater level rise vary from negative values to greater than 0.4 metres per year. The overall rates of change vary across catchments from a no change scenario in the Macintyre Catchment to a 335% increase by 2100 in the Macquarie and Bogan River Catchments. In most catchments the salt loads are predicted to more than double in the next 100 years, assuming no change in management and a continuation of

¹² Infigen Energy, 'Bodangora Wind Farm development approval' (2013) online

<<https://www.infigenenergy.com/about-us/news/bodangora-wind-farm-development-approval/>>.

¹³ Orlander Ruming, 'DRC and Solar Farms to enter planning agreement' *Wellington Times*, 13 August 2019

<<https://www.wellingtontimes.com.au/story/6325770/heres-how-a-proposal-between-council-and-the-solar-farms-could-help-you/>>.

¹⁴ NSW Government, 'Renewable Energy Zones' (2020) <<https://energy.nsw.gov.au/renewables/renewable-energy-zones>>.

¹⁵ Energy NSW, 'Renewable Energy Zone sparking investment boom' 23 June 2020 online

<<https://energy.nsw.gov.au/renewable-energy-zone-sparking-investment-boom#:~:text=The%20Central%2DWest%20of%20NSW,funding%20from%20the%20NSW%20Government.>>

¹⁶ Department of Water and Energy, 'Instream salinity models of NSW tributaries in the Murray-Darling Basin: Volume 4 - Macquarie River Salinity Integrated Quantity and Quality Model, NSW Government (2008)

https://www.industry.nsw.gov.au/data/assets/pdf_file/0014/154013/quality_iqqm_mbd_macquarie.pdf.

similar climate variability to that observed in the assessment period. These values are not inconsistent with trends identified within the stream record by Williamson et al., 1997.¹⁷

Connectivity to the Grid

Although intermittency is a barrier to renewable energy, some renewable energy is less intermittent than others, notably, tidal energy which is predictably intermittent so it can form part of the energy system's base load to provide bulk electricity to the grid, unlike off shore wind whose unpredictable intermittency provides a greater challenge with regard to balancing electricity supply and demand.¹⁸

The National Electricity Market ("NEM") is the wholesale spot market covering Queensland, New South Wales, Victoria, South Australia, Tasmania, and the Australian Capital Territory. The Australian Energy Market Operator ("AEMO") matches supply to demand through the "dispatch" process whereby generators submit bids and AEMO takes the cheapest electricity first until the demand is met. Those generators who have been accepted are all paid the same amount.¹⁹

Since 31 March 2009, the NEM requires new wind generators that are larger than 30 MWh to participate in the NEM as "semi-dispatched". This allows AEMO to limit the output of these generators as necessary to maintain the integrity of the power system. However, it has increased the compliance and operating costs of renewable energy generators.²⁰

Security

This project is a long way from the market it proposes to service. To date there has been no discussion as to where that market may be but it would be fair to assume it will be far away from Wellington and the Central West region.

High voltage direct current ("HVDC") transmission technology is more energy efficient than high voltage alternating current ("HVAC") technology. A 1000-mile HVDC line carrying thousands of megawatts might only lose 6-8% of its power, compared with 12-25% loss for a similar HVAC line. HVDC is cost-effective for distances of over 500km overhead transmission because the reduced cost of energy losses more than offsets the high cost of converter stations for long-distance transmission.²¹

Most of Australia's transmission network is HVAC and the power flow over individual elements of the network cannot be directly controlled if it is released onto the grid unevenly. All of the transmission lines from the Transgrid substation at Wellington are HVAC lines. Losses of well over 20% depending on the distance of the end users from the source could be expected. Losses are worse during summer when temperatures are high. Demand for summer cooling is higher than winter heating.

¹⁷ GTH Beale et al, 'Salinity predictions for NSW rivers within the Murray-Darling Basin' (2000) *NSW Department of Land & Water Conservation*
<<https://www.environment.nsw.gov.au/resources/salinity/salinitypredictions.pdf>>.

¹⁸ Dermot Duncan and Benjamin K Sovacool, 'The barriers to the successful development of commercial grid connected renewable electricity projects in Australia, South East Asia and the USA' (2004) *Renewable Energy Law and Policy Review* Vol 2(4) pp283-301.
<<https://heinonline.org/HOL/LuceneSearch?terms=%27The+barriers+to+the+successful+development+of+commercial+grid+connected+renewable+electricity+projects+in+Australia%2C+South+East+Asia+and+the+USA+&collection=all&searchtype=advanced&type=text&tabfrom=&submit=Go&all=true>>.

¹⁹ Ibid

²⁰ Ibid

²¹ Liang Tian et al, 'Prospects for novel deformation processed Al/Ca composite conductors for overhead high voltage direct current (HVDC) power transmission' (2013) *Electric Power Systems Research* 105 [105-114].

