

SPEAKERS
(CONTINUED)

MS MARILYN WOOD (FRIENDS OF
KENTUCKY ACTION GROUP)
MS CATHERINE WOOF
MR IAN MCDONALD
DR JULIAN PRIOR (FRIENDS OF
KENTUCKY ACTION GROUP)
MR MARK FOGARTY (BUSHTRICITY)
MR ROBERT CROUCH
MR ROBERT BELL (URALLA SHIRE
COUNCIL)
MR STEPHEN JOHNSTON (FRIENDS OF
KENTUCKY ACTION GROUP)
MR BRETT WILKINSON
MS ARLEEN PACKER (SAVE OUR
WOODLANDS INC.)
MR JOHN MCGRATH (YASS
LANDSCAPE GUARDIANS INC.)
MS LYNETTE LABLACK
MR SEAN DOODSON (NEW ENGLAND
SURVEYING & ENGINEERING)
MR CHRISTOPHER KIT DAWSON
MS ALISON CAIRNS
MR DARREN SMITH

LOCATION:

KENTUCKY MEMORIAL HALL,
NOALIMBA AVE, KENTUCKY

DATE:

10:00AM – 3:00PM
THURSDAY, 14TH MARCH 2024

<THE PUBLIC MEETING HAS COMMENCED

PROF NEAL MENZIES: Good morning, everyone. We have got some chairs down the front here, so if you're still looking for a chair, come on down. We'll undoubtedly have more people entering during the course of the meeting, so we'll just continue. We won't stop and wait for people to take their seats. So please don't be distracted by the - the goings on. My thing here is talking to me, which is going to distract me dreadfully. Stu, can I turn this down somehow? Okay, so I have a formal statement to read to start the day off, so I'll get into that.

10 Good morning and welcome to the Independent Planning Commission's public meeting into the state. Significant development application for Thunderbolts Wind Farm SSD-10807896. I'm speaking to you. To you from Anaiwan Land. I acknowledge the traditional owners of all the countries from which we meet today. I pay my respects to their elders, past and present, and to the elders from other communities who may be participating today.

I'm Professor Neil Menzies, and I'm chair of this panel, joining me and my fellow commissioners, Dr. Bronwyn Evans and Sue Ellen Fitzgerald. No conflicts of interest have been identified in relation to our determination of this development application. We have a limited and specific role at the end of the planning process. We decide if an application should go ahead and if so, on what conditions. We consider the department's assessment report, the application, your written and oral submissions and other materials that the planning law requires us to consider. All of these materials are either already publicly available or will be made available on our website.

In making a decision on this case, the Commission must obey all relevant laws and consider all applicable policies and the public interest. We are also obliged to consider public submissions and that is the purpose of today. We want to hear what you think about the merits of this application. This is not a forum for submissions on whether you like or approve of the application, the laws we must obey, or the policies we must consider. The application has already been assessed by the department on our behalf. Many of you have already participated in the department's process and we thank you for that participation. There is no need to repeat your previous submissions. They are all available to us for our consideration.

The applicant and the department have considered your submissions and taken them into account in the application and assessment and conditions we're considering today. Today, we want to hear your response to the department's assessment recommendations and recommended conditions. Even if your submission today objects to the application being approved of at all, we encourage you to tell us whether any of your concerns could be addressed, either wholly or in part, by the imposition of conditions. Your consideration of alternatives does not in any way compromise your submission, and it enables the - the panel to consider all options.

Okay, so we will start through our series of submissions. The first submission is

Nicole Brewer, who's representing the Department of Planning, Housing and Infrastructure. Welcome to Cal.

5 **MS NICOLE BREWER:** Thank you, Chair and commissioners. My name is Nicole Brewer. I'm the director for energy assessments with Department of Planning, Housing and Infrastructure, which is formally the Department of Planning and Environment. I'd also like to - to acknowledge the traditional owners of the land on which we are joining today's meeting and pay my respects to elders, past and present, and extend that respect to elders from this land and other communities that may be here today. Next slide, please.

15 The Thunderbolt Wind Farm is a state significant development project. The department's undertaken a comprehensive assessment of the application under the Environmental Planning and Assessment Act, which is the planning legislation under which all developments in New South Wales are assessed. This is included a whole of government assessment, where we've consulted with key agencies that have technical expertise within government and the relevant councils in preparing our assessment. I do want to know that through the process that's shown by the flow chart, there have been a number of formal and informal opportunities for all stakeholders to provide input, and we thank you for the input that you've provided. And we're now at the determination stage where a final decision will be made by the Commission on the merits of the application. Next slide please.

25 The applicant, Neoen, proposes to develop 192-megawatt wind farm with 32 turbines. I'd like to give a bit of strategic context about wind farm development in New South Wales and the project's location. All coal fired power plants in New South Wales are scheduled for closure in the next 20 years, and there is a need for large scale renewable energy generation.

30 The Commonwealth and State have set targets and made commitments through policies and legislation to net zero emissions. New South Wales government policies and legislation also identify renewable energy zones or raises across New South Wales, which are aimed at encouraging investment in electricity infrastructure, unlocking additional generation capacity to ensure that there is secure and reliable energy in New South Wales. As this project is located within Aris, supporting infrastructure in the region surrounding the project, such as road upgrades to support the development of renewable energy through generation, including wind farms, would be coordinated by the New South Wales Government through the Energy Corporation. The site is located approximately 47km north east of Tamworth, in the New England region of New South Wales, within the New England REZ. The site has good access to the electricity network via a connection to an existing Transgrid 330 kilovolt transmission line that runs through the project site, and overall, the department considers that the site would be appropriate for the project and is consistent with the department's wind energy framework. Next slide, please.

45 The department exhibited the eyes and received 100 unique submissions consisting of 82 objections, 14 in support and four comments. Our analysis of the location of

the submissions showed that the majority of the submissions were received from people more than ten kilometres away from the project site. 16 submissions were received from people located within ten kilometres, but most of those submissions, 15 of the 16, objected to the project.

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Advice was received from 15 government agencies along with Uralla Shire, Tamworth Regional and Muswellbrook councils. A note a Uralla Shire Council objected to the project, and Tamworth and Muswellbrook Shire Council raised concerns about the project. And I note representatives of Uralla Council may be speaking later and they might give you an update on that objection. The most common matters raised in public objections were biodiversity amenity impacts, including visual and noise. The consultation undertaken by Neoen socioeconomic factors including property devaluation, the risk of bushfire, the site suitability, decommissioning and rehabilitation, and aviation emissions in support raise the benefits to the local economy through the creation of local jobs, investment in the area and the benefits of renewable energy. The department also visited the site twice in 2023 and met with landholders around the site. Next slide please.

I'd first like to mention that the applicant has worked to address the key applicants of a proposed wind farm from the sea stage, which is the early stages of the planning process before the eyes and the development application were lodged with the department, including completely removing the section of the project that was proposed to be located south of the New England Highway, reducing the number of turbines north of the New England Highway from 37 to 32 turbines. Securing - and securing neighbour agreements with three landowners associated with ten dwellings located to the west of the site.

The department acknowledges that this reduces the potential for visual impacts on the landscape, particularly for those residents located south of the New England Highway. This has meant that there's only been a minor amendment made by Neil and following the eyes exhibition and the consideration of submissions and agency advice. And that was to include an above ground pipeline approximately one kilometre long, to provide water supply during construction. The department considered that no re exhibition was necessary due to the minor nature of that amendment. Next slide, please.

I'm now going to talk about what we consider to be the three key issues for assessment being energy security, biodiversity and visual impact, and visual amenity. Regarding energy security, the project would have a capacity of 192MW, which would generate enough power to power about 99,000 homes. This is consistent with a number of national and state policies, including the New South Wales Climate Change legislation of achieving net zero emissions by 2050. On that basis, the Department considers that the project is consistent with the relevant national and state policy documents, which identified the need to diversify the energy mix and reduce carbon emission intensity of the grid, while providing energy security and reliability. The project would connect to an existing 330 kilovolt transmission line within the site and has available network capacity, which reduces the need for

additional transmission infrastructure outside the site, and it also provides an opportunity to contribute to replacing the loss of the energy generation earlier than other projects that might be relying on new transmission infrastructure to be built. The project would play an important role in increasing renewable energy generation and capacity, and contributing to the transition to a cleaner energy system as the coal fired energy generators retire. Next slide please.

Now to biodiversity in New South Wales. The best wind resources are often located at higher elevations, which is where this project is located. These areas are often associated with the least historical vegetation clearing, and for that reason, most wind farm projects cannot be developed without some vegetation clearing. The project was designed to avoid and minimise impacts on threatened species and communities within the site. The project site itself is close to 6000 hectares, with the development footprint of around 568 hectares. Within that footprint, about 162 hectares of native vegetation would be cleared, half of which, or approximately 80 hectares, is derived. Native grassland. Approximately 15 hectares of the impacted vegetation comprises threatened ecological communities listed under the BC act, including around 12 hectares of box-gum woodland. Anyone's committed to minimise the clearing of Box-gum woodland and all other threatened ecological communities where feasible, through micro siting at the detailed design stage. Regarding flora and fauna impacts. One threatened flora species is listed as vulnerable under the BC act, the Biodiversity Conservation Act and the EPBC Commonwealth Act that would be impacted and would also be offset. Around 80 hectares of koala habitat would be impacted but would be offset. And the department's assessment, which was done in consultation with the Biodiversity Conservation Division, found that the project would be unlikely to significantly impact koalas for a few reasons.

The area of impact is in largely fragmented areas within low agricultural land, there are no large, intact areas of koala habitat that are proposed to be impacted, and the project would not cause any permanent barriers to koala movement within or through the development footprint. Regarding bird and bat strike. Bird and bat strike falls into the category of prescribed impacts in biodiversity assessments. Prescribed impacts. The impacts on biodiversity values which are not related to or in addition to native vegetation clearing or habitat loss. There's no policy on how to calculate or quantitatively assess prescribed impacts, including bird and bat strike, and there's no requirement to provide biodiversity offset credits. The adopted approach to assessing these impacts for all wind farms in New South Wales is a combination of risk assessment followed by post determination. Adaptive management. This adaptive management approach involves stringent requirements for baseline monitoring, ongoing monitoring of any strike during operation, and triggers for adaptive management measures to avoid or minimise impacts.

The applicant's risk assessment, applied a number of highly conservative assumptions and found that without adaptive management measures, six bird and bat species were at high risk and 12 species at a moderate risk of turbine strike. The applicant proposed a range of additional monitoring and management measures for offsetting impacts, and also included \$100,000 funding for a research program which

has been included in the recommended conditions.

5 Departments recommended conditions requiring the applicant to carry out detailed monitoring of the bird and bat strike impacts of the project, and carry out adaptive management if the impacts are higher than predicted. The impacts to native vegetation and species would generate 4337 ecosystem credits and 3253 species credits. The department's recommended conditions requiring Neoen to retire the required biodiversity credits prior to carrying out the development that would directly or indirectly impact those values that require offset. Overall, the department
10 considers that the biodiversity impacts of the project would not be significant, subject to the implementation of the recommended conditions and by offsetting the residual impacts of the project. Next slide, please.

15 The department visited the site and several non-associated residences surrounding the project to assess the visual impacts. The Visual Assessment Bulletin is the guideline that applies to this project, and the department assessed the project against the performance objectives that sit within that guideline. Which considers visual magnitude, multiple turbine effects, landscape scenic integrity, key feature disruption, shadow flicker, blade glint, and aviation hazard lighting.

20 The applicants work to address the key visual impacts of the proposed wind farm. From the early stages before the EIS and development application were lodged, including through the project design and layout and seeking neighbour agreements. Starting with the assessment of public viewpoints. Overall, the impact on views from
25 public viewpoints was considered to be limited by the distance, the intervening topography, and existing mature vegetation. The department considers that the visual performance objectives of the bulletin, or the guideline that applies, would be achieved at all public viewpoints.

30 Moving on to the assessment of visual impacts from private receivers. The department's focused its assessment on 27 non-associated receivers that are located within 5.1km of a turbine, and that's within the blue line that is specified in the - the Visual Assessment Bulletin. Most dwellings would benefit from either the distance or intervening topography, or screening from existing mature vegetation between the
35 viewpoints and the project, which is shown on the next slides that I'll get to in a moment. The department considered that the visual performance objectives in that guideline would be met at all receivers. This includes locations where, despite the close proximity of turbines to some receivers such as receivers 55, 308, 18, 222 and 219, the existing vegetation and topography mean that the visual impact. The visual
40 magnitude objectives are achieved.

45 As the project is located at least eight kilometres from most residences within the village of Kentucky. The department considers that the visual performance objectives would be met at these residences as well. Regarding aviation hazard lighting, the Civil Aviation Safety Authority, known as CASA, advised that the project is considered a hazard to aviation safety. And recommended that the wind farm is obstacle with steady medium intensity lighting. In response, Neoen provided

a night lighting plan, proposing to light 20 of the 32 turbines, which CASA has reviewed and supported the department's recommended conditions requiring new and to install aviation hazard lighting in accordance with the CASA recommendations and in a manner that minimises adverse visual impacts.

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The department's recommended a condition requiring neo and to ensure that shadow flicker from turbines does not exceed 30 hours per annum, and any non-associated dwelling which is in accordance with the guideline. The department also assessed the visual impacts of the project's ancillary infrastructure, and concluded that it's unlikely to have a significant visual impact. Next slide please.

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To give you a snapshot of the visual impacts. Included in the slides are photo montages or representations from some of the locations that were considered in detail by the department. Firstly, towards the north of the project, we have two example locations receive a 221 at the top and receive a 55 at the bottom. The upper image shows a wireframe that's been overlaid with the vegetation that exists at receiver 221. At this location, three turbines are located 3.45km, the closest of which is located 2.81km away. Given the distance between the project and this receiver, the intervening topography, and the existing vegetation, the department considers that the performance objectives of the bulletin can be met at this location. The lower image shows a wireframe or a model of the view from receiver 55, which is overlaid with a representation of the vegetation that is taken from lidar data. At this receiver. Five turbines are located within 3.45km, the closest of which is around two kilometres away. Despite the close proximity of this receiver to the nearest turbine, the department considers that the existing vegetation and topography mean that the visual magnitude objectives are met at this receiver. Next slide, please.

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The next slide shows the views from the south of the project from receivers along the New England Highway. One example location is at the top of this slide, which is receiver 12. A number of turbines are visible from this receiver, including two turbines within 3.45km. Again, the department's assessment found that despite the close proximity - proximity of some of these turbines and other receivers along the New England Highway, there are significant existing vegetation and topography that again mean the visual magnitude objectives would be met. The lower image shows representative views and models the view from the Kentucky village looking west towards the project. The distance between this cluster and the project minimises the visual impacts and most receivers within this cluster. The village of Kentucky are at least eight kilometres from a turbine.

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And so at this, within the village of Kentucky, the visual performance objectives are achieved at all the residences or receivers. And so in conclusion, the recommended conditions require Neoen to offer landscaping or vegetation screening to all non-associated residences within 5.1km and implement all reasonable and feasible measures to minimise the impacts of visual appearance of development. The Department considers the project would meet the performance objectives of the Visual Assessment Bulletin, as it would not dominate the existing visual catchment. Next slide, please.

I'll talk about a few other matters that the department considered during its assessment in regard to traffic and transport. There are slightly different transport routes for different types of traffic. One route for transporting turbine blades and loads up to 5.2m in height would travel from the Port of Newcastle, shown in the darker purple, which is a little bit harder to see in person on the slide. I'm sorry. And another vehicle for sorry and another route for vehicles transporting loads more than 5.2m in height, which is shown in pink. And that route would bypass the town of Muswellbrook, and then they would continue north to the project via the same route to the project site.

The benefit of this site location is that all project related vehicles would access the site from an existing intersection that's directly off the New England Highway, and that access point would be upgraded to allow the vehicles to access the site safely. Regarding construction traffic volumes. Vehicle movements would peak at up to 188 light vehicles and 64 heavy vehicles per day over the 18 to 24 month construction period. There will be a maximum of six heavy vehicles requiring escort per day for the delivery of the wind turbine components during to the site during construction. Light vehicles may travel to the project site from the northern direction on the New England Highway, as shown on the bottom figure in the blue dotted line. To support the transport route for construction. A schedule of road upgrades is included in the recommended conditions for certain upgrades to be completed, to the satisfaction of the relevant Roads Authority.

The department engaged with Energy Co regarding the proposed upgrades from the Port of Newcastle and Bengalla Road in Muswellbrook Shire LGA. Some works relate to those that are already required to support the Central West REZ. And additional works from Bengalla Road in Muswellbrook to the north. Muswellbrook North are needed to facilitate - facilitate transport to the New England Renewable Energy Zone. The department considers that the proposed transport for this project should, to the fullest extent possible, adhere to the upgrades that are proposed by the Energy Corporation. With the recommended conditions. The department considers the project would not result in unacceptable impacts on the capacity, efficiency or safety of the road network. Next slide, please.

Over the 18 to 24 month construction period, construction noise levels would exceed the recommended noise affected criteria of 45 dB(A) at six receivers, as specified under the EPA's guideline. Noise levels, however, would be well below the highly noise affected criteria of 75 dB(A) at all six receivers during standard construction hours. Construction traffic noise would comply with the New South Wales road noise policy at all receivers. The Friends of Kentucky Special Interest Group commissioned a peer review of Neoen's noise impact assessment. The department acknowledges the concerns raised in the review. However, the department considers that the information provided by Neoen to be appropriate for that assessment. The department's recommended conditions, restricting works to standard construction hours, with no works permitted on Sundays or New South Wales public holidays.

