NARROGIN ENERGY TRANSITION QUESTIONS AND ANSWERS

There were a range of different topics that emerged from the questions submitted, both in advance of the event and on the night through Slido or handwritten questions. These have been summarised into different themes (refer the end of this document). Our responses to those themes are recorded below. Where there were quite specific questions directed to the Shire, we have made every attempt to answer these individually. We have also tried to answer as many other questions as possible, but as we received 90+ responses, it is not practical to address each question individually. We also have noted where questions were answered on the night.

1. ANSWERS FROM THE CURTIN INSTITUTE FOR ENERGY TRANSITION

1.1 We received seven questions about the impacts that infrasound caused by wind turbines can have on human health.

"Infrasound from Wind turbines is well known to cause extreme health problems! How come this is not required to be measured or assessed?" (Luke)

Research over the last decade has consistently found that infrasound from wind turbines does **NOT** harm human health. This has been the official position of the Australian Medical Association (AMA) and National Health and Medical Research Council (NHMRC) since 2014, and as well as of international organisations like Health Canada (2016).

These positions have been supported by recent Australian (2023) research. No impact on sleep, brain functioning, cardiovascular health or psychological health was found in any of the study participants exposed to infrasound. The findings are consistent with the theory that wind turbine syndrome is caused by what is known as "nocebo effects". This means that a person's **belief** that exposure to wind farms will do them harm is the cause of symptoms known as Wind Turbine Syndrome (WTS), rather than the actual exposure itself.

Despite searching, we have been unable to find any peer-reviewed research that consistently proves the impact of wind turbine infrasound on any measure of human health.

1.2 We received six questions about bushfire management and wind turbines.

"On February 6th 2022 the Yilliminning area endured a horrific fire with homes, buildings and animals lost. Ariel support was paramount in saving lives and homes. If these turbines are installed & another fire event unfolds - how will the 60 surrounding homes and the town, be protected without adequate aerial support." (Alicen)

The peak body for fire and emergency services in Australia and New Zealand, the Australasian Fire and Emergency Service Authority Council (AFAC), states that "wind farms

are not expected to adversely affect fire behaviour, nor create major ignitions risks". AFAC also says wind farms may actually reduce the risk of bushfires starting from lightning since the lightning would hit the turbines rather than the ground because they are tall, metal structures. Unlike isolated trees, vegetation is cleared around the base of turbines, making the likelihood of a fire getting away very low.

National (AFAC) and state (South Australian Country Fire Service; Victorian Country Fire Authority) organisations offer guidelines on how to manage firefighting in areas with wind turbines. All three sets of guidelines confirm that aerial firefighting **remains possible** in areas with wind turbines.

Further information is available via the Australian Firefighters Climate Alliance, a national group composed of career and volunteer firefighters.

1.3 We received two questions about the effects of wind turbines on birds.

"What investigation regarding negative impacts to wildlife including the endangered carnaby cockatoo which reside in this shire?" (SW)

In the case of black cockatoos in Narrogin, a submission to the WA Environmental Protection Authority by Umwelt Environmental Consultants provided expert advice that black cockatoo species typically fly at canopy height and in areas of lower topographic relief. Therefore, they recommend that ensuring a turbine tip height of at least 49 metres above ground level can minimise turbine strike risk. Similar advice has been implemented elsewhere in WA such as at Alinta's Marri project and Tilt Renewables' Waddi project (both in the Shire of Dandaragan).

Within Australia, the greatest threats to birds are now from climate change and extreme weather such as drought, fire and heatwaves. It is also worth noting that research shows that over 1 million birds are killed by cats every day in Australia, many by pet cats. Similar research in America puts cats, cars and buildings far ahead of wind turbines in terms of bird mortality causes.

1.4 We received two questions about whether wind farms affect property values.

"Does the land value in terms of rates go up or down for property hosting wind turbines? And what about their neighbours?" (Tyron)

Research conducted in Victoria and New South Wales by consultancy Urbis in 2016 found that appropriately located wind farms within rural areas, removed from higher density residential areas, are unlikely to have a measurable negative impact on surrounding land values.

A 2022 report by real estate company PRD found that median property prices in six New South Wales and Victorian local government areas with major renewable projects r**ose significantly** – between 35-51% over five years. This reflects how renewable energy

projects can lead to growth in population, wages, employment and rental yields, all of which can have a positive impact on local property values.

1.5 We received twelve questions about carbon emissions, renewable energy and climate change

"Australia's omissions [sic] are 1 percent of the world omissions [sic], why are you promoting these renewables in our country when other counties [sic] are no longer supporting these wind farms /turbines as they are not proving efficient." (Marian)

It is critical that the entire world works together to reduce greenhouse gas emissions. CSIRO's 2024 State of the Climate report found that in the south-west of Australia there has been a decrease of around 16% in April–October rainfall and 20% in May–July rainfall since 1970. There has been an increase in extreme fire weather, and a longer fire season across large parts of the country since the 1950s. CSIRO also projects that we face longer periods of drought, an increase in the number of dangerous fire weather days and a longer fire season. The "primary and unequivocal driver" of climate change is the amount of greenhouse gas build up in the atmosphere, meaning that all emissions reduction is crucial.

According to CSIRO's 2024-2025 Gen Cost report, the Levelised Cost of Electricity (LCOE) cost range for solar PV and wind energy with integration costs is the lowest of all new-build technologies. The LCOE is the total unit costs a generator must recover over its economic life to meet all its costs including a return on investment, meaning that wind developments remain a cost-efficient way to generate the clean energy that WA needs.

Around the world, wind remains a key element of the energy mix. While China plans to more than double its wind capacity to 1.3 terawatts by 2030, countries like Denmark already derive more than half of their energy from wind and in 2024, €33b was raised to finance wind developments planned for 2026 onwards. Additionally, the majority not just of Australians, but the whole world, believe that greater action on climate change is needed. Research from 2024 also finds that a significant majority (70%) of Australians living in Renewable Energy Zones support clean energy projects **on farmland** in their community.

1.6 We received three questions about decommissioning and construction

"What costs are there when they stop working out in the community and the farmers?" (Natasha)

The project owner (not the landowner) is responsible for decommissioning. The Australian wind farm industry takes decommissioning very seriously and no wind farm owner has ever abandoned a wind farm in Australia. Requirements for decommissioning projects, such as land rehabilitation, are set out in the landowner contracts and planning and environmental approvals of the specific project.

Currently, 85–94% of a wind turbine (by mass) can avoid landfill. This rate of recovery is higher than the national recycling average (in 2019, over half of all waste was sent for

recycling, while 27% was sent to landfill for disposal). Additionally, the average windfarm produces 20-25 times more energy during its operational life than was used to construct and install its turbines (based on research from 119 turbines across 50 sites going back 30 years.)

According to Neoen's submission to the EPA: "The expected operational life of the wind farm will be up 25 to 30 years. At the end of the operational life the wind farm will be decommissioned and removed from service in accordance with this plan. The decommissioning and rehabilitation of the wind farm project site at the end of its commercial life is at the proponent's [*Neoen*] obligation and cost… Any land disturbed during the construction, operation or decommissioning of the wind farm will be rehabilitated. This includes some areas containing native vegetation and cropping areas."