Reliability

Wind turbines should be located at least 2km away from existing residences.²² As each blade passes the tower a low frequency air pressure pulse is created causing vibrations²³ and noise sensations. Harmonic high frequency spikes from wind turbines can damage sensitive electronic equipment and adversely affect human and animal health. When a wind turbine generates electricity, the frequency must be converted to 50Hz by power converters. That conversion generates a large spectrum of current and voltage oscillations leading to poor quality power and adverse human health outcomes.²⁴

For power systems to operate correctly, energy demand and supply need to be in balance at all times. The system frequency is a measure of instantaneous balance and it can only deviate narrowly within a 50Hz band to prevent equipment damage, disconnection and potential cascading effects that may lead to a black system. The task of keeping the system in balance can be done automatically or by intervention from the market operator and is measured by the amount of kinetic energy in the system.²⁵

On 28 September 2016, SA was hit with two tornadoes that caused three transmission lines to be damaged and trip. In quick succession a sequence of faults resulted in six voltage dips on the SA grid over a two minute period. As the number of faults on the transmission network grew, nine wind farms activated a protection feature and stopped generating electricity into the grid. This caused the Heywood Interconnector from Victoria to try and make up the shortfall but it activated a special protection mechanism and immediately shut down. The Pelican Point gas fired power station was either unwilling or unable to increase output to avoid load shedding and the sudden loss of power across the entire SA grid was so rapid that the automatic shedding scheme failed and the entire State was without power and became separated from the national grid.²⁶

The cumulative impact with respect to endangered species

I have serious doubts that the Fauna and Flora Study was done with any rigor or serious application. I do not understand why the Wedge Tailed Eagle, the Migratory Swift, Superb Parrot, Grey Crowned Babbler, Glossy Black Cockatoo, Sugar Gliders and Musk Lorikeets are not included in the Uungula EIS. All have been identified in the area and are well known to long-time landowners. Curiously, the Bodangora Wind Farm EIS does mention the superb parrot and the grey crowned babbler. Despite promises made in the Bodangora EIS, I am not aware of any fauna or flora study or record of bird or bat deaths that has been released since Bodangora Wind Farm was built. Certainly there is nothing on the public record. We simply do not know what birds or bats have been impacted by the turbines in this area and how many have been killed.

²² NSW Planning & Infrastructure, 'Draft NSW Planning guidelines for wind farms' (2011) at <http://www.planning.nsw.gov.au/~media/Files/DPE/Guidelines/draft-nsw-planning-guidelines-wind-farms-a-resource-for-the-community-applicants-and-consent-2011-12.ashx>.

²³ A Staino and B Basu, 'Dynamics and control of vibrations in wind turbines with variable rotor speed' (2013) *Engineering Structures* 56 at https://ac-els-cdn-com.ezproxy.cdu.edu.au/S0141029613001375/1-s2.0-S0141029613001375-main.pdf?tid=b2f64dfe-45e2-43f1-a584-4556f96be5f4&acdnat=1536577092_caef6b43720a11afb37da25862cfbf5b

²⁴ Magda Havas and David Colling, 'Wind turbines make waves: Why some residents near wind turbines become ill' (2011) *Bulletin of Science, Technology & Society* 31(5) 414-426.

²⁵ Luigi Mancarella et al, 'Power system security assessment of the future national electricity market' (2017) *University of Melbourne* at <https://www.energy.gov.au/sites/g/files/net3411/f/independent-review-future-nem-power-system-security-assessment.pdf>.

²⁶ Australian Energy Market Operator, 'Black system, South Australia, 28 September 2016' Final Report (2017) 83-92 at https://www.aemo.com.au/-/media/Files/Electricity/NEM/Market_Notices_and_Events/Power_System_Incident_Reports/2017/Integrated-Final-Report-SA-Black-System-28-September-2016.pdf.

The cumulative impact on flora and fauna has not been considered in the Uungula EIS. The fact that there are two Wind Farms so close together and another not far away at Crudine Ridge²⁷ creates a circumstance whereby habitat destruction and turbulence from the blades has much greater significance. The impact on Wedge tailed eagles and the migratory swift is of much greater significance because they are slow breeders and they are endangered.