The recommended conditions do allow. Outside of standard hours. The departments also recommended conditions requiring Neoen to apply mitigation measures to minimise noise during construction. Both the department and the Environment Protection Authority. Consider that the operational noise impacts of the project can comply with the requirements of the guideline. The department's noise bulletin and the project would also be subject to strict noise limits under the Environment Protection Licence. That the Environment Protection Authority issues. Next slide, please.

10 Now to decommissioning and rehabilitation. Neoen estimates that the operational life of this project is approximately 25 to 30 years, but there is potential for it to operate for a longer period of time if the turbines are upgraded over time, as permitted under the recommended conditions of consent. The recommended conditions require the applicant to rehabilitate the site in accordance with a number of objectives that the site must be safe, stable and non-polluting. That above ground infrastructure, access, roads and underground cabling must be removed unless the Planning Secretary agrees otherwise, and land must be rehabilitated and restored to pre-existing use. With the implementation of these objective based conditions and monitoring requirements, the department considers that the project would be suitably decommissioned at the end of the project life, and the site will be appropriately rehabilitated. Regarding decommissioning bonds. It is New South Wales government policy that financial assurances should not be required by the conditions of consent, and any financial assurances should be dealt with in commercial arrangements outside the planning system. Next slide, please.

25 The project would provide benefit to the community by providing approximately 285 construction jobs. Expenditure on accommodation and businesses in the economy by workers, goods and services. Neoen's committed to sourcing a portion of these construction jobs from the LGAs surrounding the project. The departments recommended a condition requiring Neoen to develop an accommodation and employment strategy in consultation with the relevant councils. In addition, Nijhawan would enter a voluntary planning agreement or VPA or Community Benefit scheme, with the councils providing contributions of around \$3.4 million, adjusted to CPI to Tamworth Regional Council and \$2.2 million to Uralla Shire Council, with a portion of these contributions to be spent in and to the benefit of the immediate community. While both councils accepted in principle the quantum of the VPA or community benefit offered at the time that we referred the project, they did not accept the final terms of the timing of payments and the administrative mechanisms and the area of that spend.

40 So the departments recommended a condition that if the VPA offered by Neoen is not accepted by either council and therefore unable to be executed, that it was reasonable to include a condition that Neoen make an alternate money contribution. Monetary contribution. That contribution would be \$2.24 million to Tamworth Regional Council and \$1.49 million to Uralla Shire Council, and would be directed to infrastructure services and community projects in towns, villages and rural areas within each LGA. I understand from both Uralla Council and Neoen that the terms of

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the VPA that council with that council have now been accepted so the department can provide some revised conditions to the Commission, reflecting that agreement with Uralla Council.

5 I do note that at this stage, while the discussions are continuing, agreement from
Tamworth Council has not yet been provided. There would be broader benefits to the
state. Through an injection of \$373 million in capital investment to the New South
Wales economy. A number of submissions raised concerns about the potential
adverse impacts on property values, and the department notes that the Land and
10 Environment Court has ruled on several occasions that the assessment of impacts on
individual property values is not generally a relevant consideration under the
legislation, unless the project would have a significant and widespread economic
impacts in the locality, which we don't consider as the case in this instance. Next
slide, please.

15 In summary, the departments undertaken a comprehensive assessments of the merits
of the project in accordance with the legislation considering the environmental,
social and economic impacts of the project. The wind farm development is a suitable
land use for the site, as it has good wind resources and access to the existing
20 electricity network, which may allow the wind farm to generate renewable energy
earlier than other projects that might rely on new transmission infrastructure. And it
is within the New England REZ, which is where infrastructure in the region would
be supported by the New South Wales Government. Neoen reduced the number of
proposed turbines and limited the project in this application to the north of the New
25 England Highway, significantly reducing the potential for visual impacts to the
landscape and for residents to the south of the New England Highway.

MS BREWER: The project would not significantly impact threatened species and
ecological communities of the locality, and residual biodiversity impacts can be
30 managed or mitigated by imposing appropriate conditions, such as the
implementation of a bird and bat adaptive management plan and retiring the required
biodiversity offset credits. The department considers that the project's impacts can be
readily managed through the recommended conditions of consent. Importantly, the
project would assist in transitioning the electricity sector from coal and gas fired
35 power stations to low emission sources and is consistent with New South Wales
policy. It would generate over 570,000 megawatt hours of clean electricity annually,
which is enough to power around 99,000 homes and save over 550,000 tonnes of
greenhouse gas emissions per year.

40 The department considers that the project achieves an appropriate balance between
maximising the efficiency of the wind resource development and minimising the
potential impacts on surrounding land users and the environment. Through job
creation and capital investment, and a community benefit scheme or voluntary
planning agreement with the councils. The project would also stimulate economic
45 investment in renewable energy and provide flow on benefits to the local
community. The department's recommended conditions to manage the full range of
impacts, including biodiversity and visual impacts. And on balance, the department

considers that the project is in the public interest and is approvable. Subject to the recommended conditions of consent.

5 **PROF MENZIENS:** Thank you, Nicole. Commissioners, any questions?

DR BRONWYN EVANS: No, thank you.

10 **PROF MENZIENS:** Thanks, Nicole. We'll now hear from Emily Walker and Lisa Stiebel, who are here to represent Neoen.

MS EMILY WALKER: Hi, by way of an introduction, Emily Walker, I lead Neoen's New South Wales Development team, where a team of seven in total split between our Sydney and Canberra offices.

15 **DR EVANS:** Lift the mic. I would.

MS WALKER: Perfect. Thank you. Hi. Hi. Emily Walker. I lead Neoen's New South Wales development team. We're a team of seven people across our Sydney and Canberra offices. We have three project managers here today. Aaron Gutteridge,
20 Daniel Schilperoord and Alexis Good, who are working full time on the Thunderbolt Wind Farm project. Next slide. Next slide please.

In fact, you can probably So firstly, I just wanted to start by acknowledging the traditional owners of the land on which the Thunderbolt project is located and pay
25 respects to their elders, past and present. Next slide please.

I'm just going to run through a quick overview of the project. You've had a quite a good one from Nicole, so I'll keep it relatively brief. Next slide. Thank you.

30 So by way of an overview the - the site is situated just outside Kentucky. I'm sure most of you know exactly where it is. The site entrance comes directly off the New England Highway. It's a proposed 32 turbine wind farm project with a capacity of around 192MW. We have two host landowners for the project and another three associated landowners. The connection, as Nicole mentioned, is to an existing 330
35 kV Transgrid line that crosses the project site already. The land use at the moment is for sheep and cattle farming, which will continue after the project is operating. And if the project's constructed, it'll obviously have a number of other elements of infrastructure in addition to turbines, including an on site substation, an O&M building, underground cables, access to access roads and such like. Next slide,
40 please.

45 So a little bit about Neoen. We are a very experienced operator of wind farms and renewable energy assets. Overall, we have 20 renewable energy projects in operation or construction in Australia at the moment, including three large wind farms across South Australia, Queensland and Victoria of a similar or greater scale than the proposed Thunderbolt project. We're also in the process of building another 400 megawatt project called Goyder in South Australia. We also operate another 1.3,

sorry, 2.3GW of wind across northern Europe. Neoen's. Also a very respected offtake partner, which means we have contracts with third parties such as utilities, governments and large corporations for the sale of electricity and large generators. Large scale generation certificates from our operational assets including seven
5 offtake agreements with state governments across Australia. All our assets are operated around the clock from our Canberra 24 over seven operations control centre. And we also have a dedicated energy management team, which is important to ensure that each of our assets is perfectly optimised to the extent possible, particularly our battery assets. Some of our partners. You can see their logos there on
10 the right. Next slide please.

So as we just heard, New South Wales and Australia as a whole really needs renewable electricity right now. We have a number of New South Wales in particular, has a number of retiring coal generators, which are all expected to retire
15 before 2028. The next one will be Eraring towards the end of 2025, which is nearly three gigawatts. We have clear federal and state targets, as Nicole mentioned, to achieve net zero by 2050 and also to achieve between 40 and 50% reduction on 2005 emissions level levels by 2030. Thunderbolt, at nearly 200MW, is well positioned to deliver that electricity in time to meet those 2030 targets. Next slide, please.
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So why? Why did we choose this site? Well, as we've heard, the project site has been largely cleared already for agriculture, grazing and logging. The site has a very good average wind speed, on average 7.6m/s across the site, and also a high capacity factor of nearly 38%, which is the average percent that the wind farm. The wind
25 turbines will be turning at a particular time. The project's expected to generate around 650,000 megawatt hours a year, which is enough to power around, which is enough to supply electricity to around 100,000 homes and avoid 500,000 tonnes of CO2 per year. Unlike other projects in the in the New England Renewable Energy Zone, because Thunderbolt is connecting to an existing transmission line, it's well
30 placed to provide electricity reasonably far in advance of most of the other projects that are proposed within this area, which again makes it well positioned to help the state and government, the state and federal government to achieve its - its targets by 2030 to halve emissions. Thank you.

35 So the project's evolved quite significantly since its inception in 2019, when the original scoping report, which is the first stage in the in the state planning process, was submitted in 2020. It was for the so-called Thunderbolt Energy Hub, which comprised 70 turbines 120MW of solar and a large 400 megawatt battery. Significant consultation has been done in the local community and also with local councils since
40 that time, and the project has taken into account some of those concerns. A lot of which related to property value, visual amenity, noise and environmental impacts, and also construction disruption. That feedback has resulted in the project being split into two parts. Stage one, which is what we're here today, and what the department's assessment is based on, is a 32 turbine wind farm project. There's a possibility.
45 There's a possibility for a stage two of - of the project, but that would be a completely separate Da process that may come at a later date and is not being considered here. Thank you.

So over the last two and a half, three years, we've been working hard with our specialist consultants to minimise the impacts of - of our impacts of the project on the site, while maximising the energy yield from each of the turbine locations. This map on the right, it's slightly less clear here, but those areas, those turbines that have been circled there on the right, which are depicted as green dots, show the highest yielding turbines on the site. It's careful balancing act deciding where turbines go, where it's economically viable to have them, and balancing those against the impacts, particularly in terms of biodiversity and visual amenity at each of those locations.

10 The highest wind is obviously usually in elevated areas, which often goes hand in hand with less disturbed areas in terms of native vegetation, but also the areas of the site which are most visible from without - without out with the site boundary. So we've been working hard to try and minimise those impacts to the extent possible. Next slide please.

15 So firstly, on biodiversity, the site is - has been cleared to a large extent, particularly in the lower areas that but there are still stands of remnant vegetation on those higher outcrops and also a mosaic of native and exotic grazing grassland on the lower areas. The final layout prioritises locating our infrastructure on those areas of higher of lower quality native grassland or exotic grassland. The final project area, which you can see depicted there in red, is just under 6000 hectares. But the disturbance footprint of the project is around 215 hectares, around just around 3.64% of the site.

25 There are quite a lot of mitigation measures that are proposed, some of which Nicole just talked to. In relation to biodiversity. So an environmental management strategy is already in development. And there's a well-advanced bird and bat adaptive management plan, which is also being developed. There are other, more specific mitigation measures, such as a minimum of 50m cleared space between the tip of a blade and the closest area of native vegetation. There's also extensive additional -

30 additional monitoring of bird and bat behaviour across, which needs to happen before construction and before the project goes operational, which all gets fed back into that adaptive management plan. And there's also a commitment to a \$100,000 into a bird and bat strike research program. Next slide. Thank you.

35 On the landscape and visual impacts. We have chosen these 32 turbine locations as they are largely shielded by existing vegetation for - for residences with a potential view of the site. 37 dwellings were identified within 5.1km of the nearest turbine. The landscape and visual impact assessment that was performed by our consultants identified seven non-associated dwellings within that area where the project was deemed to have a moderate visual impact, and it's been proposed that vegetation screening planting should be implemented to reduce those impacts to a negligible or low level. Thank you. I'll hand over to Lisa to talk a little bit more about benefits and

45 **MS LISA STIEBEL:** Thanks, Emily. Hi everyone. My name is Lisa Stiebel. I head Communications and Engagement for Neoen Australia. The community engagement for Thunderbolt Wind Farm has began in around 2018, 2019. And as a result of that

consultation, over time, a range of community benefits have been developed. In response to the community's requests. The first of these is a neighbour benefit sharing program which is a comprehensive program of structured annual payments for neighbours within 3.5km of the project of any turbine. This is something that we developed and is sort of widely seen as being kind of on the very leading edge of what wind farms are proposing across Australia. The payments have been offered to all neighbours within that area, and would begin at the start of operations.

In terms of community benefit sharing. We heard from Nicole previously about the proposed contributions through voluntary planning agreements with the two councils. Our initial proposal in our early consultation with the community, was for a \$100,000 a year community benefit fund. This sum has significantly increased in the period in response to council requests over time. So it's now sitting at around the \$160,000 mark. And that's those - those sums are still part of the discussions that we're having with councils. Some of our community engagement on this project. Just wanted to highlight some of the things that we had done slightly differently. We were aware of the some of the environmental concerns and biodiversity concerns from the very early consultation. And so we worked with our ecology partners, Umwelt, to develop a video which showed what the environmental surveys looked like for Thunderbolt which is, if you haven't seen it yet, it's really informative in terms of the extent and the detail of all the different flora and fauna surveys that were done across the project area. We also provided photo montages, which are the, the visual images of what the turbines would look like in the landscape.

Normally yeah, there's a whole series of them that are available on the website so that you can look at different location and turn your video around to see what it, to see what it would look like. So we went, yeah. Which was the first time that we had done that. That much of the consultation for this project fell within the Covid period. And so that was a challenge for us to adapt to that to that reality. We continued our engagement through our community liaison officer here locally. But also having a virtual town hall meeting, leaving materials in the Kentucky shop. And, yeah, a variety of options online. There was a virtual we created a virtual town hall on our website so that people could continue to get that information through the Covid period. And finally one other thing that we've done differently this time, I suppose, for this project was there was quite a lot there has been quite a lot of interest from neighbours and local farmers in relation to biodiversity credits and how they maybe could be involved in that process.

And so we held a workshop with the local New South Wales Farmers group to try and provide as much information as we could on that. Next slide please. In summary, our community consultation has been extensive. We've held a number of workshops in the early days with host landowners and neighbours. Three series of open days. We appointed a community liaison officer. In 2019. And there have been multiple one on one and face to face meetings with neighbours and residents and people in the broader community. We've consistently provided updates on the project through the website and also through newsletters and letterbox drops. And our consultation survey. So we've had an online survey on the website since 2020. Which records a

level of support sitting at around 75%. Just to mention, I guess, what would what would come next if the project is approved? We will be appointing a new community liaison officer to take us into the construction period, whose focus will be on maximising local employment and supply chain opportunities. We will be opening a shop front in Uralla, which would be manned by that community liaison officer. And we will be continuing to provide up updates on the project through newsletters and websites. As well as when we get closer into the pre-construction period, holding a job supplier and job seeker and supplier networking session. So, yes, that's sort of what we have planned for - for the next period of the project if it is to be approved.

10 Thank you. The next slide.

Thanks. So, just by way of a conclusion neon is - is confident that the wind farm project has been assessed in accordance with the relevant guidelines and the EPA act. And we are obviously here today because we agree with the department's assessment that it's an approvable project. We've sited the project so that it minimises impacts to the extent possible on the on the receptors that some of which we've spoken about today, in particular visual and biodiversity, while at the same time maximising the capture of the all important wind resource on the site. We've undertaken a lot of community engagement and that will continue over the over the coming years. And as a result, the project's evolved significantly since 2019. When it's constructed.

The project will also live in our portfolio at the moment, sitting at 20 renewable assets, and it will be monitored around the clock by our operations control centre in Canberra, which is one of the reasons why we consider it very important that we continue to keep those stakeholder relationships and dialogue with councils and rights holders going. Once operational, it's going to deliver, as we said, around enough electricity to power 100,000 homes and offset 500,000 tons of carbon. It's going to help the state and federal governments to achieve important 2030 and 2050 targets to halve emissions and to achieve net zero. And that's at least a little bit, in part due to the high wind resource that we have on this particular site. It will also deliver around \$5 million worth of financial benefits to the local councils, and also to neighbours across the life of the project, and it will help our landowners and local businesses to diversify their income streams a little bit as we start to see the impacts of climate change increasing and that's all. Thank you.

PROF MENZIES: Thank you. Emily. Could - we'll keep you there for a minute to ask you a couple of questions. Well, at least one, I have one. Our discussions with Uralla and Tamworth Council. Both councils raised the issue of the demand for gravel that the project's going to produce. And all of the associated concern with, you know, competition for their own developments. Truck movements, etc.. We wondered whether you could just comment on that, and maybe you already have a plan. If not, how would you go about.

MS WALKER: Yeah. This is one of a number of issues which we've been discussing with both councils over the last year or so, and it's an important one that comes up on every project now, especially with the advancement of the renewable energy zones. We are in the process of developing a plan. I would say that it's pretty

important for things like gravel and employment and accommodation strategies to be developed in partnership with the contractor that will be using to build the project. The tender process is already well underway to identify that contractor. So that will be something that evolves over the next six months quite considerably. I would also just add that we have already identified a potential quarry on the site itself, which we are currently having investigations done to understand whether the material is of sufficient enough quality for us to use for crushed rock for roads, for example, to try and take pressure off local quarries.

10 **PROF MENZIES:** Thank you. Commissioners? Thank you guys. Thank you. Our next speaker is Nicole Martin. Good morning.