1.7 We received eight questions about siting of the wind developments

"We keep hearing from people who live in the metropolitan areas and how they are in favour of these renewable projects - why then are these turbines not being installed along the boarders [sic] of the metropolitan areas??? Surely then it would be producing power closer to where it is required?" (Alicen)

Two important components of wind farm (and other renewable energy development) siting are access to wind and/or solar resources and location in relation to existing transmission infrastructure.

Australia's existing high-voltage transmission network was designed around large coal-fired power stations, many of which are due for retirement. Building new transmissions infrastructure is expensive and time consuming, so ideally, renewable developments should be located near existing transmission infrastructure. This means that while energy use may be higher in urban areas like Perth, the least expensive way to add more power to the grid is to site renewables developments (like those in and around Narrogin, Wagin, Darkan and Williams) to make best use of the transmission connected to older generation sources, like the Collie coal-fired power station, rather than in urban centres.

Because not all renewable developments will necessarily be generating power at the same time (dependent on time of day and weather), there is a need to have a diverse portfolio of energy sources, generation amount and storage to provide sufficient power.

There is currently a met mast east of Narrogin. I understand the purpose is to collect wind data to assess a site's suitability for wind turbines, by measuring wind speed and direction at various height.
- Exactly what thresholds or levels need to be reached for this project to be given the green light and what are the current readings indicating?
- Will there be any transparency to the Shire of Narrogin, the community and immediate neighbours to "prove" that this is an appropriate site from the measures taken?
- To what degree are these measures from the met mast even taken into account when deciding if this site is appropriate for a wind farm, or given the Federal

Governments push on renewables, are these measures even used, or is putting a met mast up simply just a tick a box exercise to satisfy approvals? (Cara Borthwick)

Meteorological masts are used to collect detailed, site-specific wind data over an extended period — usually a minimum of 12 months. This data provides a reliable understanding of the wind resource unique to the location, which is essential to:

- Confirm the duration of the wind speed and direction to support design decision and;
- Provide accurate estimates of the potential energy the wind farm can generate

The extended data collection also creates a long-term reference that supports investment and the viability of the project. Without the required readings the project would not go ahead.

Have neighbouring property owners had time to undergo their own independent Noise & infrasound analysis and data recording.? (along with land value and water quality testing for at least 3 years.?) (Erin Hutton)

There is no requirement for neighbouring properties to undertake their own analysis of background noise or data recording. You may be interested in the study undertaken by ARUP for Hydro Tasmania which demonstrates the difference between the project and background noise. Note you do need to watch to the end to see all of the different examples.

Why are energy companies sneaking around signing up host's properties before communities know? What are they hiding? (Bill Benn)

The Queensland Farmers Federation Renewable Energy Toolkit outlines the process for project development which clearly outlines the process for project development. Chapter 6 provides all of the details.

1.8 We received two questions about the environment, agriculture and land use

"What immediate and future environmental benefits will the Narrogin region see as hosts of these turbines?" (Gareth)

Not only do wind farms create emission-free energy, but, unlike coal-fired power stations, their operation does not emit toxic matter into the air, waterways or land. Wind turbines also do not require water for operation, further reducing their environmental impact, and making them ideal for dry and drought-prone areas. Climate change is likely to pose a more permanent threat to rural land (through flooding, bushfires and erosion) than the installation of wind farms.

Co-locating renewable energy with farming activities is very safe, and there are even benefits for livestock. Cattle, sheep and other livestock can stay cool under solar panels, and

one farmer reports that the turbine workers on his property every day are "often the first to spot a calving issue".

There is no scientific evidence that renewable energy infrastructure poses a contamination risk to livestock or food production when it is co-located with farmland. The protective coating of wind turbine blades is non-toxic, contains negligible amounts of bisphenol A (BPA), and is highly weather resistant. Degradation in wind turbines (estimates of 8–50g per blade each year) is small in comparison to other sources, such as car and truck tyres, road markings, paint, astroturf and car brakes.

Wind turbines take up only around 3% of leased land allowing farmers to derive additional income while continuing to produce food and fibre. Additionally, the land used for turbine development is often already degraded as a result of long-term land clearing and intensive farming practices or sometimes less productive hilly areas of a property.

1.9 Community sentiment and misinformation

"Please name some POPULATED communities that haven't had social break down due to these turbines." (Braden)

Community sentiment about the Collgar wind farm near Merredin, the largest wind farm in Western Australia when it was built, is very positive. Sixteen town residents are currently employed by Collgar, and 150 people were employed during the construction phase. Collgar sponsors the Men's Shed, provides scholarships for local students and donated laptops to Merredin college. Around $250,000 is paid to farmers in rental income each year, and Collgar spends about $80,000 per year on community projects. You can read more about the firsthand experience of farmers in Merredin HERE.

In the Shire of Dandaragan, sheep farmer Tim Stevenson has established Parron Developments to propose the development of a wind farm on his family property, diversifying their income alongside continued cropping and grazing. Paron Wind Farm will pay $1,000/megawatt hour, adding up to nearly half a million dollars each year. "We see that as a huge benefit that we can put back into the community and share the love with people from these types of developments and hopefully increase the population in the rural communities," Mr Stevenson said.

Another example of a community-supported wind farm is Coonooer Bridge Wind Farm in Victoria, where hosts and neighbouring landholders were offered free shares in the farm. This added up to 4% of shares (around $20 million) being held by residents, also giving them a say in how the wind farm turned out. "I think it's a really good way to do it," says June Williams, resident of nearby St Arnaud and owner of a neighbouring farm at Coonooer Bridge. "We're happy to see the money split up. There's country towns that could use a bit of help."

Submissions to a Senate committee on information integrity on climate and energy (Nov, 2025) suggest that community cohesion is not threatened by wind farm developments

themselves, but rather the spread of misinformation about them, especially via "coordinated misinformation campaigns." Research suggests that providing people with information about the benefits of wind farms can increase the likelihood of acceptance, even those who tend to believe wind farm misinformation. Building trust in the responsible parties (like the developers and relevant government authorities) and encouraging public participation in the planning process may also play an important role in countering anti-wind turbine misinformation and conspiracy beliefs.

Everyone who spoke talked about benefits to the community, can you list some negatives. (Tyron Whitten)

The link to the article above on misinformation points to the negative outcomes of what can happens in communities and to those who support wind farms. The other negatives can be around the impacts on community infrastructure such as housing, road use and so on which is why the developers work closely with the Shire and state government to ensure all traffic movements are coordinated to cause minimal disruption to daily life.

1.10 We received seven questions about finance and economics

"What amount of TAX did your organisation pay the Australian government last year?" (Clive Barton)

Every company pays different amounts of tax based on their income, expenses and so forth. The following excerpt is from the US Department of Energy which shows the wider benefits that arise from the presence of wind farms in a community.