On July 8 2019, Dr Bob Brown, former leader of the Greens and defender of the Franklin River, spoke out against a proposed wind farm on Robbins Island on the north coast of Tasmania. Foremost among Dr Brown's concerns was the potential impact of 163 wind turbines on birds, especially the endangered Tasmanian wedge-tailed eagle (*Aquila audax*) and the white-bellied sea-eagle (*Haliaeetus leucogaster*).²⁸

For decades the wind industry has put out a steady stream of grossly misleading information about its wildlife impact. It continues to claim that the impact of wind turbines is relatively low, and compares the bird deaths it causes to those of housecats, or buildings. But where many of the birds killed by wind turbines are large, threatened, and of high-conservation value, most of the birds killed by house cats, and from collisions with buildings are small, unthreatened, and of low-conservation value, like robins and sparrows. And because big birds have much lower reproductive rates than small birds, their deaths have a far greater impact on the overall population of the species. For example, golden eagles will have just one or two chicks in a brood, and usually less than once a year, whereas a songbird like a robin could have up to two broods of three to seven chicks a year.²⁹

Overseas corporations have control of essential services and are profiting at the expense of Australian superannuation funds

Technology and finance have emerged as critical factors in the transition to a low-carbon economy, and thereby in international climate change negotiations. A potential source of such resources, that is already having an impact in countries around the world through foreign direct investment (FDI), is transnational corporations (TNCs). The scale and scope of this phenomenon remains under research, including sector-specific drivers pushing firms to invest abroad and the determinants leading to investments in specific host economies. The findings suggest that those governments seeking to target FDI as a source of external climate change finance must be mindful in particular of the motivations of the investors they are targeting, as well as the state of their domestic energy policies.³⁰

There is evidence that Energy NSW is aware of the problem and is actively encouraging community-owned renewable energy projects. Provided the right projects are selected in the right place at the right time they can develop local renewable energy resources for electricity, heat and fuel in ways that:

- reflect the motivations and aspirations of the local community;
- maximise local ownership and decision making;

²⁷ Newsletter, 'Crudine Ridge Wind Farm' <https://www.crudineridgewindfarm.com.au/>

²⁸ Aynsley Kellow, 'Wind energy and the extinction of eagles' *Quadrant* 16 September 2019 <<https://quadrant.org.au/magazine/2019/09/wind-energy-and-the-extinction-of-eagles/>>.

²⁹ Michael Shellenberger, 'Why Wind Turbines threaten endangered species with extinction' online <<https://www.forbes.com/sites/michaelshellenberger/2019/06/26/why-wind-turbines-threaten-endangered-species-with-extinction/#7d11185464b4>>.

³⁰ Michael S Hanni et al, 'Foreign direct investment in renewable energy: trends, drivers and determinants' (2011) *Transnational Corporations* Vol 20(2) <https://www.researchgate.net/publication/289791034_Foreign_direct_investment_in_renewable_energy_Trends_drivers_and_determinants>.

- share the financial benefits widely;
- match energy production to local usage.³¹

Uungula Wind Farm will be subsidised and incentivised under the Renewable Energy Target ('RET'). The RET works by allowing both large-scale power stations and the owners of small-scale systems to create large-scale generation certificates and small-scale technology certificates for every megawatt hour of power produced. Certificates are then purchased by electricity retailers (who supply electricity to householders and businesses) and submitted to the Clean Energy Regulator to meet the retailers' legal obligations under the Renewable Energy Target. This creates a market which provides financial incentives to both large-scale renewable energy power stations and the owners of small-scale renewable energy systems.³²

There appears to be no reason why Australian Superannuation Funds could not finance projects such as this. The way things stand, asset managers for overseas funds such as CWP, are reaping the reward out of Australian consumers/taxpayers and for good measure are keeping the cost of electricity high and at the same time forcing reliance on overseas technology which should have and could have been developed in Australia.

The length of time this project has been on foot.

This project has been on foot for well over 9 years. Promises have been made and not fulfilled and the community has been fractured and divided. For those who have budgeted for an off-farm income from this project, the failure to proceed within a reasonable time has caused major uncertainty. Succession planning has been made even more difficult. Time does not stand still and long term planning which is difficult enough in agriculture itself, should not be held in limbo while developers fiddle in the midst of horrific drought and bushfires. For those whose lives will be effected by this project adversely, they have a right to be treated with respect and should be allowed to make plans in a dignified and predictable manner. None of this has occurred and all parties should be fairly compensated by CWP.

Conclusion

There are no grounds to approve this project. It fails all the tests. It has destroyed a community, it is not environmentally friendly, it is not sustainable and the transmission infrastructure to support it is not built.

Yours sincerely,

Nat Barton

³¹ Jarra Hicks et al, 'Community owned renewable energy: a how to guide' (online) <<https://www.environment.nsw.gov.au/resources/communities/cpa-community-energy-how-to.pdf>>.

³² Clean Energy Council, 'Financial incentives' <http://www.cleanenergyregulator.gov.au/RET/How-to-participate-in-the-Renewable-Energy-Target/Financial-incentives>