15 **MS NICOLE MARTIN:** Good morning. My name is Nicole Martin and I'm a directly affected neighbour of this potential project. I'm not a professional speaker and I do not ever stand in front of anyone and speak, so please bear with me. I've just written a few. I have written a few thoughts. I am here today as a farmer's wife, representing my family and our way of life as a custodian of our land and a concerned member of this community. I am otherwise known as a Nimby. Not in my backyard. Well, it's certainly not going to be in your backyard, and it's certainly not going to be in your backyard, but it's going to be in my backyard.

25 And quite frankly, that pisses me right off. We will. We will see and hear 15 turbines from our property. No amount of vegetation will disperse the view or noise from this project, unless there is a new species of tree 300m high that I'm not aware of. This proposed energy hub. Thunderbolt energy hub. Zoned for this area has sparked both panic and fear within me. My family and the community as I contemplate the potential impacts it may have on our lives and the future of our farm and our business. This project has created seven long years of stress, hardship, uncertainty, mental health issues for our family relationships, and the loss of neighbours as friends.

30 All were sworn to secrecy. This has divided neighbours and our community. Financially, it has cost us a lot more than we could afford. It's tough going up against a multinational company with all your resources. As a drought and bushfire surrounded us, so did neon. With their sly, underhanded dealings, lies and manipulation, refusing public meetings, hosting drop-in sessions just to tick the box to get the project over the line meetings that were held not with even in the Kentucky community, but in nearby Uralla. While there is a perfectly good hall right here. The French owned company Neoen and the Chinese - Chinese owned Kyabra, the host.

40 For them, it is just a business transaction all about the money. But for us it is our way of life, our future and my children's future. They don't care how it affects us personally, simply because it's not in their backyard. It's not even in their country. They are the real NIMBYs. Meetings were held at times when Covid was a very convenient ally. Community meetings could not be held for people to attend. Thrust created the drop-in session. When meetings were allowed, they were held at these drop-in sessions instead of whole community meetings, and held at the most ridiculous times, middle of the work, week, and day.

When the average person is unable to attend this, is terribly inconvenient, isn't it? Including same as this one today? People having to take time out of their workday to attend and defend. The average normal persons work and are paying hard for this
5 land they are trying desperately to defend. On one hand, I recognise the importance of renewable energy sources in combating climate change and securing a sustainable future for generations to come. But at what cost? But at what cost? Our koala habitat, the use of prime agricultural land, our biodiversity, eagles, bells, turtles, and the terrifying threat of uncontrolled bushfires all in the promise of clean energy from
10 wind power. The greatest hoax of the century.

All in the name of a greener planet and a healthier environment. However, I appreciate the efforts to transitions to transition towards a more sustainable energy future. I believe this is not the way. I cannot ignore the potential consequences that
15 this wind farm will bring to my life and our livelihood. The visual impacts of towering turbines on our once pristine landscape, the disruption of wildlife habitats and the potential noise pollution are all concerns that weigh heavily on my mind. As a farmer, my connection to the land runs deep, and any changes to the landscape can have profound effects on our crops, livestock, and overall way of life.

I urge the panel to consider the voices of those directly impacted by this proposal the farmers, the residents and the community members whose lives will be forever altered by the construction and operation of this wind farm. It is crucial that we strike a balance between progress and preservation, between energy needs and
20 environmental concerns. I ask for thoughtful assessment of the potential impacts of this wind farm on our community, our environment, our environment, our livelihoods. Let us work together to find solutions that not only benefit the greater good, but also respect the values and traditions of those who call this land home.

In conclusion, I stand here not in opposition, but in plea for thoughtful consideration, responsible decision making. Let us ensure that if this project is allowed to go ahead, you are opening the floodgates and allowing the whole of the New England to become a giant industrial zone. These projects should be undertaken with
30 transparency, accountability and a genuine commitment to the wellbeing of all. And please do not be the people responsible for the destruction of our beautiful New
35 England just by ticking that box. Thank you.

PROF MENZIES: Thank you. Nicole - Thanks, Nicole. Our next speaker is Rafe Champion. Who is phoning in.
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DR EVANS: You might want to explain that.

PROF MENZIES: Hello, Rafe. I'm assuming you can hear me. Hello? Rafe, can you hear me?
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MR RAFE CHAMPION: I can.

PROF MENZIES: Great. You are on.

MR CHAMPION: All right. Thank you. Well, good morning, and thank you for the opportunity to present this morning. I have seven points to make, and it should have
5 been a written submission, but I'll itemise them first and then come through and say a little bit more as time permits. The first point is that the net zero project, using intermittent energy from the sun and the wind, is not sustainable due to wind, droughts and the lack of grid scale storage to keep the lights on through windless
10 nights. That is a fatal flaw. The whole system is not workable. And the failure to take account of wind droughts has permitted possibly the biggest public policy blunder of our peacetime history.

The second point is the human and environmental impact that is both visible, that you can see in the countryside in front of you. And it's invisible in overseas countries
15 where there are human and environmental impacts, including child labour. In some countries, toxic lakes of children working on the export of minerals. And we have forced labour in China. And then there's another not yet visible problem that is the waste that has to be cleared away at the end of life of these facilities. Some of it toxic.

20 The third point is food security. There is a little note of clause in the Paris Agreement that climate strategies must not compromise food production. That's a powerful point, which has been brought out by my colleague Bill Stinson, and I hope it will be better recognised going forward.

25 Fourth there's no business case for these facilities without subsidies. But they're not. They can't stand on their own feet without assistance, which suggests that they're unsustainable. Really?

30 Fifth, we have the deindustrialisation of the nation due to increasing power prices. These are a direct consequence of the wind and solar enterprise. And it's not very well remarked, but you can read about it practically daily with firms closing down or moving overseas, because power intensive industries cannot handle any more increase in power prices.

35 Six, there are national security issues which are outside of my area of competence, so I won't go on about them, but I think they're very serious.

40 And seven, there is what economists call the opportunity cost. And that is the things that you can have but you're not getting because you're spending your money here on this wind and solar enterprises. The money that is going into assets, which will be stranded when they're no longer subsidised and mandated, could be going into roads, schools, aged care, health care education, infrastructure of valuable kinds that
45 actually yields a return, an economic return as opposed to money, as I said, going into factors which will be stranded without subsidies and mandates.

So I think my time is just about up. So I'll just revert to the first point. That is the

shattering impact of wind droughts and the failure of meteorologists to give any warning that this would kind of be a problem. Thank you.

5 **PROF MENZIES:** Thank you, Rafe. You came through very clearly to us here so we we could hear your full presentation perfectly. Thank you very much for that. Our next speaker is Gary Basford.

10 **MR GARRY BASHFORD:** Good morning. My name is Gary Bashford. I am a lifelong resident of the Kentucky area and live approximately ten kilometres to the south east from the proposed stage one of the Thunderbolt Energy Hub development. I'm here today to make a submission against the development of the Thunderbolt Wind project. Whilst grounds for objection are many and varied, I will attempt to cover just a few. That are of concern to myself and others in the community. Firstly, the matter of suppressing wildfires. Particularly with aircraft. Given that the
15 prevailing winds are from the west northwest, any constraint of aerial suppression of fires coming from the west northwest will mean that the largest proportion of the Kentucky residences in the Kentucky area will be subjected to a higher risk of fire impact than would otherwise be the case.

20 For example, a fire starting on the western edge of the proposed development. Given three kilometre buffer zones that exist around other establishments. It has 18km to travel. By that time it will probably have a frontage of nine kilometres when it impacts the New England Highway. Recommendation, reduce the size of the development, or preferably move it to an area where the combination of factors does
25 not pose such a significant threat to a relatively closely inhabited area, such as Kentucky. Secondly, I would like to address the matter of noise generated by wind turbines. There are countless references of how audible and inaudible sound can or may affect the health of large numbers of people in impacted areas. And yet, neon, in their glossy brochure, claim that some 17 reviews of leading health and research
30 organisations concluded that there is no published evidence linking wind turbines with adverse health effects. Then we have a report from a Vermont medical doctor. The doctor, Sandy Ryder, a Harvard University School of Medicine graduate.

35 Where he - he encourages the Vermont Public Service Board members to read and conduct careful review of a study by Bob Thorne, a professional acoustician in Australia, that he presented to the Australian Senate in 2011. Ryder states that Thorne's report is a careful and well designed case study covering sound measurements and health measurements in a balanced and scientific way. And just to give one example of Thorne's study, he states that a 1 to 2 kilometre setback from
40 wind towers is not nearly sufficient. A significant low frequency sound pressure measurements have been recorded in homes 5 to 10km from large projects in Australia, and I'm fairly confident that in stating that the proposed towers for the Thunderbolt project will be larger and higher than the ones where the measurements were taken.

45 Recommendation that the New South Wales Planning Department members read Bob Thorne's clinical case study and apply his recommendations to any approvals

they are considering. My third point centres around the principle of social license and includes the two areas I have already mentioned. We are constantly being burdened with, burdened with information overload, and with as many scientific references supporting the developer's claims as there are refuting it. We, the general public, have little chance of determining where the truth lies. Does this scientific disagreement represent? (a) gross incompetence or (b) intentional bias. Where are our chief scientists and researchers to provide the credibility and scientific rigour to these matters for at the moment? There is a foul, foul stench emanating from the whole process.

10 Recommendation. The Department of Planning, Hearing and Infrastructure use comprehensive, credible and independent peer reviewed information when determining the suitability of developments such as the Thunderbolt Wind Factory. A whole of New South Wales Integrated Land Use plan would be a good start.
15 Thank you.

PROF MENZIES: Thanks, Gary. I note that you've made a submission to the department, and we would certainly welcome a submission to the IPC just to get those recommendations that you wanted to make to us, clearly articulated to us.
20 Thank you very much. Our next speaker is Karen Zirkler. I hope I pronounced that correctly. Karen. Karen. I knew I'd get something wrong.

MS KAREN ZIRKLER: It looks like Karen, but it's Karen from birth. My husband Craig is here to help with some butcher's paper that I've got. Good morning, chair, and good morning, Commissioners. My name is Karen Zirkler, and I'm a seventh-generation farmer. My husband Craig, and I operate a regenerative grazing enterprise adjoining the proposal we're representing. On. We are presenting on behalf of our family and our farm business. I have a passionate interest in nature. Positive agriculture.

30 In the late 1980s, I completed a cutting-edge environmental science degree with first class honours from Griffith University where I became aware of the science of climate change. In the 1990s, I worked across the native pasture landscapes of Queensland, developing farmer friendly pastures and soils monitoring programs, and later I conducted focus groups with hundreds of farmers in every state researching barriers to agroforestry extension. I've worked with Southern New England Landcare here for the last 26 years, and I'm now CEO of this not for profit, which supports communities across three local government areas. Hence, lots of people know who I am.

40 My experience is a key reason that I was appointed to the board of the New South Wales Biodiversity Conservation Trust in 2020. My belief in the need to transition away from coal fired power generation is also a reason I participated in a climate rally in 2018 where I rode my horse down the main street of Sydney. And I share this information because it shows that I believe in climate change. I believe in renewable energy, but not like this.
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I'd like to cover. I'd like to cover five key issues impacting our family, our lifestyle, and our farming business. And I'd suggest that these probably cover a lot of other people who are a bit afraid to speak today. Recommendations for each section are outlined on the butcher's paper. And I won't read these out to you because I don't have time, because my - my time got cut off a little bit. Thank you for the opportunity anyway, to speak with you today.

Our property is located across the New England Highway in an easterly direction from the proposed development. We consider ourselves immediate neighbours of the project. We've spent the last 18 years implementing regenerative agriculture practices on farm to build natural capital and be nature positive, while producing high quality superfine merino wool, fat lambs and beef cattle. Our natural capital contributes to the marketability of our products, and our farm has been the focus of many regenerative agriculture projects and events, demonstrating ideas and outcomes to other landholders. Because of our solar and battery system at home, we don't notice blackouts and we share electricity back to the grid.

The first issue that we would like to point out today is project layout negotiations. In January 2021, we wrote to the proponent giving ten reasons for withdrawing our expression of interest in hosting a turbine and suggesting a range of ameliorating and compensatory actions should the project proceed.

We've never received written acknowledgement of that letter, nor any negotiation opportunities. Mapping by the proponent and the department has been obtuse and unhelpful. There's been no opportunity for us to discuss and negotiate. Turbine layout with the proponent to ameliorate our concerns. The maps of the turbine layout, and particularly on page 22 of the development consent, cover much of our property. In fact, all of it with an inset diagram. Preventing us from reviewing exactly how we might see the turbines from various parts of our property, or even seeing our property on the map. Nguyen has failed to negotiate any kind of neighbour agreement with us despite claims by a previous speaker. These processes should be considered necessary best practice for them not to occur as procedurally unfair and unacceptable. Neighbour benefit sharing should start at the beginning of construction.

We have three negotiations relating to that topic. Second topic biodiversity. Our farms natural capital includes endangered raptors such as little eagles and square tailed kites. And Steve Debus, who's here today personally communicated that to me recently. We have a breeding pair of wedge tailed eagles nesting behind our wool shed. We have endangered Bell's turtles in our stretch of Lunga Creek, and we sight endangered koalas regularly. We've recorded rare native grasses such as silky brown top wallaby grass and kangaroo grass, long thought to be grazed out of this landscape. We have a myriad of small, threatened woodland birds, and our farm dams are stocked with yellow belly, silver perch and Murray cod. Sounds great, doesn't it? These are all part of the critically endangered box gum grassy woodland we call home. This ecological community is protected from harm under the federal EPBC act 1999. It's always been a part of our long Tum business plan to attract eco

tourists to the property.

In the last year, we started with Hipcamp and plans include a tiny home or cabin. We've deliberately built up our natural capital and see it as an integral part of our farm enterprise, contributing real value. However, the potential impacts of the wind farm on our enterprise were not considered by Neoen in their environmental impact statement, nor by the Department of Planning, in their assessment of the proposal, nobody asked us. No one surveyed, surveyed our property. Nobody offered to consider it for any biodiversity offsets that might be required for the project. This is a failure of process and procedural fairness. We have another two recommendations relating to that. Third topic for us is wildfire. And I know Gary this, but prevailing winds are from the west, as Gary said and blowing from the project site directly towards our property and residence. Fires from this direction will most likely be caused by lightning or a turbine malfunction. Project proceeds. Our farm stands directly in harm's way, because firefighting in the project area will be impeded in two ways. Aerial support will not be possible due to a three kilometre no fly zone around the turbines.

And secondly, local ground crews are unlikely to be prevented from suppressing fire within the project - project site because the current Chinese owners discourage entry. Last year, they refused helicopter access by local land services for the annual feral pig shoot. A wildfire that crosses the highway into Bisbee Vale. Our property would be devastating for our family and farm business. Fanned by westerly winds, it would take just minutes to reach the more densely populated areas of Kentucky, which are just off the edge of all of Neon's maps, by the way. The devastation would be unacceptable and have insurance premium implications for the whole district but is totally avoidable if this project were located in a more suitable site.

We have two recommendations for the IPC to consider. Next issue is noise. Recent research is raising concerns that animals including sheep, dogs, horses, koalas, whales, and others become distressed and experience reproductive issues as an impact of constant exposure to infrasound. Constant exposure being the key words there. For a five-megawatt turbine, there is a detectable signal at 20km away, potentially impacting Uralla, Bendemeer and Walcha. I'll have full references in my submission. Notably, Neon's noise mapping curved the noise level contours around neighbour houses, placing the neighbour residences just outside the predicted noise limit looked a little suspicious to us. Neither Neon's response to submissions nor the department's assessment report addresses infrasound, and neither addresses non-compliance issues that were identified by Les Hewson in his independent review commissioned by the Friends of Kentucky Action Group.

The government has a duty of care to protect citizens from harm. If a non-compliant project is approved, our family's health could be jeopardised by non-compliant noise pollution along with the health of our farm animals, our wildlife, and all of which are pivotal, pivotal to our business. If these impacts are possible, they are simply not acceptable. We have three recommendations along those lines. The fifth and final issue is poor community consultation. Nguyen completely flabbergasted me several

times during the community consultation process. Number one, they refused to conduct professionally facilitated community forums at all, despite numerous requests. Number two, they insisted on dropping sessions in Uralla, 20 to 60km from all neighbours of the project during Covid restrictions. We know that only a handful of community members attended, mainly turbine hosts. And number three, they muted us during an online community consultation meeting. When we asked questions like why didn't their consultants conduct aquatic biodiversity surveys? This was our one and only opportunity to ask questions of technical experts. This poor consultation and engagement process had the impact of completely erasing our trust in this developer. Number two, causing a significant uncertainty about information we needed to make family farming and business decisions and creating significant frustration, anxiety and worry that impacted mental health. I required medical advice and counselling, and I already have what's called solastalgia in my 30 plus years as a change agent working in extension and community engagement in my field, I have never seen such poor, shoddy community engagement processes.

Consequently, not all members of our community have been afforded their right to know the relevant details of this project, ask questions and have input. In a further example of poor conduct in the broader industry, Friends of Kentucky Action Group conducted a public meeting to share information. Days before the meeting, the guest speaker from another region was bullied into not speaking by an employee of the wind farm in their local area. This demonstrates the lengths to which farm wind farm developers are prepared to go, in order to prevent sharing of lived experience. Given their track record on community engagement, we question Neoen's commitment to the environment, social and governance principles ESG. The French Corporate Duty of Vigilance Law 2017 requires large French companies to establish and implement measures to identify and prevent human rights abuses and environmental damage throughout their supply chains. It aims to ensure companies respect human rights and the environment in their business operations globally. If this project is approved, are we certain our governments are not complicit in any breach of this law by French company Neoen? Some in our local community have raised the question of whether Uyghur labour has been used in Neoen's supply chain. We don't know. It's important to find out because our local and state governments have a duty of care. Under the New South Wales Modern Slavery Act of 2022. I really don't. It's just 30s more, please.