"In addition to its benefits, wind energy can be very good for the economy. The economic benefits of wind energy include:

- Job creation
- Revenue for farmers and ranchers
- Increased local tax revenue
- Lower electricity prices
- Financial compensation for impacted communities
- Wind energy tourism.

The money communities generate and save through wind energy development can then be used to support improvements to roads, emergency services, libraries, and more."

1.11 We received thirteen statements or questions representing opinions and politics

Are there any studies or data showing how much fossil fuel companies or media outlets have spent on anti-renewable campaigns in Australia? (Kate)

Across the world there are multiple publications that allude to fossil fuel companies investing in campaigns on anti-renewable campaigns. A most recent study was by the Australian

Research Council Centre of Excellence for Automated Decision-Making and Society, which filed a submission to the *Senate Select Committee on Information Integrity on Climate Change and Energy*

Athony Klan from The Klaxon summarised the submission as follows:

"The right-wing lobby group that ran the "No" campaign against the Indigenous Voice was one of the biggest spreaders of fossil fuels propaganda ahead of the federal election, a major study has found.

An Australian Research Council study has found "Advance" injected "highly polarising, misleading claims" about "renewables, nuclear and fossil gas" into the national debate before the May poll.

The lobby group — which falsely claims to be movement of "ordinary Australians" — generated around 193 million digital ad impressions in the four months to election day.

The activity placed Advance "in the same league as the major parties", the study found.

"Third party advocacy groups with links to fossil fuel interests or right-wing political movements were among the most active spenders on digital advertising in the lead up to the 2025 federal election," it states.

"Most third-party advertising during the 2025 federal election focused on energy costs, nuclear power and climate action, framing vested interests as 'ordinary Australians'."

2. ANSWERS FROM THE SHIRE OF NARROGIN

2.1 CONSULTATION

"Did the shire consult broadly with all landowners and ratepayers or just potential hosts of projects? This meeting is very one sided and leans heavily on bias from developer and does not represent the interests of all ratepayers. How can the community make an informed decision without all the inform [sic]." (Scott)

For the large wind projects (Wind Energy Facilities), the approval authority — and therefore the body responsible for the statutory consultation process — is the State Government, through the State Development Assessment Unit (SDAU), the Western Australian Planning Commission and its State Planning Committee / Development Assessment Panels. The Narrogin Wind Farm, for example, was assessed and approved by the State Planning Committee, not by the Shire of Narrogin. (narrogin.wa.gov.au)

The Shire is a referral body and host community. We have no power to "sign off" wind farms, but we do make formal submissions, advocate for buffers and conditions, and encourage State agencies to listen carefully to local feedback. (narrogin.wa.gov.au)

For the Narrogin BESS and the Narrogin Solar & BESS projects, development approval has been issued by the State's Development Assessment Panel, following public advertising and assessment against the local planning framework. (narrogin.wa.gov.au) The Shire managed the local consultation on these proposals in line with the Planning and Development (Local Planning Schemes) Regulations, including public notices, direct neighbour advice and an advertising period of a minimum of 30 days. Only a small number of submissions were received, expressing both support and concern.

We agree that a single public meeting that includes developers can feel one-sided. However, its purpose was to share information about the projects and the state government's direction, and we felt that was best to come from the developers. At the same time the Shire has created a dedicated Renewable Energy Zone (NREZ) information hub, including project summaries, links to State decision documents, and independent resources on health, noise, bushfire, aviation and landholder negotiations, so residents can review a wide range of material in their own time. (narrogin.wa.gov.au)

Importantly, there is no single "yes/no vote" on these projects. Community views are expressed through submissions to State and Commonwealth processes, through Shire advocacy (including our formal submissions and policies), and through ongoing engagement as projects move from concept to construction and operation.

2.2 COMMUNITY BENEFITS, NEIGHBOURS AND RESOURCES

"As someone who believes this can be a positive thing for Narrogin (if done effectively), what are the actual tangible benefits the Narrogin community will see in terms of economic productivity, business diversification, and local employment opportunities for our young people?" (JP)

Narrogin now sits at the centre of a proposed renewable energy investment pipeline of more than $17.9 billion within a radius of about a 45-minute drive. (narrogin.wa.gov.au)

Even if only part of that pipeline proceeds to Final Investment Decision and Western Power connection, it represents a level of private investment we have not seen before in this region.

For the first three approved projects alone (Narrogin Wind Farm, Narrogin Solar & BESS and Narrogin BESS), current estimates show around:

- ~550 construction jobs across staged build-outs over multiple years, and
- around 25 ongoing local operational roles, plus contract work for maintenance, vegetation management, cleaning, catering, transport, fabrication and civil works. (narrogin.wa.gov.au)

The bigger prize is the multiplier effect: more work for local trades and suppliers, more demand for training with South Regional TAFE and the College of Agriculture, and a stronger case to retain and attract young people into engineering, electrical, civil construction, environmental science and ICT roles linked to the energy transition. Our Community Enhancement Fund Policy is specifically designed to channel a share of project value into place-based initiatives such as skills development, main street renewal, tourism and community infrastructure. (narrogin.wa.gov.au)

"There's already a housing and rental shortage in Narrogin - where are the temporary workers going to live? Or will they be brought in from Perth every day? How will that benefit the community's growth in the backdrop of an ageing population?" (JP)

The Shire is very aware that our housing market is already tight for workers, families and older residents. That's why Council has adopted a Temporary Workforce Accommodation (TWA) Housing Policy and is actively advocating for transitional and legacy housing solutions that serve both the construction phase and the long-term community. (narrogin.wa.gov.au)

Our expectation is that most peak construction workers will be accommodated in purpose-built workforce villages and existing commercial accommodation, rather than displacing local renters. The TWA policy is focused on good locations (near services, not in the middle of residential streets), on quality design, and — wherever possible — on future reuse of that

housing stock for key workers, aged care, or other long-term community needs once construction is over. (narrogin.wa.gov.au)

Some specialist workers will inevitably be flown or bussed in from outside the region. However, by planning early, we are trying to maximise local and regional employment, use of Narrogin's caravan park and short-stay options, and to leave a permanent uplift in housing supply rather than a short-term spike in pressure.

"What extra resources will the state government be providing to support these projects in terms of infrastructure (as well as housing), health, education, road use, community development etc? Many of our resources are overstretched already and local government is underfunded." (Eliza)

The Shire has been very clear: **Narrogin cannot shoulder the infrastructure and service impacts of the State's energy transition on rates revenue alone.** In March 2025 we formally called on the State Government to step in with coordinated support for housing, infrastructure and community investment to match the scale of private projects being proposed here. (narrogin.wa.gov.au)

We have asked multiple Ministers to work with us on three priorities:

1. **Transitional and legacy housing solutions** for construction and operational workforces. (narrogin.wa.gov.au)
2. **Infrastructure and community investment** to support sustainable population growth, including roads, firefighting capacity, water, gravel, and community facilities. (narrogin.wa.gov.au)
3. **State-level planning and community-benefit mechanisms** that ensure host communities receive a fair share of the value generated by these projects, not just the impacts. (narrogin.wa.gov.au)

Ultimately, decisions about additional State funding sit with the State Government. Our job is to keep advocating strongly, demonstrate the cumulative impacts across Narrogin and neighbouring Shires, and make sure the case for investment is clear, evidence-based and persistent.