PROF MENZIES: Keep going, Karen.

MS ZIRKLER: In conclusion. With groups like Z-net and businesses like Morelli Solar in Uralla. Our community is poised for a renewables transition on our terms without harm to agriculture. Without harm to the environment. Or else social fabric. These proposed monstrosities have so much embodied carbon. Will they ever offset themselves? The IPC has the power to stop this approach and allow our community to determine a better, safer renewables transition. We ask the IPC to reject the proposal and recommend the state government facilitate our community and give us some leadership to determine a much safer, more sustainable renewables transition.

PROF MENZIENS: Thank you, Karen, and thank you to your helpers. And by way of open disclosure, let me acknowledge Julian Prior, my professional colleague. Hello, Julian. Okay. Our next speaker is Grant Piper, who I understand is joining us by phone. Grant, can you hear me?

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MR GRANT PIPER: Yes, I've got you (indistinct). Yes.

PROF MENZIENS: Okay, so, Grant, you're the group can now hear you. So you're on.

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MR PIPER: Okay. Thank you. Thank you for hearing me. Sorry I couldn't make it. I intended to following on from the last speaker, I'd just like to say also to highlight the fact that the Emissions Reduction Act that the New South Wales Parliament passed last November, paraphrasing the (indistinct) Agreement consciously took out the sentence regarding with no to, to - to call (audio drop) needs to be (indistinct). (Audio drop) (indistinct) feet high above ground level. They are a significant hazard to light aviation if they are forced down due to stress of weather, which you are permitted to go below 500ft in due stress of weather, to remain clear of cloud and in sight of ground or water. So the reason model for aircraft accidents has been long established. Accidents occur when a series of events happen and force you into position, or a series of failures occur and it ends in an accident. Usually, it's just not one single failure. There's a series of failures and building huge turbines on ridgelines and on hilly country such as this at Thunderbolt between two major cities with major airports for light aviation, Armidale and Tamworth. You're going to have an accident one day. Whether they think it's a low risk or not at the time, it will be a tragedy and we will say, I told you so. Painting them off matte white is the worst thing he can do. You imagine in smoke or with cloud or rain and drizzle, they would blend in very well.

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The - the not putting lights on them, which is the other issue, or the projects don't want to put lights on these turbines, whereas it's a CASA requirement to have lights. Now Umwelt, who did the has no authority to make the decision that these things do not require lighting. That's a decision for CASA. And it's CASA says that they have to have a request from a planning authority to consider whether lights can be waved or whether they should be fitted. Can I recommend that the IPC directly approach CASA and ask them to assess whether these turbines need lighting aviation hazard lighting in accordance with the regulations? And if they don't require lighting, CASA needs to put that in writing and specifically state they can't just roll through without any contest. And if that's the case, then they need to review the rest of their hazard lighting criteria and regulations and bring it into line. The second major point is aerial firefighting. I've been a RFS member since I could hold a hose. I last two fires I fought were the Flags Road fire near (indistinct) and the Sir Ivan fire near Coolah, west of Coolah in 2017, where large air tankers and helicopters and small air tankers were used. I was on the ground, but I was watching them and they dropped from well below 1000ft. I'd say they were below 500ft. So once again, wherever these turbines are built, you are removing the option to use aerial tankers because in all honesty, no employer could send a pilot into that sort of a workspace and expect them to fly.

The RFS is negligent in that they don't engage on this issue. They just say the pilots or the aviation crews will do their own risk assessment, which means fundamentally, they will and they will avoid the area you can imagine in turbulence, in smoke, they will not come below the height of the turbines to drop. But if they're forced to stay above the height of the turbines, it will be pretty ineffectual as far as putting out a fire. So that puts the people on the ground in greater danger, such as myself. And it removes a major asset we have for fighting fires, especially again in hilly and inhospitable terrain. So they're the two main issues. The Aerial Agriculture Society Association also is opposed to these turbines. And they've been at this for years with little, little, little effect. And I suppose that might be the case with us as well. But we must highlight it that these things are a hazard to aviation. You can't avoid it, and an accident will occur and aerial firefighting will be curtailed. There's no, no other choice. So I just commend you to read what I have written, and I'm happy to answer any questions, if you like.

PROF MENZIERS: Thank you very much, Grant. And - and thank you for bringing your professional view there. Let me confirm that you are making a submission.

MR PIPER: That's to me. Yes, I - I've emailed it through earlier.

PROF MENZIERS: Okay. Thank you very much, Grant.

MR PIPER: Thank you.

PROF MENZIERS: Okay. Our next speaker is Marilyn Wood. Marilyn, I note you have made a submission. No, not to yourselves. No, no, to the department. Oh, yes. Yeah.

MS MARILYN WOOD: That better? Great. Good morning. I thank you for the opportunity to address the Independent Planning Commission and the community today. I'll be referring to the New South Wales Department of Planning, Housing and Infrastructure as the department. My name is Marilyn Wood. I live on the outskirts of Kentucky Village, a residence of some almost 13 years now. My introduction to the Thunderbolt Wind farm was by way of a flyer in our letterbox. My first reaction was, okay, we need to do something to move away from coal. So I did a little research into wind farms and what is being proposed for our community and the wider region. I looked at reports from overseas countries with a much more mature renewable energy industry, and the alarm bells started to ring. That was a few years ago now, and here we all are now mentally exhausted as we come to the end of this awful process. I'm very unhappy with many aspects of this development. The noise and vibration risk, including infrasound and its effect on human and health. A standout concern for me. Recognising that the noise aspect is very technical area. The Friends of Kentucky, which is part of the Responsible Energy Development for the New England, commissioned a review of the Thunderbolt wind farm. Sonus EIS noise and vibration assessment.

The review completed by Les Houston and Associates, whose opinion was accepted by the Victorian Supreme Court in the UN versus Bald Hills. So they have some cred. With the. Our concern became alarm when the findings of that review came back, recommending changes and stating if the changes suggested are not considered
5 in the EIS, then the EIS deficient. Incomplete and should be considered premature and must not be approved. So where are we now? Many documents, reports, assessment, reviews, conversations, but still no clarity. It seems they are trying to assess the currently unknown. And yes, size does matter. The Sonus Noise Assessment stated that the actual wind turbine model has not yet been identified. So I
10 asked the department how can this be accepted as a completed technical study? A study of the unknown. Undecided.

We read - we read that EPA, EPA and the department are satisfied with the predicted noise levels. How can this be when levels have been calculated on an unknown
15 turbine model? So at this pivotal decision point, we have expert consultants in disagreement. We have a community alarmed and frustrated as it appears the experts cannot agree. And we ask who's looking after our interests? Almost daily new studies reports arrived from around the world (audio drop). Testing? Yep. Great. Almost daily new studies reports arrive from around the world on the negative health
20 impacts of wind, turbine noise and vibration on neighbours and their animals.

We have some recommendations. Requested a pause be placed on any determination by this commission, pending the identification of the actual wind turbine model and the completion of a pre-construction noise assessment of that model. And then,
25 because of the confusion and differing opinions that the Thunderbolt wind farm EIS noise assessment be referred to an independent expert body to provide an impartial assessment of the noise and vibration impacts of this development. In closing, I must say that I believe that department's process to be biased in favour of any developer. Energy code declared the New England REZ with a disproportionately high network
30 capacity requirement of eight gigawatts, without any communication. Community engagement. The department process itself creates a huge power imbalance, disempowering small rural communities as it pits them against large, well-resourced corporate developers. That's not fair. It's just not fair. And finally, where you might hope the department would properly interrogate consultant reports, assessments and
35 act as an umpire to their own process, they are, in fact, missing in action. Government is failing in its duty of care to its citizenry as it subsidises an industry which it knows is damaging to nearby residents and watchers, as individuals are forced to take their battles to court. It's not good enough. That's -

40 **PROF MENZIES:** Thank you, Marilyn.

MS WOOD: Thank you.

45 **PROF MENZIES:** And thank you for your calm under pressure there with the equipment failing you. Our next speaker is Carolyn - Catherine Wolf.

MS CATHERINE WOOF: Good morning. I'm the owner of Balmoral, a 605-hectare place to the superfine merino farm to the north and west of the proposal. I'm bordered by both hosts. And as previously addressed, that is very much critically where fire starts. Turbines will be placed in contiguous areas of forest. And this is a cause of anxiety. Mine is that old homestead you saw with all the trees around it. They are deciduous trees. They are there also as potential feed for stock during drought. I feel coerced by the thought that if I chop those down, I'll see wind turbines. And yet they should be maintained by me during a drought when water is scarce. Already in the last drought, five large trees surrounding my property died. However. My Bulk of this talk will be about visual amenity and its effect on my health.

My background. I have a first-class honours degree in Zoology and Biochemistry from the Australian National University. I was a National undergraduate Scholar and also a Master of Creative Arts from the University of Wollongong. I've worked in the pharmaceutical industry here and in the US, filing new drug applications in the US. I know what a scientifically. Well put together. Submission should look like being no real statute of limitations for anything I signed off on as an artist. I've exhibited in the US and throughout the New South Wales and act in regional galleries. Commercial galleries, one in Sydney and artist run spaces. This has been achieved against a background of severe bipolar disorder, including psychosis and severe depression, whilst helping and caring 18 years of a 28 year marriage for my husband who had a brain tumour. I have volunteered in areas where people are generally disenfranchised. Mental health at the pointy end. Brain tumour and dementia. So at the end of the 2019 2017 to 19 drought, unprecedented in this area, with all the fires, many of them. Not too far from our farm in that very fire prone area to the north and west. I climbed to the top of the hill after the first rains. That's the top of the hill where T-28 is going to be very close to look at the beautiful valley sweeping and down towards the highway. Noticing the first stirrings of life in vegetation. That happened in early January by the end of January. An acquaintance over the New England Highway told us, what are you going to do about the wind farm? You're coming to the meeting. What wind farm? And then later on in March, Covid hit. Now. Over the ensuing few years, my health deteriorated. Emerging bouts of psychosis. Depression. Anger associated with grief at the loss.

And Neoen has managed to take away, a valuable treatment, which is for me to climb up that beautiful hill and feel the exhilaration that I've seen everyone experience who's looked at that view. And just feel a little calmer and a little better and a little more able to go on. This culminated in early 2022 with my admission to a psychiatric facility. For suicidal thinking, depression, mania and psychosis. Indeed, I was not long, in fact not totally well, when the submission date came round in May and I wrote a handwritten submission, very little of which has been addressed by this group. Neoen and the planning people. So what I hear in the group. Is a background of rising stress and anxiety. Some of the people won't be as severely affected as I have been in my life, but some may not have been affected at all. But with the background of stress from increasing drought and fires due to climate change problems with business, some of those people will be requiring treatment. People

who have had moderate or even low risk illness will be shifting into the higher categories. All of this against inadequate facilities, mental health facilities in this region. It's just not good enough Umwelt.

5 I won't go into the origin of that word. To state that the perceived effects.
Stakeholders perceived a high sure hi for me and high for other people. I'm speaking
on behalf of other people as well. And they reduce it to medium and then ongoing
engagement with the community. Amazing. Low and low, low, low, low, low is how
10 all of these problems have been mitigated. Very selectively. If I were a drug
evaluator and I looked at this. Incredible. Ability of unwell to reduce high risks,
perceived risks. And that is my call. It's not unwell to say that my risk was moderate.
That is my personal call down to low. I would like T-28 removed. It is within 200m
of my boundary. I would like the turbines 26 - 23, 24, 25, in the bushfire prone area
15 removed and I would because there is so going to be so many renewable energy
projects causing more and more stress in this community with people whose
community is fractured in their supports, are far lower than they have been in the
past. To please consider successful applicants to fund a permanent, full-time
psychiatrist in Armidale, and not a merry go round of doctors like we seem to get,
and to consider supporting the mental health facilities. Thank you.

20 **PROF MENZIES:** Thanks, Catherine. I'd note that we as Commissioners did a tour
around and - and particularly stood at - at near your location. Because we had taken
note of your handwritten submission to us. It stood out for lots of reasons, not just
because it was handwritten. Catherine. So thank you for that. Our next speaker is Ian
25 MacDonald.

MR IAN MCDONALD: Good morning, Commissioners, ladies and gentlemen. My
name is Ian McDonald. Walker Grazier. I think it's already become evident in this
hearing so far this morning that health is a major issue. It's time. Excuse me. I just
30 put my glasses on. It's time governments take another look at the mental health of
their own people and stop putting renewable targets ahead of the wellbeing of rural
Australians. The ruthless rollout of wind and solar across our rural landscape is only
made possible by absentee tenants. They are large corporations and industry
superannuation funds from the big end of town. Lured by government guaranteed
35 returns. These absentee landholders said, in boardrooms without any duty of care for
the anguish and human misery they bring about on rural Australians. Rural
Australians feel oppressed, we feel neglected, and we feel helpless in stopping this
runaway, renewable juggernaut that is destroying our landscape and livelihoods.
Anxiety, stress, fear and uncertainty is tearing the bush apart.

40 Most of the general population don't have a clue about the real-life turmoil unfolding
in rural Australia. And the people sitting in boardrooms don't give a damn. That we
are the ones bearing the brunt. Of this grand fraud. It's not a fair guy, and it's taking
its toll on our mental health. Has been expressed already here this morning. We feel
45 a little consideration has been given to the serious issue, and any government support
that has been forthcoming is certainly not keeping pace with the juggernaut.
Community engagement forums have been convened by governments and

proponents, but seldom has dialogue resembled meaningful consultation. We left the state of flux without any tangible plan having been tabled going forward to the proposed construction phase of these developments. This will be a period of a decade or more. We will see an influx of thousands of itinerant workers descend on little
5 places like Kentucky and other villages, towns and the cities of Armidale and Tamworth, driving many residencies at residents and businesses out there places to be filled by carpetbaggers. Who come for short tum gain. Once the wind and solar farms are completed, the carpetbaggers will leave and we will be left with yet another ghost like community, locality, and town or town in our landscape.

10

Now. Brewarrina, once a model town on the south western slopes of New South Wales, is a classic example of the shambles that will come about for small communities in this region. And I would suggest to anybody who has got the time to visit a borough of one of these days you won't be able to witness the before and after,
15 but you'll certainly be able to witness that. It's a town without soul these days. Anyway. Then will come the operational phase for a further 20 years to endure watching thousands of these monsters pumping out harmful levels of noise, infrasound and shadow flicker. These are the things that literally drive people mad. And cause them to get sick. So sick that many abandon their acoustically toxic
20 homes and just flee. This has happened all over the United States. When the wind and solar farms have reached their use by date, we are told they will be decommissioned. But will they be decommissioned or will that be left to stranded assets? Surrounding gated communities without soul and set in the landscape resembling an industrial graveyard. Renewable energy is environmentally,
25 economically and ethically flawed. It has not been properly thought - it has not been properly thought through. And it is having far too many unintended consequences for it to be fit for purpose. And in their haste to roll it out, governments and being complicit with the big end of town have failed to recognise mental health as a major casualty. Government is driving its own people to relationship meltdowns and
30 depression, leading to suicide. This nation cannot afford to let the social fabric of the bush. The undermine any further by this unparalleled travesty. For this nation to prosper, we must gain a fundamental respect for an unspoiled landscape and regain a fundamental respect for our quintessential way of life. Thank you very much.

35 **PROF MENZIES:** Thanks, Ian.

DR EVANS: That's fine. Thank you.

PROF MENZIES: Yes, great. Thank you, Ian. Our next speaker is Julian Prior.

40

DR JULIAN PRIOR: What's the sound like? Is that okay? I'd be a bit higher. Yeah. Thank you. Firstly, I have two acknowledgements or two disclosures to make. Firstly, I know the chairperson, Professor Neil Menzies. Professionally. Good to see you again, Neil. Secondly, I'm also a neighbour of the Thunderbolt wind farm. Phase
45 one proposal. Please allow me a minute, just to tell you a little bit more about my background. For 15 years, I worked for several New South Wales government agencies in a variety of specialised natural resource and environmental roles.

Amongst these, I was a soil conservationist, a land management planner, a catchment planner. I've conducted soil and vegetation surveys over many areas of the Northern Tablelands, including this local district here. During my time with government, I commented on and contributed to numerous environmental impact statements. I also
5 was involved in dozens and dozens of community consultation exercises throughout New South Wales, including during the contentious water reform and vegetation reform processes. I've also conducted many community and stakeholder consultations for international organisations including the EU, the German Government, United Nations Development Programme and the Australian
10 Government. I thus have a very strong background in designing and conducting community consultations. I left government to work at the University of England, where I lectured and researched for 20 years. For over ten years I taught a course in Environmental Impact Assessment. With my experience with government and my teaching in this specialised area, I think I know how an EIS should be conducted.
15 Remained an adjunct professor at UNE, and I still supervise PhD students.

Now, I declared an interest because I am a neighbour. Obviously the wind farm and I have some bias, but I try to look at this proposal as objectively as I could through the eyes of a scientist. Now I try to make those comments there, but I acknowledge that
20 there will be some bias. Got the slide there. They're my issues. I want to talk first around the - the high biodiversity nature of this area. I presume you Commissioners drove south from Armidale along the New England Highway to this venue. Along the drive, you would have noticed that for the first 40km of the drive it's almost completely devoid of native vegetation or tree vegetation apart from recent tree
25 plantings. Unfortunately, this is due to historical over clearing of trees, the introduction of non-native pasture species and fertiliser which changed the soil ecology and the ravaging effects of New England dieback dropping south along the highway. The first area that you encounter with good tree and shrub vegetation is this district. It is the last of the plateau country with good tree vegetation before you head
30 down the steep slopes to Tamworth. The New England Tablelands is also considered a climate change refuge area for species that have the opportunity to migrate to higher altitudes in the heating climate. All these reasons, this local area is precious and must be carefully protected from adverse environmental impacts. It is no wonder that the initial eyes triggered the environmental, Federal Environmental Protection
35 and Biodiversity Conservation Act.

Secondly. So, what I'm saying there are effectively we need to really look at environmental impacts closely. We need to monitor the claims that are made. When I
40 hear there are 162 hectares of native vegetation are going to be cleared and there'll be a footprint of 215 hectares of disturbed area. As a catchment planner, former catchment planner and soil conservationist, for me that is a red flag. We need to really monitor that closely. Secondly, community consultation. The inadequate and manipulative community consultation by the proponent particularly upsets me and you can hear how upset people are because it disempowers and marginalises the
45 community and does not hold the developer accountable. Others have and will talk about this in more detail, but I just want to highlight one incident which Karen touched on. The only time we ever had the opportunity to potentially talk to Neoen's

technical consultants were with two online zoom meetings at September 2021. A few community members, including me, attended each of the zoom meetings. Expecting finally to get the opportunity to talk to consultants who were conducting the EIS studies. However, during the zoom meeting, Neoen had deliberately muted the
5 microphones of the community members so that no one could ask any questions. The only way we could communicate was by typing into the chat box. The only people that were allowed to speak were Neoen staff and their consultants. In all my 30 years of conducting community consultations, I have never encountered anything as cynical as this.

10

Where the organisation during the consulting has deliberately muted community members so they could not participate in the discussion. This is what the proponent calls community consultation. Finally, the development will have a large landscape footprint. Many trees will be cleared, many kilometres of farm roads will be
15 constructed and as well drainage channels and creek crossings. Large concrete pads will be constructed for each turbine. This is a highly erodible area of duplex soils. Gravel roads concentrate rainfall runoff and are highly erodible, requiring high maintenance. This is particularly because this is particularly important. So what I'm saying is we need the study to look much more closely at rainfall runoff, soil erosion,
20 river turbidity, and catchment hydrology that was not properly considered in the original EIS. This is particularly important because the erodible nature of the soils, and because the endangered species such as Bell's turtle, which are found in the catchment. Poorly designed developments, have significant impacts on catchment hydrology, water quality and aquatic habitats. The fact that the proponent plans to
25 pump water from its concrete batching plant from the large dam on Pine Creek on the property in Alaska, and did not consider the impacts on catchment hydrology or aquatic ecology is astounding. This large dam is an important habitat and breeding area for Bell's turtle, and is particularly important as a refuge area during droughts. When many other smaller farm downs are run dry. I'll finish up there. They're my
30 recommendations. Thank you very much, Mr. Chairman. And thank.

PROF MENZIES: Our next speaker is Mark Fogarty, who's joining us by phone. Mark, can you hear me?

35 **MR MARK FOGARTY:** I can - can you hear me, Commissioner?

PROF MENZIES: Yes, we can. Mark, the whole hall can hear you. So you're set to go.

40 **MR FOGARTY:** Thank you very much. So, look I appreciate the time to listen to this. I'm currently down in the Riverina, so wasn't possible to come in by zoom, but I wanted to just make a concentrate if I could on one point, could I have? Next slide, please? The - the topic that I wanted to just cover, I think was, was cumulative
45 impact and particularly focused on the southern rays, where this application, of course is interested in. Just a bit of background. I think there's common agreement that the rays concept itself that was brought in under the legislation was a fairly rushed process. And it was rushed in the fact that there really wasn't any strategic

land use planning. Certainly we had the backdrop of the integrated system plan, and that occurred every two years, but below that where projects went and how they went and things like that was supposedly left up to the state governments and things. And that really wasn't given effect to the result of that was that we had a lot of developers and originators off the chain, I think, chasing along the various 330 kV lines opportunity. So right of access was paramount to them. And, and there were certainly some constraints. And, and the applicant in this case was - was of no different in that respect. So there was not really set up to deal with strategic planning to use planning and the LGAs or the local government associations and their local environmental planning, their zoning and things like that were pretty much cut out from day one. They became in allegedly sense subservient to the ISF. And things. The planning government was still slow to react and still is slow.

Things have got a little bit better there. We've dealt with the issue of sustainable agricultural land. We've got some large scale solar guidelines, which are helping a bit in respect of how we better plan for the for development in those areas. We have in 2021, the government put out a cumulative impact assessment guideline, but it didn't really provide a lot of definition as to what - what study areas and, and what were to be really the environmental baselines that should be taken into account. So consequently, I think this applicant and 1 or 2 others in the New England have taken a very wide approach to what the study areas should be, and that really doesn't give us a lot of guidance as to what cumulative impact really means. I've just driven down the M1 down through Yass and Collector and those areas, and you see a very stark evidence of what cumulative impact can be if it's not properly checked. Energy Co has had a couple of attempts to do cumulative impact assessment in the Central West Torana, and they have really only concentrated on, on benefits, not on cumulative. The upper house standing committee in the New South Wales government rolled their arm over and I think came up with a couple of good recommendations, none of which have been given effect to but we keep on hoping that that will be the case. One they suggested was much more if you like, a more robust approach to strategic cumulative impact assessment. So the New South, the New England REZ, is going to suffer.

It's got quite a deal of focus particularly on wind. It's somewhere between 8 to 10GW. We're not really sure what the final target will be. So, so what I'm saying is its cumulative impact will continue to be an issue as the IPC deals with these developments as they come forward in the planning process. So our follow up submission or my follow up submission will be very much one to deny consent. Next slide. And then I might go to the next slide again because there's an animation there. So Commissioner is that just is an extract from what was the voice of Walcha submission on the Winterbourne Wind Farm. And what it does highlight for you is just the concentration in the southern end of the New England REZ of projects. So we've got already, I think, particularly mindful of wind, this project together with potentially Ruby Hills, we're not sure what Brackendale which is two a and to be on that list. What they will mean together with Winterbourne. So it's - it's a very big issue for these communities as they go forward. And I, and I just highlight in a solar sense what that means for Uralla. If all those projects are currently are being

developed and will be developed that are currently in the planning system, we're going to end up with something like 8.25 million solar panels on calculation surrounding the township of Uralla. So I think we've got to get a lot better with the way we deal with cumulative impacts. That's probably my submission, I think in five
5 minutes. Commissioners I hand it back over to you.

PROF MENZIERS: Thank you very much, Mark. The submission you sent us didn't have an animation, so if you could send that to us, it would be appreciated. I'd also.

10 **MR FOGARTY:** Just apologies about that.

PROF MENZIERS: That. That's fine. I also just wanted to acknowledge that our discussion with the Uralla Shire Council, the issue of the number of projects and - and potential for cumulative impact was a concern to the Shire. And - and that's
15 actually a really good segue to our next speaker. Robert Crouch.

MR FOGARTY: Yes, look. Thank you, everyone. I think that's good. Thank you, Commissioner. Thank you. Commissioners.

20 **PROF MENZIERS:** Welcome, Robert.

MR ROBERT CROUCH: You need to talk to you. I'm Bob Crouch. I talked to you on Monday as a counsellor. Today I'm presenting as a concerned member of the public, not as a counsellor. I've left that to our mayor. Who comes next? My
25 presentation today is limited to soil erosion and sediment management. My key areas of expertise. My credentials. Master of Science in Ag PhD, focusing on erosion rates and concerns. 30 years as a research soil conservationist employed by the New South Wales Government, leaving in 1999 as Director of Research and Technology to go consulting in Canberra. Since then. I bought a bandana to go away and hide for a bit.
30 I've been a member and chair of the board of Rivers Catchment Management Authority and currently a councillor on Uralla Shire Council. As I said, I'm presenting here because I'm concerned. I'm concerned because this project will have more than 50km of two lane gravel roads, plus large areas that will be exposed for turbine and turbine foundation, construction and other infrastructure. When a
35 footprint of less than 6000 hectares. I'm concerned because sediment and erosion control is dismissed in the conditions of consent with one sentence. Unless an appeal authorises otherwise. The applicant must comply with section 120 of the PO-EO Act. Operational conditions, then go on to specify that the applicant must minimise erosion and - and control sediment generation.

40 **MR CROUCH:** And ensure appropriate drainage and erosion, and sediment controls are installed. I'm concerned because I don't know what the Land Environment Court would consider, minimise and appropriate. These factors need to be defined. I'm concerned because the project area properly described by the DPI is steep and highly
45 Erodible is in the headwaters of two very important streams, Ramallah Creek and the MacDonald River. Both these streams and their tributaries are known to contain Bell's turtle and platypus, along with other endangered species. I'm concerned

because the biodiversity studies dismiss aquatic ecology biodiversity as not significant because the drainage lines had no permanent water. This is wrong. There is no other way of putting it. This is wrong. Erosion from this site will have an impact and may have a catastrophic impact. These days, intermittent streams drain into the major rivers in the Nandewar and New England Tablelands bioregions. Streams that contain a number of endangered species, including Bell's turtle and platypus. Iconic species that are very sensitive to turbidity and sediment. The impact of soil erosion from these steep erodible slopes will affect stream sediment load and turbidity. Tens if not hundreds of kilometres from the site. This impact will be immediate when we get that 1 in 20 year storm. Running. If we get a 1 in 100, it will be a disaster.

A 1 in 5 will cause some issues. It will also be Long Terme. It's currently a slug of sand in the Guada River. Just south of Bhandara that originated with gold mining around Uralla. It's moved down the river. As it moves down, it changes the ecology of the river from fine, medium and fine gravels, which are really good ecosystem for platypus to unstable sand. It does move on as it gets washed further downstream. We don't want a similar event from this project. The roads are a major erosion risk. Studies in urban and forest development areas in the 70s and 80s showed very clearly that gravel roads, particularly during development, were major sources of sediment even compared to slopes cleared and ripped for re-establishment. Table drains and associated mitre drains, unless properly protected, will erode. Just to reinforce this point, the Roads and Maritime Services have recently spent a heap of dollars completing works on the New England Highway immediately adjacent to this site, to effectively manage soil erosion beside the highway. I wouldn't expect the applicant to go to similar extremes, but erosion on this site will be expensive and that must happen. The best way to ensure it happens, as well as inspections, is to put in the monitoring equipment with mandated reporting of exceedance, similar to the conditions imposed on licence conditions to council landfill and sewage treatment works.

And conditions for mine sites. The potential impact from council's facilities are minuscule compared with the potential impact from this site. These days, automatic monitoring is not difficult or expensive, so it should not be seen as an onerous condition. The installation of monitoring stations in the streams. At the boundary of the project footprint, along with mandatory reporting, should be included in a condition of the development consent. This information would also be used to inform the independent environmental audit that's called for. Now, before I conclude, there's one other issue I want to raise. Decommissioning. As a soil conservationist doing design of soil erosion works for difficult situations. I did a lot of work on derelict, abandoned mine sites. Most of these sites predated environmental assessment as we know it. The work was paid for by the state government because the companies that had mined had walked off. This is why bonds were introduced into the mining industry. Anyone working in this field can see what's going to happen with the renewable energy infrastructure. The companies that just happened to own the infrastructure at the end of life will not have the resources to restore the site. No amount of words or contracts or conditions of consent will ensure a restoration and

rehabilitation if the resources are not available. Who will we hold to account? The multi-billionaire directors in France.

5 That own neon. The directors from China who own the land. If a bond will have a significant impact on the project viability, then where's the money going to come from at the end of the project? Whilst I don't want to be alarmist, I urge host landholders listening to ensure your contracts contain bonding provisions because the state government does not appear to want to look after your interests, otherwise you seriously compromise your intergenerational equity. To dismiss this as a landholder responsibility without giving the landholders the appropriate support, will, in 10 hindsight, be considered gross negligent by our government of the day. That's the government and their advisors not understand why these companies are leasing land and not buying. The companies are thinking long term. We need to think and act along the same lines. There must be an upfront bond or an annual payment made to trust funds within the state government to ensure decommissioning funds are 15 available at the end of life. So I asked for two additions to the conditions of consent. The requirement to install turbidity monitoring devices in the streams below these sites. The devices to be associated with mandatory reporting when there are significant events and the requirements for a decommissioning bond. Thank you for 20 the opportunity to talk to you again.

PROF MENZIES: Thanks. Bob. Could I encourage you to make a submission to the Commission capturing suggested wording for those conditions, please? Greatly 25 appreciated. Our next speaker is Mayor Robert Bell.

MAYOR ROBERT BELL: Good morning, ladies and gentlemen. To the Commissioners, thank you for the opportunity. This has already been pointed out. The Commissioners took time on Monday. That opportunity also go through. And we've made a submission to the department. So is it is this adjunct to this. There are 30 number of areas in this that have been covered by those with much more knowledge or experience or background in that area. However, I'll touch on some of those issues that council still sees as outstanding in the debate. The recent and proposed developments in the New England Energy Zone are overwhelming our community, and we're seeing that today. Neon noted only six nearby energy generation or storage 35 projects. As Mark pointed out, Council knows of a further 27 proposed and four operating projects in the New England REZ around Uralla, with more expected. Noting these project numbers and to include the largest of them All Energy Co's New England Transmission project, the cumulative impact has been greatly understated and we have a major impact on local and state roads, housing and all 40 types of infrastructure and services. While these projects will bring resources to our shire, we're already experiencing considerable detrimental impacts including visual impacts, ecosystem impacts, employment boom and bust cycles, and a shortage of local labour and housing shortages, particularly impacting on lower socioeconomic groups. Council recognises the two sides of the coin, some individuals are more 45 severely impacted than others, and some in our community will directly share in the local injection of funds.

There will be employment opportunities, but rents will be higher. Unfortunately, as I said, this is dividing our community. In this context, council seeks to mitigate adverse impacts while ensuring the whole community shares in the benefits. We trust that in considering the application before you and the associated drafted addition to the conditions of consent we presented to you earlier in the week, you will help us achieve this objective. Uralla Shire has had a number of opportunities to have formal impact - impact in this process through the C's, through comments that we put into the Environmental Impact Statement, including that we objected to the process, basically on the basis that there were a number of areas we didn't feel were adequately covered. We've had presentations to councils, we've had direct meetings and correspondence with Neon, and we have a councillor on the Thunderbolt Community Consultative Committee, and for that I thank neon. The Friends of Kentucky group also presented their issues to council, and council obviously is part of the community. We've had discussions with many individuals. We note that journey well responded individually to specific issues we raised in our comments on the EIS and in their response to agency submissions out, outlined how they could address each of the shortcomings we flagged.

However, we have remaining areas of concern. The waste management plan, while it is being further developed, does not in identified a council where it intends to use our waste facility and if so, the amount and types of waste that could be expected to accept. We welcome the opportunity to work with Neon in the development of their waste strategy. The Framework Decommissioning Plan outlines the process but does not consider the resources required and the commitment to ensure they are available at the end of life of the project. I strongly support and I'll call him Bob Crouch for the sake of this discussion, that the state government should be including a bond process. I think Bob expanded that beautifully. To simply dismiss this issue by the Department that it is a landowner issue, does not meet community expectations, will make future negotiations with landowners almost impossible. The lives advice we got on decommissioning a wind turbine was about half \$1 million. Again. Bob's also touched on the erosion and sediment control, and Council is very supportive of his response to that. As pointed out earlier, Uralla Shire Council and Neoen have agreed in principle to the terms of voluntary planning agreement based around the 1.5% capital investment value.

And there's also pointed out Tamworth are still negotiating with neon. The terms of the agreement will need to be included in the conditions of consent. And once we have a formal contract that will make all of that detail public. Be assured that the community of Kentucky and the neighbouring areas around Bilala will be take up to 35% or 33% sorry of the actual voluntary planning agreement. Local experience during the construction of phase one of the Newlands Solar Farm raised community and council awareness of the adverse local impacts on housing and employment associated with the development of local renewable projects. We look forward to working with Tamworth Regional Council and Neon, and any future developers, is how to take account of the number of projects and the utilising resource, and that may be utilising resources at the same time. Impacts on native flora and fauna is of great importance to our community. We strongly request the use of mitigation

measures, such as the identified system used at Cattle Hill Wind Farm in central Tasmania, with the outcome of informing the audit report. Identification and possible impacts on local roads that may be used for transport needs to be considered with equal weight, as the roads associated with the major transport routes. As has already
5 been pointed out by the Commissioner the internal the roads of Uralla Shire will not cope with any huge movements of gravel, concrete, etc. we understand the issues around the New England Highway. However, our experience in previous development has been that the truck drivers go where the truck drivers wish to go and that will not turn anybody. Finally, we ask the independent Environment orders
10 to be undertaken not only at the commencement of construction and operations, but at intervals no greater than three years at the local community, and relevant agents or agencies are informed about the operation and environmental performance of the development. In our submission, given on Monday, the 11th of March, Council made specific modifications to parts A, B, C and appendix C of the Recommended
15 Instrument of Consent regarding the areas we have spoken about. I'm more than happy to provide further information. Thank you for the opportunity.