"How will the projects stop poaching of the town's employees making it even harder for local small businesses?" (Tyron)

Competition for workers is already a challenge for local businesses, health services and emergency volunteers, and we expect that to continue. The Shire can't control who private companies hire, but we can influence *how* they plan their workforce and how they support the wider community.

Our approach includes:

- Encouraging proponents to **prioritise training pathways and new entrants** (apprentices, trainees, graduates) rather than simply bidding workers away from essential services. (narrogin.wa.gov.au)
- Working with local employers, the Chamber, the Local Jobs Program and training providers to anticipate peaks in demand and identify opportunities for upskilling and career progression. (Employment Relations)
- Using our Community Enhancement Fund and advocacy to support initiatives that attract more people into the region overall, so the "labour pool" grows rather than just reshuffles.

There will still be pressure — especially in construction and trades — but handled well, these projects can expand the local skills base and create more varied career options, rather than hollowing out existing businesses.

"How will this project actually help reinvigorate Narrogin's declining population and declining retail base? The number of boarded up shops vacant is an eyesore on the town - will this project actually help alleviate any of that?" (Anonymous)

Population and main-street health are core reasons the Shire has engaged so strongly with the Narrogin Renewable Energy Zone. We don't want a scenario where infrastructure is "dropped in" and value flows straight past us.

If even a portion of the current project pipeline proceeds, Narrogin can expect:

- **Several hundred construction workers cycling through the town over multiple years**, using local shops, hospitality, accommodation and services. (narrogin.wa.gov.au)
- **Dozens of new long-term roles** in operations, maintenance and associated industries, which increase the likelihood that workers and their families will settle locally. (narrogin.wa.gov.au)
- Increased **rating income and potential Community Enhancement Fund contributions**, which Council intends to use to support town-centre renewal, public realm upgrades, events and amenity that attract both residents and visitors.

On their own, these projects won't "fix" main street vacancy. But combined with our existing economic development strategies, arts and tourism initiatives, and housing focus, they can be a catalyst for new investment and population stabilisation and increase and ultimately demand for new services and therefore new shops.

"Who will move to town to live near the new wind turbines?" (Tyron)

Experience from other regions shows that while some people don't like living near turbines, many continue to farm, work and raise families in landscapes that include wind and transmission infrastructure. In our district, turbines are being sited in predominantly

broadacre farming areas between Narrogin and Williams, not in the middle of town. (narrogin.wa.gov.au)

The choice to live near turbines is ultimately a personal one. Our role as a local government is to:

- Set **planning expectations and buffer distances** through our Local Planning Policy – Wind Energy Facilities.
- Ensure the State carefully considers visual, noise, aviation and landscape impacts when deciding applications.
- Advocate for fair and transparent **community-benefit and neighbour-benefit arrangements**, so that those closest to the infrastructure are appropriately recognised. (narrogin.wa.gov.au)

The Shire does not expect everyone to welcome turbines, but we also do not assume that whole districts will empty out — particularly when the underlying agricultural and service economies remain strong and can coexist with renewable energy developments of every kind.

"How do you think the town will survive after construction. This town is supported and thrives from the agricultural sector. It is known that large numbers of farmers leave after money is in the bank. No one wants to live near turbines." (Emma)

Agriculture and Services will continue to be Narrogin's backbone. Renewable energy projects sit on top of (not instead of) broadacre farming, with cropping and grazing continuing around turbines and beneath solar arrays in many projects. (narrogin.wa.gov.au)

Some landholders may decide to retire or sell after receiving lease income. Others will use that income to reinvest in their farms, succession planning, debt reduction, or diversification. The Shire cannot and should not dictate individual financial decisions, but we can:

- Advocate for **land-use compatibility and buffers**, so farms remain functional and neighbours' amenity is respected.
- Use increased rate revenue and any negotiated community benefits to strengthen the services, facilities and lifestyle that keep people here — regardless of whether they're farmers, tradies, professionals or retirees.

The real risk to our town in the long term is not turbines, but a lack of jobs, housing and services for the next generation. Managed well, these projects can help address that.

"Why build legacy housing? The population will decrease after building as no one wants to live near turbines. People leave the land." (Emma)

Right now, Narrogin faces an undersupply of housing across the board — key workers, aged care, entry-level buyers and renters. That is true whether or not renewable energy proceeds. (narrogin.wa.gov.au)

Legacy housing is about **using the one-off opportunity of construction demand** to add permanent housing stock that the community needs anyway. For example, a temporary workforce village designed for later conversion into standard dwellings, seniors' units or key worker housing can continue to serve Narrogin for decades after construction ends.

Even if some individuals choose to move away, it is very unlikely that the overall demand for well-located, quality housing in and around Narrogin will disappear. Our government agencies servicing role, ageing population, service sector and education and health hubs all require people living close to town.

"If the shire thinks these projects are good for the town they should purchase at above value on all farms and lifestyle blocks that are affected. Those in the dange [sic] zone. That means all within 15km of any turbine." (Emma)

The Shire understands that some residents are worried about property values and would like the certainty of a buy-out offer. However:

- There is **no recognised statutory "danger zone"** around wind farms under Western Australian planning or health law.
- Local governments are not resourced — and are not permitted under the Local Government Act — to purchase large numbers of private properties at above-market values as a condition of State-approved projects.

Instead, community protection is achieved through:

- Planning controls (setbacks, noise and shadow-flicker limits, visual impact assessment).
- Compliance with the Environmental Protection (Noise) Regulations 1997 and other environmental conditions. (Western Australian Government)
- Voluntary **neighbour-benefit and community-benefit schemes** offered by proponents, which the Shire is pushing to see strengthened and, ideally, mandated by the State across all projects. (narrogin.wa.gov.au)

Individual landowners who believe they are unfairly affected retain their own legal rights in relation to contracts, valuation and nuisance, but those are not decisions the Shire can make on their behalf.

"What community benefit is going occur long term, as our house electricity prices are not going to become cheaper so the cost of livening [sic] pressures are not improved in this way, road maintenance costs will increase due to toll on the

roads from heavy machinery and equipment therefore rates will increase as there are no provisions for these renewable companies to maintain the roads they use. Donating to the Narrogin show and arts are a great initiative to improve community involvement. What else is going to occur as the length of time that these industrial structures are going to be present is 20 years plus. What is the positive legacy left behind?" (SW)

Electricity from these projects feeds into the State's South West Interconnected System (SWIS), not directly to individual houses in Narrogin, so **we do not expect your personal power bill to fall simply because you can see a turbine or battery.** (narroginbess.com.au)

The Shire's focus is therefore on benefits we can influence, including:

- **Ongoing local employment and contracting** during decades of operation and maintenance. Narrogin Wind Farm alone is expected to support around 15 long-term operational jobs; the solar and battery projects add more. (narrogin.wa.gov.au)
- **Increased rate revenue** from large-scale industrial-rated infrastructure, which can help fund roads, community assets and services for all residents.
- A Shire-administered **Community Enhancement Fund (CEF)** to which we are asking all major projects to contribute, to support things like main-street upgrades, youth facilities, trails, arts and cultural projects, and community-led initiatives.