PROF MENZIES: Thank you, Mr Mayor.

20 **PROF MENZIES:** Our next speaker is Steven Johnston.

MR STEPHEN JOHNSTON: Goodday, Steve Johnston. I'm Kath Wolf's partner. We've got Balmoral, which is in the north west corner of the project. I'm 68. I started
25 working when I was 16 on properties. I've managed from Oberon to the Victorian border into the mountains. I've been droving out west. I mustered in the mountains. I'm deputy captain of Kentucky Brigade. I've been fighting fires for about 50 years. 1998 at the Cooksville fire, when it got in, the Abercrombie River was the first time I fought a fire under a helicopter. And I found that a pretty good idea. Now I just. I got from the black Summer bushfires. I've got the commissioner's citation, the premier
30 citation and the national emergency medal. I didn't fight a fire further than. Hockey goalie Ben Lester and Kentucky Craig. That's a very small area to afford a lot of fires, right? Now, I'm not going to talk about the RSCFS. Head office, bugging up things within the submission and all of this. Friends of Kentucky Action Group sent them a letter after threatening a deputy commissioner. When I was getting my long
35 service medal, they ended up writing back to us, talking all about the Winterbourne Wind Farm. Not this one. So we sort of won't go into that. In their submission response to the submissions and that, and they're talking about the fire action plan. They're talking about using Armidale. Most of it's in Tamworth area, but we won't go into that. You know, that's all just problems. It's like they sent out a heap of trucks
40 that we couldn't top fill. So it meant that when somebody else turned up with water for us, which quite often happens, we couldn't fill those trucks because you had to have the RFS here. But we won't go into that part of it. That's just the FRS. We've got to put up with that now.

45 At the moment. You got about 16,500 acres there that if there's a fire, fixed wing aircraft can come in, helicopters can come in. During the black Summer, they filled out of the Bendeela Dam that now Neoen want to take the water for their batching

station during the drought. Two helicopters could fill out of that. That's how big it is. Back of Kyabra across all the Luhanga or Balmoral our place right to fight fires. A helicopter spotted smoke and bombed out a lightning strike on Luhanga before anyone got there. The pilot called it in right. The next day there was a fire. I got a
5 phone call. Avalanche! You got a fire watch box? Yeah. Bottom paddock jumped in the ute with the kid on it. My neighbour said I've rung it in, so I head down the road. It's not on one of the two ridges of watch box. It's the next one. I go down further on the road, come back in. I rang fire control at Glen Innes and said, you'll get this triple-o call. It's not on Balmoral, it's on Broughton Park. Notify Kentucky, they said
10 Kentucky's not available. The red box forest, which is the other side of Kingstown, quite a distance away. I said get a helicopter there quick. Tell him he's a mile north of where he was yesterday.

They said a helicopter mightn't be available. I said start a back burn off the New
15 England Highway. It's that important. Years ago I got told the difference between a little fire and a big fire is getting it out. Okay. Kath and I were down near Canberra in 2003. You want to talk about big fires? You know, if you have a lightning strike on that Turkey mountain range. It will come down, as they do into Kentucky, into the Kyabra and across. Right. If you don't have a helicopters, so what you're going to
20 have to do is move 27, 28, 29, which will give access for helicopter off that Bendeela Dam across into the fire prone area. Move 24, 25, 26 because they are in fire prone areas, who the hell would put a wind tower in a fire prone area? You've got to knock the bush over and put a wind tower in a fire prone area. Now my comment to all union staff is the same thing I said to Nicole Wright and her two friends. You take
25 helicopters away from me, you come and help me fight the fires. I mean that you come and help me fight the fire. You're all a lot younger than me and brigades are losing. We don't have young members anymore. Imagine five years ago being on a fire. I was 64 and I was the youngest on the fire ground. And you think I'm kidding? I'm not. You take helicopters and fixed wing away from me. You come and help me
30 fight the fires. That's did see it.

PROF MENZIES: That's a great comment to finish on, Steven. Thank you.

MR JOHNSTON: (Inaudible), but I can show you footage of a helicopter dropping
35 in on that fire.

PROF MENZIES: Yeah. I can imagine. Thank you. Are our final speaker before lunch Brett Wilkinson.

MR BRETT WILKINSON: Commissioner. Thank you very much. My name is
40 Brett Wilkinson. I'm a local. Being a local resident most of my adult life. A couple of things I'd like to bring up a bit hard to carry on after avalanche with his fire talk, but I'd like to own a bit more of that anyway. Firstly, the effects on aerial firefighting. I've been volunteering in emergency services for damn near 40 years, 25 of them
45 with Rural Fire Service, 20 of them with aviation. Ten of those as an air base manager. I also hold a Diploma of Emergency Management through the University of Tasmania.

Where aerial firefighting operations are required. Wind turbines. Metal towers. Solar farms. Their associated transmission infrastructure can pose a significant deterrent to aerial firefighting. Where bushfire is impacting in close vicinity to a wind farm. The turbines and the Met Towers may well be hidden within the smoke plume. That smoke plume will change depending on on wind. Aerial firefighting crews will do what they can in order to suppress the progression of fire and endeavour to keep the fire as cool as possible so the ground crews can access those fires. The fire flanks particularly. Away the ground crews can get to aircraft a uniquely effective in getting on to the fire front parts where the ground crews isn't safe for them to attain. However, when the threat of hidden wind turbines and metal towers becomes an issue, the efficiency of aerial firefighting is significantly diminished. According to the Australasian Fire and Emergency Services Council, in their Wind Farms and Bushfire Operations Guide version three. In part, it says turbine towers, metrological monitoring towers and power transmission infrastructure pose risks for aerial firefighting operations. Meteorological monitoring towers and power transmission infrastructure are generally difficult for aerial personnel to see if they are not marked appropriately. We've heard from other people, other speakers today, some of them pilots themselves, are just how true that statement is.

This clearly has a potential amplification factor for bushfire risks to properties within the surrounding wind farms. An example is most of the wind farms north of Glen Innes have a three kilometre exclusion zone for all aircraft, all firefighting aircraft around the development site. In recent memory. We saved a house in the proposed area, in a large part thanks to fixed wing aircraft and helicopters backing up firefighters on the ground. Without those aircraft, there could well be one family who'd lost everything. If this development to go goes ahead, I will personally believe that there could be a very large number of houses and potentially lives lost due to an essential resource being removed from the equation. Other thing I'd like to mention is the effects of infrasound. This is a very, very personal issue for me is I'll go into. While the effects of infrasound are still being debated, and there are currently studies being conducted both in South Australia and Germany. German research conducted by the Federal Institute for Geoscience and National Resources has concluded that infrasound from five megawatt turbines can be heard up to 20km away. These are the same people that use infrasound for nuclear detection and - and rocket tests. The Fisher Alan Scott from the Washington University School of Medicine in Saint Louis, an international expert on the inner ear has found that the inner ear does inter does respond to infrasound.

More troubling is the fact that some of these reports are showing that those with ADHD and autism may be more susceptible. It's estimated that 240,000 to 240,000 Australians have autism, and approximately 1.68 million Australians have ADHD. The effects of this type of development could have major health implications, not just for Kentucky, but for surrounding towns like Uralla and Bendemeer as well. I've personally experienced what this means. I have an 11-year-old son. He lives with ADHD and autism. He wanted to sell you the wind turbines up at Bald Hill, up near Glen Innes. We took him up there. We didn't get within three kilometres of them

before he started complaining of nausea, headaches and something not just right. We turned around and by the time we got to Glamis, those symptoms had disappeared. If this development goes ahead. We could have to sell up. What would be the effect on 11-year-old boy? To lose everything. This is a boy who goes out every morning to say hello to his animals. He knows their birthdays. He feeds them treats. What effect would be on him if we had to sell up because of a development such as this? Thank you.

10 **PROF MENZIES:** Thanks, Brett. That brings to an end our morning session. I'd just like to thank everyone for having stuck to time fairly effectively. We are a few minutes over, but remarkably close to our schedule. So your lunch break is only a little bit shorter than we've allocated. So we will start again at 1:20 as scheduled in the program.

15 **MS SUELLEN FITZGERALD:** Recording still on - Recording still on, do you think?

<THE PUBLIC MEETING HAS ADJOURN FOR LUNCH

20 <THE PUBLIC MEETING HAS RESUMED

MS ARLEEN PACKER: (Audio drop) Independent Planning Commission for coming today. And for all of you for coming today and for your enthusiastic, a wonderful audience. I'm representing an environmental group called save Our Woodlands. But I'll give you a little bit of my background first. I'm actually a TAFE teacher. I've taught in TAFE for 30 years, I teach Ag. I went to the University of New England and did rural science and got a first class honours there. And then just recently I've done a graduate certificate in region Ag. I have a farm, 1000 acres, which I run biodynamically and for me, the very important thing here is the effect on the environment. And it's not just a matter of, you know, 50km of road. I realise that's really a lot of road. It's not the fact that you have to clear such large areas just to just to manipulate these huge turbines for me. I the thing I learnt while I, was actually writing this was how big the noise effect is. Now, we've talked about the noise effect on people, but there's a huge noise effect on the on the wildlife around these areas. You can still hear the sound of a wind turbine 3.5km away inside a house. So if you if you multiply that out. It's seven kilometres each side of every turbine and multiply that out again, it's 490 hectares around every turbine is not going to be inhabited by any wildlife.

40 Now, you'd think that's just intuitive. Oh, yeah. You know, a koala has to call. Can't call when it's when there's a lot of noise. And I was thinking about it and I thought I'd better have a look. So I went into my, you know, the internet. Fantastic. But I did look up peer reviewed. Are the surveys. And there's dozens and dozens and dozens and dozens which say that wildlife is affected by noise now in India. Well, this is one of the, one of the these are all peer reviewed and I have put in a submission. Right. So in India they, they noticed that the wildlife simply just moved away. Well that's good. You know we can just shift the, the wildlife away. Fantastic. Except that then

this is the Department of Planning and Environment. God help the environment. Figures. Their figures. Their figures are is that we've only got 5% of Box Blakely's red gum woodlands left. 5%. So we're going to knock a bit more down. That's terrific. You know, we I mean, you really want a tree. I mean, you know, we don't
5 really want trees, do we? Because what happens cars run into trees. God. You've got to get rid of them. And then we've only got 15% of all our woodlands left.

So where are these animals and birds going to move when they move away from the turbines? They've got nowhere to go. Now that doesn't really matter. We've only got
10 rid of 50%. This is Birdland. Birdlife Australia's figures. 50% of our birds have been diminished since 1950. This is in my lifetime. 50% is gone. Okay, we keep doing this. But by 2000, what was the figures a girl was doing earlier? 2050? We're going to be all fantastic. We're not going to have one bird left, which is probably not a bad thing, really, because they shit on cars, don't they? You know, you don't really want a
15 bird. Damn them, you know? I mean, I just can't believe that people. Want to do this. And I think that the people in the cities, if we said to them, this is what you're doing when you want all this electricity, I just that was my ding God. So two quick. I could keep talking forever. I do want to remind you of this. You know, every single solitary civilisation that has wrecked their environment has failed everyone. And,
20 man, that's where we're going if we keep doing this stuff. So that's all I really want to say.

PROF MENZIES: Thank you, Arleen, and thanks for making a submission for us. Yeah. So for - for all the speakers, the first thing is four minutes to let you know you
25 have a one minute left. And the second thing is five, at which point.

MS KYLIE DORSETT: It's a minute before the end.

PROF MENZIES: I'm sorry, have I misunderstood?
30

DR EVANS: So, friends of Kennedy have got 15 minutes.

PROF MENZIES: Thank you. So - so for most speakers who have five minutes, the first dings at four and the second dings at five. You'll note that I haven't pulled
35 people up because I felt that what was being said was useful to us as a Commission. So it's - it's advisory rather than vigorously enforced. I'm sorry, but if I don't think you're saying something that's useful to us, I will pull you up at time. Some people have longer time periods of - of ten and 15 minutes. Okay. Our next speaker is John McGrath, who's joining us by phone. John, can you hear me? One more time. John,
40 are you able to hear me?

MR JOHN MCGRATH: Yes, I - I can hear you.

PROF MENZIES: Excellent. So? So the whole room can hear you. So you're now
45 set to speak.

MR MCGRATH: All right. Look. Thank you very much. I'd just like to thank the IPC for the Thunderbolt Energy hub, for having me here on behalf of the Yass Landscape Guardians. I've covered. Look, everything's been covered. So well this morning. But I would argue against approval of the Thunderbolt Energy Hub. SSD-108078796 for the following reasons. As Robert Crouch alluded to.

Decommissioning. There is no New South Wales decommissioning legislation that this industrial installation will ever be, never be decommissioned means that the host is ultimately responsible, and this is the case right across the board. The Thunderbolt Energy Hub, CCC, September 15th, 2021. It states that the proponent had contractually committed to the host landholder that it will decommission the wind turbines. Empty words. Why? Because the proponent will not hold the owner hold ownership at the end of life of this project. Will they? Projects unsold with regularity and original agreements never passed to the purchaser. The original Crookwell Wind industrial wind turbine site has reached maturity, but it's not decommissioned but is allowed to operate as an educational role. Why is that? Suitably decommissioned at the end of life, as Nicole Brewer said, is deep rhetoric that I've listened to for 20 years. Nothing means nothing without legislation. But this is only a small industrial wind generation plant. Which agreed. Establishing. In the case of Thunderbolt Energy Hub, the point of connection approval is Transgrid's 86 330 kV transmission line with Thunderbolt. Energy Hub rated output of only 192MW if it was maximum from the Transgrid spreadsheet to existing loads on the transmission line 86.

It has a dynamic flow between 100,000 and 5. Sorry, 1082MW will probably be megavolt amps to Y to stabilise an important 330 kV transmission interconnector such as trans, with 86 330 kV transmission line between Tamworth and Armidale for a paltry amount of intermittent generation of an alleged 192MW. Now Arosen has been. From so-called wind farms, as the landholders abutting, say, the Rye Park Industrial Wind Turbine project will attest. With one impacted landholder needing to clear with a tractor deposited gravel off a concrete low level crossing to access his property after every major rain event. The runoff has been horrendous out there due to incompetence with earthworks and other Rye Park landholder set boundary fences flattened by flood waters and a once productive, loose and growing flat has been completely destroyed. I could speak on so many other components of these things, but none of this is ever good. I look fine. Thank you very much for your time. And hopefully you can take on take on some of my comments.

PROF MENZIES: Thank you very much, John. Our next presentation is from Friends of Kentucky Action Group. So and they have a 15 minute slot. Doctor Julian Pryor, Karen Zirkler, Steve Johnson, and Marilyn Wood.

MS WOOD: Yes. I got caught out unawares. Okay. Friends of Kentucky Action Group are a small, energetic group. And it came about because it came very clear early on that Neoen's approach to communicating and consulting with the community was strictly divide and conquer. That's their approach. And there was no other way. But the community had to band together so that we all had a voice. Next slide please. Okay. Yeah. It's. A group. Okay. Yes. Sorry. Next slide. I'm out of whack here. Okay. I'd just like to mention the community benefit fund. It doesn't

really relate to this slide. We ask that it's back to the drawing board on that one. You've already heard that the councils can't agree. We are one community. We actually would prefer a model where we have an experienced, not for profit, independent organisation appointed to manage this this fund. And we also heard or I
5 actually read very disappointing that a general manager of one of the councils actually wrote to Neoen saying that we do not have any immediate community in close proximity to the project. I think a number of the families represented here would be surprised to hear that. So a rethink is required on the It really isn't about the money. We'd prefer you to go away and take your money with you. But if there is
10 something going to be happening and there is some money, we don't want it to be managed by the councils. We're one community. And. I think our voice needs to be heard on that one. Okay. Next slide please. I've done it. That's okay.

Now the we're talking about infrasound, low frequency sound. Large wind turbines
15 generate infrasound. I don't think anybody is saying that doesn't happen. What is new is that it's been proved in a German study that it's detectable up to 20km away. The claim that infrasound is swallowed up by background noise, which we hear here from the proponents, is incorrect. Yes, the way acoustics measures, it flattens out the data to support that claim. But in fact, infrasound generated by wind turbines is
20 distinct, easily measured, and should not be flattened out for the convenience of operators. I quote from the Thunderbolt Wind Farm Noise Assessment report, Sonos assessed low frequency noise and found it to be insignificant. The department stated that it was satisfied that any low frequency noise impacts would be minor and acceptable. To whom I ask? We are increasing. Increasingly Australian. Overseas.
25 Oh yeah. The increasingly Australian and overseas courts have a different view. Noise problems can be ignored. Can't be ignored. Sorry. And the government is knowingly putting our communities at high risk of debilitating health impacts. There's almost also impacts on animal health. Recent studies. There's full leg deformities post birth. And that's a technical University Faculty of Medicine study.
30 There's unexpected reproductive problems reported with sheep in Scotland that recently came out. And James Cook University are warning us that low frequency, low frequency infrasound is inhibiting koalas ability to communicate and hence to breed. Next one. Thank you. Nope. Go back.

35 **MS WOOD:** Okay, I'll just talk. The noise nuisance. Wind factory operators refused to acknowledge any noise problems at all. They ridicule it as hysteria and nimbyism. Government is failing in its duty of care and leaving it to the courts to decide. And they are. Operators hide behind claims of compliance. 2022 we all know about the urine versus Bald Hills, and the court found in favour of Urin in March this year.
40 Ballyduff in Ireland findings against the wind farm and I quote. The defendant cannot rest its laurels on the proposition that a generation of renewable energy is a socially valuable activity, which is in the public interest to continue. The comment was made. There is no binary choice to be made here. Between the generation of clean energy by the wind farm and a good night's sleep for its neighbours. Another
45 thing that I thought was quite interesting planning compliance does not determine if wind turbine noise is reasonable or a nuisance. So I think, in finishing up. Sorry. I'm looking for my recommendations. Recommendation that a pause be placed on any

determination by this Commission, pending the identification and noise assessment of the actual wind turbine, would seem basic to me. Any development consent should require the proponent to measure and publish infrasound emitted from the project using best practice technology, and there's been a suggestion the technology
5 to measure at the moment is not best practice. Any development consent should require turbines to be decommissioned. Should infrastructure be shown to impact any town, resident livestock, or terrestrial or soil ecosystems. Thank you.

MS ZIRKLER: Could we have the biodiversity? The first of the biodiversity slides,
10 please. Yeah. Thank you. So biodiversity is irreplaceable. This site has critically endangered natural assets under the federal EPBC act 1999. This means that they're high priority for protection and maintenance of habitat connectivity. Because fragmentation of habitats is a key threatening process, the proponent really does need to follow the avoid, then mitigate, then offset principles of biodiversity protection.
15 For example. First of all, new and should avoid developing areas in the top three green circles on this slide with a with a vegetation index score of greater than 70 to avoid fragmentation of large areas of habitat. Because some species, such as hooded robins, need greater than 200 hectares in which to breed. Secondly, neon should mitigate where some damage has been done, for example, monitoring and reporting
20 of bird and bat strike and publishing this data online publicly on a monthly basis. I know they have got a bird and bat strike plan, but we would like to request that that is essential that they publish that online monthly. And then that would be that would enable them to mitigate activities that are taking place once the wind project is operational. And thirdly, Neon should use the offset option only as a last resort and
25 ensure offsets are as close as possible to the impacted areas. So recommendations include removing some turbines actually 22, 23, 24, 25 and 28. Because those areas are large areas of good quality remnant vegetation, they should be protected. They should be avoided. Secondly, we'd recommend decommissioning of high strike turbines that are identified through compulsory monthly monitoring of that bird and
30 bat strike to mitigate further damage.

MS ZIRKLER: So if it's found through monitoring that those certain turbines are creating a problem, those turbines need to be in the development consent. Have the ability to be switched off. Decommissioned. Thirdly, recommend finding offsets as a
35 last resort. Adjacent to damaged sites. If these recommendations can't be undertaken, perhaps this is not an appropriate site for such a development. Next slide, please. Koalas are endangered. That's been a fairly recent thing. They're found on and around the project site because there is good quality habitat present. Koalas use infrasound. We know this to find mates across large distances. The quote you see on
40 the screen comes from researchers at James Cook University as lately as just this month, and raises the alarm about the impact on koalas of infrasound emitted from large wind turbines.

A key point here is that the EPBC Act of 1999 predates wind turbines, and the noise
45 they emit is unregulated. These researchers are suggesting urgent scientific investigation of this noise, not just on koalas but on all wildlife. Turbines are increasing in size fast. Every time you turn around, they're bigger. Neoen proposed

5.6MW oceanic size turbines that have not hadn't been used on land yet. On the one hand, the New South Wales Koala strategy indicates that Armidale, Uralla and Walcha are regions of koala significance and refuges under climate change. Why do we propose destroying it? On the other hand? Our recommendation is that we really do implore the IPCC to on the side of caution and reject this proposal based on that. And final. My final slide please is endangered. Bell's turtles. These are frequent across the project site and in significant numbers in the large dam on Pine Creek.

I'm told this by a reputable local ecologist who wishes to remain anonymous. Under a modification to their original development application. Neon plans to pipe large quantities of water from that dam on Pine Creek to a batching plant. This would significantly impact Bell's turtle populations and breeding success in that dam on Pine Creek. Project creek crossings would also increase turbidity in the streams, also impacting turtle populations and breeding. There has been no consideration of this species by Nguyen in their eyes, nor by the department. In their assessment. Bell's turtles are not even on the projects species offset list. Why? So our recommendation is that Friends of Kentucky Action Group ask asks the IPC to reject the proposal based on inadequate biodiversity assessment and compliance. Leading to unacceptable impacts on the following nine. Endangered ecological. Well, actually, there's more than nine. Ecological communities and species found at the site. Box-gum grassy woodland, critically endangered.

New England peppermint grassy woodland. Critically endangered. Ribbon gum. Snow gum. Mountain gum woodlands. Endangered. Ecological community. Carex Sedgeland, Spotted Harrier, Little Eagle, Black Shouldered Kite, Bell's Turtle, Koala, and I have some additional information here from Steve Debus, who was with us in the audience this morning and passed this information to me. Swift parrot. He knows to be on the site critically, critically, critically endangered, Regent honeyeater, critically endangered. And as I said, the bell's turtle and the koala. Steve has asked me to include some of his information in my presentation because he missed out on presenting. I will have to submit that as part of the There's no time to read it out. So heading over to Steve.

MR JOHNSTON: Could I again? Just one thing. Where a horse and dog operation. No quad bikes, no motorbikes, none of that. If your infrasound starts bugging with my dogs. I got the eighth and ninth generation of Kelpie off bread. You got a whole new fight on your hands. Now that's a warning. Okay, back to talking about fires. Just an interesting thing. January, early January. There was a fire on a tower on the colouring range. Six trucks, 20 volunteers for a day. Then February towards the end of February for Red Hill, South Australia. Similar figures of people you know, these are volunteers. I was talking to some of the neon people this smoko lunchtime. Right. They don't know how many people are going to be on the ground, although they said they needed maintenance people. I said how many? They don't know how many people are going to be on the ground. They don't know what size tower. They don't know what turbine size, they don't know what turbine, what generator. They don't seem to know very much at all now. If you okayed this today, they've got all of that.

They've got to sort of work out. And how can you okay it when they if they don't know they then obviously you don't know. So I don't know how you're going to do it.

5 **DR PRIOR:** Next slide, please. Okay. So I'm going to sum up and wrap up. And we're a little bit of short of time. So I'll be quick. The points have already been made are that we've been disappointed with the assessment process, we've been disappointed with a number of aspects of the Is, including the - the technically inadequate biodiversity conservation assessment and the points that Bob Crouch and I mentioned around catchment and catchment processes and soil and water damage
10 that could occur. I think the concern from our point of view is we know that the state government has had an open for discussion. A new approvals process has been circulating for about 18 months now. It requires much clearer standards around community consultation and some of these processes. Our concern is that what should have happened at the time, it should have been a moratorium on these
15 developments and this, this, this now in development should have been put through that gateway.

I'll give one another 30s. Just to give a bit of context. So when government originally set up the renewable energy zone in New England, it was seeking expressions of
20 interest for around eight gigawatts of power. It got 32GW of expressions of interest, four times the amount that the grid could handle and they were looking for. Then what happened is effectively, it incentivised perverse behaviours by the developers. In some ways, you can't blame the Olwen for cutting corners because it was first in Best Dressed. Those have got their development application process through the
25 through the gates. Those have got approval, will likely get access to the grid. And this is what. So you're going to be dealing with this again and again because this perverse outcome incentives. Because what we all know is that we have very good tools now for doing strategic land use planning. This is what the government should have done originally. This is not the concern of the IPC. You're just dealing with ad
30 hoc developments, but you're having to deal with - with the fallout from that. So you're assessing developments, looking at land suitability, land capability high areas of high - high biodiversity conservation should have been mapped originally when the zone was set up. But that's what we're dealing with now.

35 So my final point is, and this is, I guess, a call to you as the IPC. You're the final gatekeepers in this process. It's a faulty process. We're stuck with it. Dealing with large developments. The decisions that you make now with this development will send important signals to current and future proponents. What you allow to proceed with no further conditions, requirements or undertakings will send signals to
40 developers that are not being carefully scrutinised or held to account what you require to be done correctly and adequately. Also, send signals to developers. I call on you. We call on you to require that Neoen restarts its community consultation process and does it in an ethical and appropriate manner, and that they bring their technical consultants to this area and allow them to be questioned by the community
45 members so that people can check what's - what's proposed, what's been done. Look at methodologies. And as you've heard, we've got a lot of expertise in this community. If we only did this one thing of making requiring know when to come

back to the committee and do this properly. It would make every future developer think again about their community consultation processes, and would raise the bar for future EIS processes. Thank you.

5 **PROF MENZIES:** Thank you, all of you, for that presentation. Our next presentation is also a phone presentation. Lynette black. Lynette, can you hear me?

MS LYNETTE LABLACK: Oh, yes, I can hear you. Can you hear me?

10 **PROF MENZIES:** Yes we can. So you're set to go, Lynette.

MS LABLACK: Thank you to the panel for enabling us to condemn the department's assessment approval of Neoen's ecocidal Thunderbolt Wind Plan. The idiocy of transition to extinction by a weather dependent wind turbine junk and the
15 glaringly obvious food security, plus independent energy security equals national security nightmare, as recently proposed by ASIO Mike Burgess, as he questioned what it would be, what it would mean for the country if a foreign state took down all the networks or turned off the power during a heat wave. I assure you these are not
20 hypotheticals, he said. The Thunderbolt website and multiple others appear to be a deliberate land grab by the CCP, strategically aligned with critical transmission, infrastructure and control of Australia's critical energy infrastructure. By our most hostile enemy is a national security disaster, enabling Beijing to turn our lights off. Which companies are subject to the CCP's national intelligence law? Is the Chinese
25 Kyabra host company electronics Project Energy connect. The main southern interconnector from South Australia through to Wagga Wagga. It's controlled, owned, controlled 46.56% by the Chinese Communist Party's State Grid Corporation of China. In the light of Malaysian Prime Minister Anwar Ibrahim's recently, recently stating at the March ASEAN Conference that he does not want a tougher line with China and Prime Minister Albanese's steadfast vision announcing \$2
30 billion.

PROF MENZIES: Lynette could - could I ask you to come back to matters within the scope of the commission panel?

35 **MS LABLACK:** Yeah, this is just to do with the - the connecting grid. I'm - I'm nearly finished this tiny bit. It's just relates to my own Bomen solar. Which is now owned by Malaysia's Tenaga Nasional. Who has won Spark Renewables auction part and Spark Infrastructure, of course, are part owner of Transgrid, which people need to understand. TNB forges strategic alliance with China's state owned utilities to
40 revolutionise the Asian power grid. Okay. That's all I'm going to say about national security for now, except that we actually need. An energy source that would provide it. The DPA never consults and continues to lie and deceive. Myself personally, our family were never even notified about our neighbouring Bowman Solar by anyone. We only found out after the hasty report approval and I fully empathise with the
45 people speaking today. After crying for two years watching Spark Infrastructure vandalise our Eunony Valley and Bomen Wagga area. If the department had considered the environmental, social and economic impacts factually, they would

have rejected Thunderbolt, Wind and Bowman Solar and Neoen's obnoxious coal can solar. Instead, they have no respect for impacted human beings and have used confection made up evidence so lacking in integrity that no weight can be placed on it. The department's assessment approval of Neoen's false claims that Thunderbolt
5 would provide power for up to 99,000 homes is absolutely false. Now in our perpetual lives, claiming 160,000 homes. It will be powered by their controversial, obnoxious coal can sole and nightmare condemned by the local community and the council. Adjacent to the conflict of interest. Walla Walla and nearby maligned Jindera and the stitched up failure of IPC process. Glen Ellen Solar all forced on
10 greater GM with no consent against their will, with no social licence yet shockingly.

Neon's hybrid coal can solar, with its hopeless capacity factor of 25% on average, has Unconscionably been underwritten by the New South Wales Government. No credible electrical engineer adhering to their code of conduct would approve such
15 obvious deception in line with Aemos widely debunked, brazenly deceptive ISP, where they recklessly reckon they can predict the weather with perfect foresight. While solar only has a 25% capacity factor. Wind is about 30% on average, only blowing two days out of five. Wind has lots of periods of absolutely zero output. It has no chance of supplying any homes during those periods, and neither will any
20 other wind works at those times during a wind drought. Extreme variability is a characteristic of wind energy. A grid is not like a bank account. It's not possible to borrow now and pay back later.

Supply must match demand at all times. Second by second 24 over seven 365 days
25 per year. That means that the grid can't work with average outputs. If a wind or solar generator drops its bundle, as they often do, and there is nothing available to instantaneously fill the gap, the grid goes down into prolonged blackout. So intermittent generation is pointless and extremely dangerous. Well respected electrical engineer. Expert witness Paul Miskelly's initial battery storage findings for
30 the 100% renewables requirement for the Eastern Grid shows that Neoen's 32 turbine, one 92 megawatt Thunderbolt plan would require 74. The long sized big batteries to meet the department energy security claim. Where will they decided? This is yet another land grab for filthy, toxic junk on our limited, irreplaceable agricultural land. Indeed, it is clear that the government's fake green net zero
35 roadmap has a cruelly torturous anti - anti rural de-industrialization de-population socialist agenda that defies all the principles of ecological, sustainable development and even the Paris Agreement.

It appears to be deliberately intent on harming us and contaminating our life
40 sustaining soil and water sources. As reef has already stated, the Paris Agreement says the development should only occur where they are not going to have an impact on food production. I just lost my what's it actually says? The fight. The threatens Australia's food security. Oh, no, wait a minute. That wasn't it. In a manner that does not threaten food production. That's the quote. Once our precious rural outlook is
45 being lost, we'll never get it back. It's agriculture that's actually preserving the greenness. We don't want it to become concrete. The fake green swindle is cannibalising farmland with 600 to 900 tonnes or more of concrete per turbine, left

forever as the base. To contaminate the land and water of the Inveigled, and exploited Goomeri and Anaiwan people, changing their cultural heritage of the natural underground hydrology, local streams and billabongs which are precious and essential for all of us. This is not for the greater good. Now, Neoen's lifelong
5 desecration of ecological communities and concrete ruination would not protect precious thunderbolt nature or ensure Kentucky's intergenerational equity. It is intentional ecocide, the antithesis of caring for country. Our children's beautiful natural heritage is irresponsibly being destroyed forever, with no guaranteed plans or possibility ever of restoration. Very notable that there's no bond. Even the fairy tale
10 forest of Germany. You know, Brothers Grimm and Sleeping Beauty has actually been destroyed, instead -

PROF MENZIES: Lynette, your last minute. Could you just sum up?

15 **MS LABLACK:** Okay, Neoen's nuisance won't just torture vulnerable, endangered wildlife. Australian children are being cruelly tortured by unrelenting turbine generated low frequency noise, infrasound and a plethora of related illness. Also, there's the - the terrible impact of bisphenol A, which is lethal to young children, an endocrine disruptor shedding from turbines and childhood leukaemia, which is
20 caused by electrification. And one thing I particularly wanted to note is that children are now having to wear earmuffs to bed because of the wind turbine. Nuisance, and a recent Irish High Court ruling on the 8th of March has now found that the levels of noise generated at certain times of the day by a wind farm constitutes a nuisance to the occupants of neighbouring properties and neighbours. The Irish judge has stated
25 the defendant cannot rest its laurels on the proposition that the generation of renewable energy is a socially valuable activity, which it is in the public interest to continue. There is not a binary choice to be made here, between the generation of clean energy by the wind farm and a good night's sleep for its neighbours, it should be possible to achieve both.

30 **PROF MENZIES:** Okay, Lynette. I'll stop you there because we're over time. Thank you very much for your presentation -

MS LABLACK: Can I - can I just say one sentence?

35 **PROF MENZIES:** Very quickly. One sentence, a short one?

MS LABLACK: Okay, well, I have the solution because nuclear power has one
40 360th the -

PROF MENZIES: We won't continue. That's beyond the scope of our discussion. Thank you. Okay. Our next speaker is Sean Doodson. Sean. Sorry.

45 **MR SEAN DOODSON:** It's Sean.

PROF MENZIES: Yeah, I don't know why they made me Chair, Sean.

MR DOODSON: I am here today both as a business owner and a resident of Kentucky, and on balance, I am in favour of the Thunderbolt Wind Farm. Thank you.

UNIDENTIFIED SPEAKER: Stand a bit closer.

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MR DOODSON: My business is a civil engineering and surveying consultancy firm based in Armidale. We employ six full time staff and two part time casual staff who all live in the Armidale and Uralla LGAs. We were initially engaged by Neoen three years ago to complete topographic and cadastral boundary surveys, and we have since been engaged to complete various other surveying tasks around the project area. For most of January and February this year, we've been surveying intersections along the transport route from Newcastle through the Hunter Valley and around Tamworth. We have always had good dealings with Neoen and this is significant work for our company. The scale of which we rarely get to see is typically the opportunity to work on such projects would go straight to the larger companies in Sydney and Brisbane. However, Neoen have shown me that they are committed to engaging local businesses. A diverse economy provides a buffer to the volatility seen in the primary industry sector.

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Renewable energy projects have provided added diversity to our local economy, which has helped sustain many local service sector businesses. The service sector and primary industries are co-dependent, they rely on each other. During the peak of the last drought in 2019, our business, like many others, was suffering the flow on effects of a primary industry sector on its knees. The thing that kept our business going was work on renewable energy projects, which allowed us to maintain our staffing and trade through. Because of this, we are still here today. There are many people living around Kentucky and Uralla who work in the service sector, and many of the businesses that they work for will likely benefit directly and indirectly from renewable energy projects.