On roads, we know heavy vehicles will place additional strain on parts of the local and regional network. The Shire is working with proponents, Main Roads WA and neighbouring local governments to ensure construction traffic routes are carefully planned and that appropriate road-use, upgrade and maintenance contributions are negotiated as part of project approvals and conditions. (narrogin.wa.gov.au)

The turbines, batteries and solar arrays are long-lived assets (typically 20–30 years). That's precisely why we are insisting on long-term benefit mechanisms, robust decommissioning and rehabilitation conditions, and a focus on enduring legacy rather than short-term sponsorships alone. (narrogin.wa.gov.au)

2.3 NOISE AND HEALTH

"Are the local governments going to become the regulatory bodies responsible for Noise, tonality and infrasound assessment and compensation.?" (Erin)

In Western Australia, wind farm noise is regulated under the **Environmental Protection Act 1986** and the **Environmental Protection (Noise) Regulations 1997**, which set enforceable noise limits at "noise-sensitive premises" such as homes. These regulations apply to wind farms just as they do to other industrial and commercial noise sources. (Western Australian Government)

Local governments already play a role in administering the Noise Regulations for many types of noise complaints, alongside the Department of Water and Environmental Regulation (DWER) for certain licensed premises. We expect that, once any projects are operating, the Shire will be a **first point of contact** for community noise concerns, and that we will work with DWER, the Australian Energy Infrastructure Commissioner and the project operators to investigate and resolve issues. (Western Australian Government)

On health, the Shire relies on advice from recognised health authorities and peer-reviewed research. The National Health and Medical Research Council has found **no consistent evidence that wind farms, operating within current standards, cause direct adverse health effects**. (NHMRC) Recent studies, including those linked on our "Resources for Landowners, Neighbours & Communities" page, have not shown harmful effects from regulated wind turbine infrasound and low-frequency noise, though they do acknowledge that annoyance and sleep disturbance can occur if noise is not well managed. (narrogin.wa.gov.au)The Shire's role is to:

- Require robust, independent **acoustic assessments** at the planning stage, demonstrating compliance with standards.
- Advocate for clear, enforceable **State conditions on noise, tonality and monitoring** for each project. (narrogin.wa.gov.au)
- Support residents in navigating the complaints and enforcement pathways if, in practice, noise is experienced as unreasonable.

The Shire is **not** a medical authority and do not operate a compensation scheme. Any future changes to responsibilities or funding for local governments in this space will need to be determined by the State Government. The Shire's commitment is to continue advocating for a framework where community health and amenity are protected, complaints processes are clear, and local governments are properly resourced for any new or greater duties.

2.4 LAND USE, SET BACKS AND SITING

"Question for the Shire of Narrogin- What criteria does the Shire apply when determining whether wind-turbine host areas on a primary-producer property constitute a 'non-rural commercial use' that could trigger a change from UV to GRV, and what level of risk should landholders be aware of?" (Felicity)

The Shire of Narrogin assesses turbine-host properties under Council Policy 3.13 – *Rating Principles & Change in Predominant Use of Rural Land* and the *Local Government Act 1995*. The central test is always the predominant use of the land.

In nearly all cases, farming continues across the vast majority of a turbine-hosting property. Turbine pads, tracks and easements occupy very small areas, and broadacre agriculture continues around them. Where agriculture remains the dominant land use, the property continues to be rated **Unimproved Value (UV)**.

A change to **Gross Rental Value (GRV)** is only considered where:

- a substantial portion of the land becomes a **non-agricultural commercial operation**, and
- farming is no longer the primary use.

Typical wind-farm leases do not meet this threshold. Turbines are treated as **ancillary** to the farming enterprise, not a replacement for it.

Council Policy 3.13 makes this clear: the presence of turbines does **not** trigger GRV if farming is still the predominant use. The Shire is also advocating for a Statewide **Payment in Lieu of Rates (PILoR)** system for renewable-energy assets, to ensure consistent contributions from developers without unexpected rating impacts on farmers.

For landholders, the key points are:

- **No automatic reclassification:** Hosting turbines does not automatically move a property to GRV.
- **Normal farming is enough:** Cropping, grazing and mixed farming continue to meet the predominant-use test for UV.
- **GRV only arises if the land becomes primarily commercial in a non-farming sense.**

If the State does not implement PILoR, all WA local governments may need to reconsider how renewable-energy assets are rated. In that scenario, the Shire may explore a **UV differential rate** for properties hosting commercial renewable-energy infrastructure rather than shifting them to GRV. Any change would be publicly advertised through the annual budget process, with the opportunity for submissions from affected landholders.

The Shire's preferred outcome remains a **consistent, State-managed PILoR model**, which keeps host farms rated UV, maintains revenue certainty, and avoids ad-hoc rating changes.

3. RESPONSES FROM DEVELOPERS (ACCIONA, NEOEN, LIGHTSOURCEbp)

3.1 LAND USE, SET BACKS AND SITING

"What guarantees are available for neighbouring properties for damages occurred during construction if these projects - such things as damage to buildings, damage to underground water supplies or rising salinity due to explosive/drilling footings etc, rain drift due to changing winds etc" (Bevan)

ACCIONA: We do not anticipate any damage to neighbouring properties from wind farm construction or operation. Potential impacts, such as groundwater changes or blasting, will be carefully assessed as the project progresses. If blasting is required, a Blasting Management Plan will be developed in line with local and state regulations to protect people and property. In the unlikely event that damage is caused by construction activities, appropriate measures will be taken in accordance with regulatory requirements.

3.2 DEVELOPMENT, OPERATION AND DECOMISSIONING

"How many truck movements will there be per day during construction for blades, nacelles, tower sections etc and what Rd route will be used to bring materials to town" (Tyron)

ACCIONA: The exact number of truck movements and the transport routes have not yet been determined. During the development phase, we will undertake an Over Size / Over Mass (OSOM) Transport Impact Study and a Traffic Impact Study. These studies will identify the most suitable routes and estimate the number of vehicle movements required to deliver turbine components and other materials safely and efficiently. The findings will guide planning to minimise disruption and ensure safety for local communities.

The construction process will be site-specific and typically involves:

- Upgrades to access roads and creation of temporary construction facilities.
- Construction of internal roads.
- Building wind turbine foundations before the arrival and installation of turbine parts (blades, nacelles, towers).
- Parallel works on operations and maintenance buildings, substation, and internal electrical infrastructure (medium-voltage cables in trenches or overhead lines).
- Commissioning of the wind farm once civil and electrical works are complete.