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The viability of these businesses and the jobs that they provide are critical to the long term survival of small towns such as Uralla and villages such as Kentucky. Renewables projects such as this one provide a shot in the arm to local businesses. There have been many well made points made here today that I've listened to. But I'm a bit surprised that no one is talking about the VPA. My concern with the proposed voluntary planning agreement. Is that it seems to me like another government tax, more than a fund that benefits the community as intended. With any development comes some level of impact and inconvenience, which will affect some people more than others, and the development will benefit some people more than others. The contributions that the developer makes to the community is a form of compensation.

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To ensure that a greater part of the community benefits. We've seen this with the New England solar farm in Uralla, with many local organisations such as the pre-school, sporting clubs and events benefiting from grant funding. I am significantly concerned that the proposed EPA. Which will have the funds administered by the local councils rather than through a community benefit model. The proposed EPA

has taken control away from the most impacted by the project and those who it is intended to benefit. I'm uncertain that Uralla Council were the best of intentions, will have the resources to prepare and carry out a satisfactory strategic plan, as they are short staffed and have stretched resources and finances as it is. I'm also concerned if they do acquire extra resources to administer the fund, that this will diminish the money available for projects.

It's concerning that the councils have seemingly pushed the developer to enter into a VPA with minimal community consultation. I understand that the developer's preferred model is a community benefit fund, and this has been reflected by the Community Consultative Committee, which has already developed ideas for funding. I was not aware of it until I reviewed the project documentation this week on the IPC website. I've since spoken to many people in the local community and all were unaware of the VPA arrangement. All were expecting a similar model to New England Solar Farm. Here in Kentucky. We have several projects and initiatives that we are hoping to secure funds for. However, I'm concerned that the proposed planning agreement will now mean that we are competing with many more interests, including internal council interests.

My experience through my dealings with council as a resident and a professional capacity give me little confidence that they will have the capability to deliver this funding to the standard expected of the community. I strongly recommend that the proposed VPA be scrapped in favour of a community benefit fund. The impacts and inconvenience of the proposed development pale in comparison to the projected impacts of climate change, and we are already experiencing its effects. We need to rapidly transition to renewables to mitigate these effects, and this is a project that will be a significant step in that direction. I acknowledge that change can be difficult. It can be confronting and uncomfortable, but it is necessary. I believe that our children and grandchildren in the future will thank us for enabling change. Thank you.

PROF MENZIES: Thanks, Sean - Sean, you don't have a submission into us. I wondered whether you would be happy to put one in.

MR DOODSON: Yes.

PROF MENZIES: Cool. Thank you. Our next speaker is Christopher Kit Dawson.

MR CHRISTOPEH (KIT) DAWSON: I think that's fine. Chair and panel and people of Kentucky. I'm passionate about this. Like Kermit the Frog said, it's not easy being green. I really do care for the environment. I do want to see green solutions. I just want to go back to something that Brett said about his son being made uncomfortable by the sound or the feeling of the wind turbines. As a person on the spectrum, I might be able to articulate what his son couldn't, which is that these turbines, these big horizontal axis turbines, cause ear flutter. It's a bit like when you're in a car and somebody opens the wrong window and it gets very uncomfortable. And so that's basically I think what Brett Sutton was experiencing,

and it's something that people have experienced around these horizontal axis turbines. I personally would like to be a breath of fresh air. People have talked about all the negative impacts, and there are so many. I don't want to go over them all again. And so I just want to read this, which is a proposal for something totally similar but different. Projects, such as a recent Rez renewable energy zones applied to vast rural areas of New South Wales to provide power for our major cities, seem to have been applied without proper consideration to the initial need, powering our major cities with power, travelling vast distances and hence power being lost, and the objectives protection of our climate and environment for future generations, they haven't been considered.

I'd like to lay out a commonsense option, an option that might provide sustainable and renewable solutions that take us closer to our objectives. The proposed New South Wales Renewable Energy Zones place power production many hundreds of kilometres from our major cities, creating the need for massive transmission infrastructure. They also rely on a combination of solar farms and wind farms, both of which are not so much farms as industrial complexes. These are proposed to cover vast tracts of agricultural, rural, and already endangered agricultural land. The insistence on large scale wind, relying on clusters of horizontal axis turbines of 270m high or taller, has met with massive resistance from rural communities who are being branded - branded as NIMBYs or Anti-green power. The true facts of this are that the communities are rightfully concerned about the many impacts that such developments will have upon the natural environment and their communities. There are concerns that, apart from the wider issues arising from large scale wind farms placed so far from the point of use that this is a band aid solution applied in haste without proper consideration. The solution I would like to propose firstly gives due consideration to where the power is required being our major cities.

Major cities have transport routes of road, rail and sea that are situated near to where the power is to be consumed. These areas are already developed and due consideration should be given to these assets and the part they can play in our energy transition. Given that these transport routes radiate out from our major cities, I'd like to propose that our energy pathways - pathways follow this example. Large horizontal axis turbines have far too many concerning features to list them all here without becoming tiresome. So my proposal will focus on smaller, less invasive vertical axis turbines of between 4 and 11m in height. The horizontal axis turbines, currently proposed, measuring 270m tall, stand as tall as Sydney's tallest building or the Eiffel Tower. And they'd be thousands littering Australia's rural skylines. The tall horizontal axis turbines require massive footings over a large area to provide stability for both the turbines, and all the component parts are proposed to travel our rural road network, which would require major expansion and constant repair and maintenance to service these projects, causing damage and congestion, all at unbelievable cost. Why not instead use the existing rail network to host and place smaller turbines? Turbines could be loaded onto trains specifically designed to plant turbines along the rail corridor.

Smaller turbines would require much smaller footings and could be daisy chained out

from the major cities with transmission lines placed underground. This approach would face far much less community opposition than the proposed mega factories. There would no longer be a need for renewable energy zones, as the projects could naturally expand from the cities. As the network of the smaller turbines radiate out, there would be many opportunities for landowners to opt in and host turbines that would feed into the network and provide revenue. The use of smaller turbines would generate a more reliable baseload power, and if vertical axis turbines were used, their design allows for extra power generation by thermal air currents and passing trains. The on flow benefits from the implementation of such a plan and manifold, some of which would be the creation of a manufacturing base here in Australia, creating more secure jobs. Speed of rollout could be much faster than options currently tabled, as existing rail infrastructure could be utilised. Current proposals put undue strain on existing road networks and require the construction of massive service roads that threaten already endangered habitat and serve no other purpose than to service these developments. There be no concerns over visual or noise impacts?

PROF MENZIES: Christopher, can you wind it up at this point? Okay.

MR DAWSON: So, yep. Great. Okay. It's easy to expand. We could charge electric vehicles from the rail network and we could deliver out into our small towns and cities and everywhere else. And there's many, many more benefits that would basically put Australia at the forefront. And I think we should think about these options. Thank you.

PROF MENZIES: Thank you, Christopher.

DR EVANS: He's got some issues with (audio drop)

PROF MENZIES: Okay. So our next speaker is Alison Cairns. Alison has ten minutes, but I understand there's a problem with her presentation that's been fixed. The problem has been fixed. Well done team.

MS ALISON CAIRNS: I've lived in the New England region all my life. Part three years spent in Sydney studying for a Science Degree in Botany and Zoology. Off industrial sites in our bushland and farmland is wrong. Very wrong. Leave the bush alone. Well alone. Molalla area lies to the north of a proposed three bladed wind turbine industrial site on two properties adjacent to basically untouched bushland into undeveloped farmlands, that is the Bella to the Green Valley Road area. Ilala is an area of high value biodiversity. It's rare in the New England. Yes, rare it is. A highland climate refugia for endangered koala, critically endangered box gum, grassy woodlands, little eagle, etc., as other members have suggested. Two. Slide two. View this view. Quiet rural bushland. Three. Slide three. This is veering toward the proposed industrial site. Industrial.

45 What is the reason for proposing a wind farm in this area? When there are abandoned mine sites in the Hunter Valley, where catchments are already destroyed by mining for. Next slide. This is farmland adjacent. To the proposed industrial site. Natural.

Peaceful. Peaceful. Quiet. Beautiful views. Sacred. It's a sacred area. Namoi. Upper tributaries. Sacred land. The Namoi must be protected where it begins. Next. Next one. A mountain untouched. Its granite, granite echoes sound. These are rock areas. Rock echoing sound. There's nature sound here. Nature sound. Quiet. Rural. Don't
5 spoil it. Do not leave it for future generations. Eight to experience. Next. Balala. It's a sacred area. Residents will see and hear 270 metre high wind turbines. From this view, looking toward the proposed site from Boulala Road. Cease and desist.

10 Three bladed wind turbines now. Next. No. Next. This is sacred country. It is wetlands of the upper Namoi River system. These are in good condition. These wetlands need protection. This one in Valhalla is sacred. A Chinese research team investigated prior to and post implementation of a wind farm. What they found was drying of the soil. The operation of wind turbines will cause obvious drying of the soil. They found soil moisture within wind farms is decreased. Most significantly,
15 they found exacerbating drought may affect grassland ecology. They found we in Australia are a dry continent. Unlike any other on Earth. If wind farms dry soil, then that may that must cease immediately. Drying soil impacts all on country and increased fire threat upon our upon dried out land surfaces around wind farms, threatening the areas around them drying over time. Wind farms can also explode a
20 further fire risk.

We must not threaten soil moisture in this region of high value biodiversity. Next slide. Next. Land for wildlife. What do you see? Bushland. Natural. Quiet. Serene. Peaceful. Amazing. Biodiversity. Next slide intermixed with undeveloped farmlands,
25 stating land care and Wildlife Refuge. The Chinese study showed that in the Long Terme, the operation of wind turbines can affect local climates. Soil moisture affects ecosystem balance. Their studies show that the operation of wind farms will cause significant drying of the soil. Sees this project now. Next. This waterway goes through Lana a vital.

30 Can you feel the grief in the land? This is what I feel when I research. The grief in the land. This is a vital waterway that will get to the Namoi. Lanan is a beautiful farm because he - he. Anyway, what is what's in the plan for New England? Wind, wind? Wind. Where, where, where? On vital upper tributary catchments of Goyder and Namoi. This is lunacy. Next. Haven't got time to go about this one, but this is
35 how we treat our endangered species with complete disrespect. This is Kangaroo Island and someone just pushing down a tree with a koala in it. This is how we disrespect them. Next slide. Leave it, please. I haven't got time. I'm sorry. It's already been spoken about. Next.

40 Neighbours have koalas times by they love their koalas. Koalas hear things we don't. They're sensitive animals. Easily stressed. The research is there about impacts to humans from infrasound, intermittent sound some hear, most don't. But brains hear it. Yes they do. For people living and working on the land surrounding a proposed
45 three bladed wind farm would hear infrasound for the days on end. It runs intermittently. The Court of Appeal in Nimes. France, has ordered the dismantling of a seven turbine wind farm in Harrell after numerous environmental complaints

focusing on the turbines negative impact on local bird life, specifically the golden eagle, as well as infrasound issues. Next. Right independent planning commissions. The Bowmans Creek Wind Farm has been controversial in the community, with most of the 130 130 public submissions were made throughout the application process objecting to the project.

Landholders raised similar concerns as to ones raised here about noise, visual impacts, bushfire risks and land clearing in the quiet rural area. The New South Wales Planning Commission approved the project. Thunderbolts Wind Farm Project received 92 objections and only 14 supportive submissions to New South Wales planning. It indicates there is no social licence to operate the Thunderbolt wind farm in the Kentucky area. Same issues objected to use rooftop technology 100% recyclable on every rooftop. It's available and can be offered within four years to every rooftop in Australia. Lots of jobs, jobs, jobs, jobs and no impact to quiet rural areas. No quiet. Next.

Now and in the Cabonne area. Far north Queensland, a wilderness now destroyed. Oh, really? Community had no knowledge of it. A local told me the Cabane wind farm next slide was really secret until the bulldozers moved in. Next, keep going until you get to a. No. What's. No! Go back. Or do you. Thunderbolt! How dare a company name an industrial project after an Australian legend. Next! Near-win in the Kabam. This was a wilderness. Like a local said, that was really secret until the bulldozers moved in. The immediate neighbours knew about it because some were paid off to keep their mouths shut. Others did not accept money and are still fighting for justice. The people do not want Cabane Wind Farm, the Aboriginal corporation. Let them all down. Next slide. This is it before. Next slide. This is it after. What do you see on country. What do you see? It's completely change the environment. It's a disgrace. Cease and desist three bladed wind farms now.

PROF MENZIES: Thanks, Allison. Our final speaker, Darren Smith.

MR DARREN SMITH: Firstly, thanks for the opportunity to speak today. My name is Darren Smith and I've lived and worked in this region for 30 years. Married a Kentucky local in the church across the road and our children attended the local primary school. I have lived directly opposite stand by station and now renamed Kyabra Station since 1997. Our family was one of the first in the district to be contacted by wind farm developers, and Neoen is the fourth company we have dealt with in regards to developing a wind farm in the Kentucky district. Since the initial interactions, Neo is in regards to the proposed stage one development. I have found them clear, respectful and open to feedback in regards to this development. They have a strong desire to positively engage with neighbours and landholders. In regards to the project. There have been numerous emails and newsletters with updated maps and design layouts.

They have been upfront and informative at all stages of the project. Neoen's drop in session Uralla, which was well advertised and freely available to the public. They had up to date maps and many experts in the various areas on hand to answer every

question on all aspects of the project. In my case, they promptly followed up with extra information and emails and a map requested as the pros. As the project has proceeded through the various stages, they have visited our property numerous times, explaining progress and logistics of water extraction, flora and fauna surveys, telecommunications, Aboriginal assessment, dust control measures, lighting of the towers, traffic and transport. Community benefit scheme. Biodiversity. They have continually sought advice on various aspects of the project to make it better for the community. Neighbouring properties have been consulted since the start of the project. Some have engaged, listen and listen respectfully and ask insightful questions while maintaining an alternative view on the merits of the project.

That's absolutely fine. I totally expect that. However, a small minority claim that having been consulted, interestingly interesting. Interestingly, they have steadfastly refused to talk to the company, openly boasted about this, verbally abused the NIO representatives, and now somehow claim they haven't been properly consulted. This is absolutely rubbish. Their behaviour is rude, childish and disgraceful and needs to be called out for what it is. Maybe it is this type of behaviour that is discouraged the majority of the local community from publicly supporting this project in the forum today. However, substantial community support for this project has not changed since the project was announced some years ago. The majority of the community are strongly in favour of the project. This is simply because there are numerous benefits. The Community Fund, which was supply over \$160,000 per year.

These funds can be used to enhance the local environment, as funds have can be directed by the local community of the Kentucky community to protect and enhance the local fauna and fauna. This could include native tree corridors, improving - improving riparian zones, improving the quality of the Kentucky creek, and protecting birds habitats. However, I personally would prefer if these funds had a committee directly elected by the local community. They are select, they select and deliver projects within the immediate Kentucky area, which is 5 to 10km of the project, not money given to local councils based in Uralla and Tamworth that can arbitrarily allocate them in their shires at their own wish. The Neighbour Benefit sharing scheme will benefit near neighbours in the immediate vicinity of the turbines.

This program has been developed from community feedback. Which he shared with new neighbours and provide valuable, often farm, income. This project will deliver opportunities for local suppliers to be gauged in regards to construction aspects of the project. Gravel order machinery, labour 285 jobs will be required in the construction phase. Local accommodation in Uralla, Armidale, Benjamin Tamworth is required after completion of the project. Neon will need locally located people to service and maintain the roads and infrastructure. This is the first level major level of investment in the Kentucky district for several decades. No other alternative project has been forthcoming over the last five years. That even comes close near the investment. Neon is willing to outlay.

The various fauna and fauna. Surveys done as part of the project have greatly

increased the knowledge of biodiversity. Currently in the Kentucky area. This has enabled adjacent neighbours and others to become aware and possibly implement strategies to enhance these in the local property, if they so desire. One thing I would encourage everybody involved in this project to consider is that the buyer offsets
5 should be undertaken within five kilometres of the project. This will ensure locals continue to manage the biodiversity of the Kentucky landscape. Finally, the majority of the Kentucky community want to live in a vibrant and progressive community that shows leadership on important contemporary issues. Thus, the overwhelming majority of the community Kentucky community, support the development and can
10 clearly see the Long Terme benefits for the local community. Thank you.

UNIDENTIFIED SPEAKER: That man's a host of (Inaudible).

PROF MENZIES: Thank you. Thanks, Darren. I thank you all. That brings us to the
15 end of this public meeting into Thunderbolt Wind Farm. Thank you, everyone who's participated in the process. Bronwyn Evans, Sue Ellen Fitzgerald and I have certainly appreciated the input that we've had today. Just a reminder that it's not too late to have your say on this application. Simply click the make a submission portal on the commission's website. Or send us a submission via email or post. Deadline for
20 written submissions is 5 p.m. on Monday, the 25th of March 2020 for. In the interests of openness and transparency. We'll be making a full transcript of this public meeting available on our website in the next few days. At the time of
determination.

25 The Commission will publish its Statement of Reasons for decision, which will outline how the panel took the community's view into consideration as part of its decision making process. I'd like to thank my fellow Commissioners and I'd also like to thank you as a community for both turning up and participating today and - and for the way that you've supported the members of your community and accepted that
30 there are a range of viewpoints being presented here today. So I do thank you for that. The way that you've approached this from us all here at the Commission, enjoy the rest of your day. And good afternoon to you.

<THE PUBLIC MEETING HAS CONCLUDED