"***With so many turbines suffering catastrophic failure due to poor quality control – what quality standards are being put in place to ensure lives are not lost due to these failures" (Alicen)***

ACCIONA: Catastrophic turbine failures are extremely rare, and modern wind farms are designed and managed to prevent such events. Safety and quality are our highest priorities. To prevent failures and protect both workers and the community, we implement strict standards throughout the project lifecycle:

- **Comprehensive Work Health and Safety (WHS) Plan**: We develop a project-specific WHS Plan that sets out safe systems of work, legislative compliance, resourcing expectations, and minimum safety requirements for all contractors and subcontractors. Each subcontractor must also prepare a WHS plan for their scope of works, which is reviewed and approved before mobilisation.
- **Incident Reporting and Monitoring:** ACCIONA Energía requires all incidents and near misses to be reported immediately. Reporting processes and timelines are clearly defined in the WHS Plan to ensure transparency and rapid response.
- **Ongoing Maintenance and Inspections:** ACCIONA Energía is responsible for maintaining the wind farm throughout its operational life to ensure safe and reliable operation. Turbines are designed for a minimum 25-year lifespan, and with careful maintenance, they can operate safely beyond this. Regular inspections and preventative maintenance are scheduled to detect and address any potential issues early.
- **Insurance and Risk Management:** Appropriate insurance policies are maintained to cover unforeseen events, and risk management processes are embedded in all phases of the project.

These measures ensure that quality control is not just a construction requirement but a continuous commitment throughout the wind farm's life.

NEOEN: At Neoen we only procure turbines that meet internationally recognised standards such as IEC 61400 and hold full independent type certification.

When these deplorable monoliths are passed their used by date or decommissioned or broken down, are they going to be removed or left standing to show how we have abandoned a dreadful experiment or an expensive waste. In many parts of the world they have been left standing. The cost to dismantle is disastrously high. They cannot be effectively recycled, and the obvious solution is to bury them. (Andrew)

ACCIONA: When a wind farm is decommissioned, we typically remove all above-ground infrastructure, rehabilitate construction areas, and remove concrete to a suitable depth (generally 500mm) below the natural ground surface. These requirements are agreed with landowners and regulatory authorities. The wind farm owner funds and manages the decommissioning.

ACCIONA Energía applies circular economy principles, with 85–95% of a turbine's mass currently recyclable, including steel, iron, aluminium, copper, electronics, and concrete. These materials can be processed at existing facilities, and this percentage is expected to increase as technology advances.

For turbine blades, which are made from composite materials and harder to recycle, ACCIONA has launched Turbine Made, an Australian-first initiative to repurpose decommissioned blades into new products. Retired blades are broken down into particulate material, which can be used for items such as playground equipment, wildlife crossings,

surfboards, and other sustainable applications. This program aims to divert material from landfill and create a foundation for a renewables circular economy in Australia.

"Do the turbines need any diesel to operate?" (Emma)

NEOEN: No.

3.3 BUSHFIRES

"Who is accountable for a fire during construction or operation?" (Tyron)

ACCIONA: We recognise our responsibility to minimise the risk of fire at all our sites. In the unlikely event that a fire during construction or operation is caused by wind farm activities, ACCIONA Energía will take responsibility. We will also have a Bushfire Management Plan for the wind farm prior to construction, developed in consultation with the Department of Fire and Emergency Services (DFES) and other relevant stakeholders. We will continue to engage with DFES and local emergency services on this and other matters throughout the lifecycle of the project.

"Do the turbines rely on wifi for operation? What steps will the proponents be taking to guarantee operation in all situations, given the lack of mobile coverage and power during the Narrogin Wickepin fires?" (Eliza)

NEOEN: The turbines do not rely on Wi-Fi for operations. Please refer to the Clean Energy Council. For specific projects, the information can be found in the development application.

3.4 FINANCE AND ECONOMICS

"At a cost of 23 million dollars per turbine - how long do they need to operate for until they break even and produce income?" (Alicen)

ACCIONA: Project costs are highly dependent on choice of wind turbine and other project characteristics. Once operating they will produce income; general industry metrics would suggest that payback periods are likely to be 7-12 years.

3.5 CONSULTATION

Why havnt (sp) discussions been open and transparent from the start between neighbours, hosts and Lightsource BP? Why can't we all get in a room and have a discussion or meeting together? Why create a division other than working together?

Do you have something to hide do you? If this "renewable energy " is so great let's have some guts and all discuss it together rather than going behind peoples backs.
The way you operate gives us absolutely no trust in what you are doing. (Luke Mead)

Narrogin East is still in the development phase, and initial community engagement has commenced and will continue as the project progresses. The company expects to be in a position to share more information and invite community feedback in early 2026, which will include a more extensive programme of one-on-one meetings, public information sessions, and multiple opportunities for stakeholders to provide input into the design and development. In the meantime, community members can contact the project team at narroginproject@lightsourcebp.com with any questions or feedback.

4. RESPONSES FROM POWERING WA

4.1 THEME: SITING OF WIND FARMS

When assessing the suitability of a site for a wind farm project, developers will consider a number of factors. These include:
Wind resource availability: The presence of a strong and consistent wind profile is crucial to assessing whether a site is suitable for a wind farm development.
Energy demand: Developers may consider a sites proximity to sites of energy demand. The location and capacity of existing and planned transmission infrastructure, which facilitates projects connecting to the broader transmission grid, will also be considered.

Wind profile diversity: Ensuring wind generation projects are spread across various parts of the State, so that they can access a diversity of wind profiles, to maintain grid reliability.

Environmental impact: Refers to the measurable or observable changes that human or natural activities cause in the environment. A wind turbine or transmission lines, for example, would likely co-exist more successfully, and have less impact, in a sparsely vegetated or cleared paddock, than on land covered in dense native vegetation or forest. Prioritising already-cleared land for development can reduce the amount of additional land clearing needed for a project. This in turn reduces the impact on the biodiversity of the area.

4.2 THEME: PLANNING OF WIND FARMS

There is a lengthy project approval process for planning a windfarm, which includes:

- Development application approval
- Environmental approvals
- Heritage approvals
- Transmission connection agreements
- Approval to participate in the energy market/off-take agreement
- General licence issued (for projects over 100MW).

It is important to note that requirements in the planning approvals process are not linear. It is also important to note that a development approval is not a guarantee that a project will progress to construction and operation.

The development application process requires community consultation during its formation. This feedback process is an opportunity for communities to voice their concerns about planning for renewable energy projects. Consultation periods are advertised online and in local papers, and people are encouraged to actively participate and give their feedback.

4.3 THEME: TRANSMISSION INFRASTRUCTURE

The energy transition does not just involve moving from a high emissions energy system to a low emissions system. It also means moving from a system designed around centralised, large-scale power generation to one based around decentralised generation spread over a large geographical area. New renewable energy projects must be located in areas with strong wind and solar profiles and abundant available land. At the same time, having solar and wind generation spread across a wide geographical area is an important part of keeping a low emissions energy system reliable and secure. It is particularly important our wind farms are spread out, so they can access different and complementary wind profiles. This means an expanded and enhanced transmission network is a key enabler for connecting new renewable energy projects and ensuring a secure and reliable low emissions energy grid in the South West Interconnected System (SWIS).

The State Government has already invested $1.7 billion in growing the transmission network in the SWIS. Building on this investment, the South West Interconnected System Transmission Plan (the Plan) was released in September 2025, articulating the State Government's vision for the SWIS transmission network over the next decade and beyond.

The Plan is split into three distinct Phases, each covering a five year period. Phases One (2025 – 2030) and Phase Two (2030 – 2035) outline the transmission build out to 2035. Phase One Clean Energy Link projects will connect the new generation capacity we need as coal retires; while also meeting growing electricity demand and connecting the industrial loads we need to drive a more diverse economy. Phase Two will deliver the transmission infrastructure needed to deliver a greater amount of renewable energy to households, schools, hospitals and small businesses, while supporting new industries like green steel and battery production. It will also support the electrification of existing industry. Phase Three Clean Energy Link projects would expand Western Power's network to support economic diversification through the development of new green industries. Planning for Phase Three projects will include close consultation with industry and comprehensive system modelling and planning exercises to ensure our evolving energy needs inform the build.

None of these phases include plans for new or upgraded transmission in the Shire of Narrogin.

When transmission upgrades occur, each upgrade is considered and planned for on an individual basis and planning is undertaken to reduce the impact on energy users as much as possible during the works.

How will transmission lines be upgraded if they cannot be turned off to restring them or will a second line be built in a close vicinity? (AJ) - Western Power

WESTERN POWER: There are numerous factors to consider when deciding whether to upgrade an existing transmission line or build a new one. Western Power's primary focus is on minimising the impact on existing customers and ensuring we can meet future demand.

When contemplating an upgrade or capacity uprate, we assess if there's an alternate line available that can service the area and how quickly we can restore normal operation for unplanned emergencies.
Uprating might involve simply replacing the conductor with one of higher capacity, changing insulators and fittings to handle higher voltage, or possibly both. These projects are quite complex as they require a blend of electrical, mechanical, and structural engineering expertise to develop the project scope accurately.
For new transmission line projects, we consider new line route selections and easements when connecting new infrastructure or in cases where upgrades alone won't meet our objectives.

4.4 THEME: COST OF ELECTRICITY

Maintaining an affordable energy supply means we need to use the most cost-effective types of generation. Independent modelling by the CSIRO shows that the most cost-effective forms of new generation for WA are solar and wind farms – even when accounting for the cost of building new transmission connections. By supporting wind and solar generation with energy storage and modern peaking gas generation, we can ensure our energy is secure while maintaining affordability.

Importantly, the WA Government has two policies in place to reduce the price of electricity for households and small businesses:

1. The Uniform Tariff Policy means that small use Synergy and Horizon Power customers are charged the same rate. This includes customers in remote regions where costs to supply electricity are higher.

2. Electricity prices are regulated by the WA Government. Electricity prices have stayed in line with the Consumer Price Index. This is why we have not experienced the same electricity price hikes as happened in the Eastern States.

4.5 THEME: ENERGY DEMAND

Energy demand is rising right across our State.

Hotter temperatures and more extreme weather events are placing extra pressure on our electricity system, with more homes and businesses using air conditioners and fans to stay cool. At the same time, our State's population and economy are growing - further increasing demand for energy.

On 20 January 2025, the South West Interconnected System (SWIS) hit a record demand of 4,486 megawatts - enough electricity to power every home in WA nearly three times over at the same time. Furthermore, four of the top ten highest ever recorded demand events on the SWIS occurred over the 2024-25 summer.

With more homes trying to stay cool and more businesses electrifying to decarbonise, demand for energy will continue to rise for the foreseeable future. Modelling by the Australian Energy Market Operator (AEMO) supports this, forecasting that peak demand over the 2025-26 summer will be higher than ever.

As we prepare to gradually phase out aging coal power plants from the SWIS, there is an opportunity to build a better and more sustainable energy future for WA, meeting this demand with cleaner electricity while keeping our energy affordable and reliable for generations to come.

Independent modelling by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) shows that the most cost-effective forms of new generation for WA are solar and wind farms - even when accounting for the cost of building new transmission connections. To ensure system resilience and the reliability of our energy supply, we also need our wind and solar resources to work in tandem with traditional means of generation, like modern gas-turbine power stations, and new technologies, like energy storage. That is why the plan to modernise and decarbonise our energy system is already underway.

4.6 THEME: WHY WIND?

Wind is an important part of the future energy requirements for the state.

Wind helps ensure our energy supply is affordable, it creates more price security and wind, solar and batteries are the key to a diverse power grid.

WA has some of the best wind resources in the whole of Australia. Wind reduces our reliance on coal, which is vulnerable to price fluctuations. Accessing wind resources in different parts of the State, supported by battery energy storage and gas-fired generation improves network resilience, helping to ensure there is back up energy if there is an outage in another part of the grid. More information is available at PoweringWA**.**

4.7 THEME: COMMUNITY & NEIGHBOUR BENEFITS AND GOVERNMENT SUPPORT

In addition to the benefits that renewable energy generation projects can bring to the State and landowners hosting the projects, it is important that the wider hosting community also realise benefits from the energy transition.

That is why the WA Government has released its Draft Community Benefits Guideline for renewable energy projects, which sets out the expectation for such benefits. The aim is to have the guideline finalised by the end of the year – but we have already seen some developers, including Neoen in Narrogin, adhering to best practice community benefits.

Effective community benefits arrangements:

- Promote equitable outcomes
- Are guided by the needs of the community
- Empower communities to realise benefits
- Improve investor certainty
- Reduce delays in project delivery.

The public consultation on the Draft Community Benefits Guidelines attracted over 100 submissions.

As well as community benefits, Neighbour Agreements are also considered best practice for developers. If neighbour agreements are not offered or discussed, landowners can suggest or mandate that Neighbour Agreements are developed as a part of their contract negotiations. An example of a Neighbouring Agreement can be found at the Pines Wind Farm website: www.thepineswindfarm.com.au/neighbours.

The information about neighbour agreements and Community Benefits comes form the work of PoweringWA. PoweringWA was established by the State Government to deliver the infrastructure that we need to decarbonise our State's energy systems – including the main transmission system that Narrogin is on – the South West Interconnected System.

A part of PoweringWA's remit is to engage with communities to ensure their voice, perspectives and priorities are considered while also providing the information and tools they need to understand and navigate the opportunities and challenges of the energy transition. This includes collaborating across Government and with industry to identify barriers to the transition and find effective solutions. PoweringWA have a dedicated support email which can be accessed by community members at PoweringWAsupport@deed.wa.gov.au.

4.8 RENEWABLE ENERGY FUNDING

Question: If the state government has allocated $547.4 million for Collie to transition out of coal, how come there's no funding issued to Narrogin to transition into taking this new energy system?

The Shire of Collie has historically relied on its coal fired generation plants and coal mining operations as the backbone of its economy. The transition away from coal represents a major shift that could, if left unchecked, lead to significant economic disruption. The $547.4 million allocated by the State Government is designed to support Collie's workers, businesses, and local community through this transition, ensuring that the region can diversify and remain economically viable for the next generation.

Narrogin will play an important role in WA's energy transition, and we acknowledge this may bring changes for the community. However, Narrogin is not experiencing the same level of disruption and economic pressures as Collie – as it is not managing the level of change associated with the retirement of coal. By investing in Collie's transition, the Government ensures funding is directed where it is most needed – creating new jobs and stabilising Collie's economy as it is impacted by coal's retirement.

PoweringWA and other State Government agencies will guide and support Narrogin through WA's energy transition, but direct, large-scale financial support is not currently necessary for Narrogin.

4.9 Question: Why are we taxpayers having to pay the bill for these?

Taxpayer funding is not being used to fund the development of wind farms like the Narrogin Wind Farm. The overwhelming majority of wind and solar projects in WA are privately funded because they offer strong long-term financial returns for investors.

Environmentally, renewable projects deliver rapid benefits with the carbon payback period for a wind turbine being about 5–12 months, meaning it offsets the emissions from its manufacture and construction within its first year of operation. Financially, a 2.6 MW wind turbine costs around $3.4 million upfront and takes about 6–10 years to recover its costs. Wind farms typically operate for 25–30 years, making them a profitable long-term investment for private investors.

The State Government's role is to manage the social and economic impacts of coal's retirement, which, without intervention, would cost taxpayers far more in the long term. This strategic investment helps avoid future liabilities, protects regional communities, and positions WA as a leader in clean energy.

5. ALL QUESTIONS

DEVELOPMENT, OPERATION AND DECOMISSIONING		
QUESTION	**NAME**	**ANSWER**
With so many turbines suffering catastrophic failure due to poor quality control – what quality standards are being put in place to ensure lives are not lost due to these failures	Alicen Johnson (Handwritten)	Section 3.2
Is the use of coal and gas exported from our country to manufacture the turbines more than the energy they make over their lifetime?	Frank Goater (Handwritten)	Section 1.6
What happens to these projects and our community if technological advancements are made in the next 10yrs making them obsolete?	Bevan Steele (Slido)	Section 1.6
How many truck movements will there be per day during construction for blades, nacelles, tower sections etc	Tyron Whitten (Slido)	Section 3.2
What Rd route will be used to bring materials to town	Tyron Whitten (Slido)	Section 3.2
Do the turbines rely on wifi for operation? What steps will the proponents be taking to guarantee operation in all situations, given the lack of mobile coverage and power during the Narrogin Wickepin fires?	Eliza Dowling (Slido)	Section 3.3
Do the turbines need any diesel to operate?	Emma Pinnick (Slido)	Section 3.2
When these deplorable monoliths are passed their used by date or decommissioned or broken down, are they going to be removed or left standing to show how we have abandoned a dreadful experiment or an expensive waste. In many parts of the world they have been left standing. The cost to dismantle is disastrously high. They cannot be effectively recycled, and the obvious solution is to bury them.	Andrew Borthwick (Qualtrics)	Section 1.6; Section 3.2
How will transmission lines be upgraded if they cannot be turned off to restring them or will a second line be built in a close vicinity.	AJ (Qualtrics)	Section 4.3

CONSULTATION		
QUESTION	**NAME**	**ANSWER**
With so much emphasis on “traditional owner” consultation (less than 3% of the community) where is the current landowner consultation? Neighbouring owners are being ignored	Anonymous (Handwritten)	[Answered on the night], Section 4.7
Why are energy companies sneaking around signing up host’s properties before communities know? What are they hiding?	Bill Benn (Slido)	Section 1.7, Section 3.5
Did the shire consult broadly with all landowners and ratepayers or just potential hosts of projects? This meeting is very one sided and leans heavily on bias from developer and does not represent the interests of all ratepayers. How can the community make an informed decision without all the inform	Scott (Slido)	Section 2.1
What evidence is there to demonstrate local member consultation including Indigenous representation, as the state tribunal nominated that there had been extensive consultation but the community response does not align with that statement.	SW (Qualtrics)	Section 3.5
Why havnt (sp) discussions been open and transparent from the start between neighbours, hosts and Lightsource BP? Why can’t we all get in a room and have a discussion or meeting together? Why create a division other than working together? Do you have something to hide do you? If this “renewable energy “ is so great let’s have some guts and all discuss it together rather than going behind peoples backs. The way you operate gives us absolutely no trust in what you are doing.	Luke Mead (Qualtrics)	Section 3.5
Has there been Aboriginal land searches done in this area and if so how much will you be paying the Aboriginal people to put them in?	Natasha Pettit (Qualtrics)	[Answered on the night]

COMMUNITY BENEFITS, NEIGHBOURS AND RESOURCES		
QUESTION	**NAME**	**ANSWER**
As someone who believes this can be a positive thing for Narrogin (if done effectively), what are the actual tangible benefits the Narrogin community will see in terms of economic productivity, business diversification, and local employment opportunities for our young people?	JP (Slido)	Section 2.2, Section 4.7
There's already a housing and rental shortage in Narrogin - where are the temporary workers going to live? Or will they be brought in from Perth every day? How will that benefit the community's growth in the backdrop of an ageing population?	JP (Slido)	Section 2.2
What extra resources will the state government be providing to support these projects in terms of infrastructure (as well as housing), health, education, road use, community development etc? Many of our resources are overstretched already and local government is underfunded.	Eliza Dowling (Slido)	Section 2.2
Why are the community funds so small to the community when so much money is involved?	Bill benn (Slido)	Section 4.7
Just to clarify, the state government is providing no guidelines or support apart from the community benefit funds which are individually agreed? What about mental health, gps, education, dfes and all the factors that are state government responsibilities?	Eliza Dowling (Slido)	Section 4.7
You all talk about community benefit. What benefit does an immediate neighbour get? Not a neighbour agreement. A neighbour you have not consulted with. The ones that are affected. Someone who lives in town should not get a benefit and a neighbour suffers.	Emma Pinnick (Slido)	Section 4.7
How will the projects stop poaching of the town's employees making it even harder for local small businesses	Tyron Whitten (Slido)	Section 2.2
How will this project actually help reinvigorate Narrogin's declining population and declining retail base? The number of boarded up shops vacant is an eyesore on the town - will this project actually help alleviate any of that?	Anonymous (Slido)	Section 2.2
Who will move to town to live near the new wind turbines	Tyron Whitten (Slido)	Section 2.2

COMMUNITY BENEFITS, NEIGHBOURS AND RESOURCES		
QUESTION	**NAME**	**ANSWER**
How do you think the town will survive after construction. This town is supported and thrives from the agricultural sector. It is known that large numbers of farmers leave after money is in the bank. No one wants to live near turbines.	Emma Pinnick (Slido)	Section 2.2
Please name some POPULATED communities that haven't had social break down due to these turbines. Already we are seeing long term friendships break down. The impact on immediate neighbours should not be understated.	Braden Lange (Slido)	Section 1.9
What community benefit is going occur long term, as our house electricity prices are not going to become cheaper so the cost of livining pressures are not improved in this way, road maintenance costs will increase due to toll on the roads from heavy machinery and equipment therefore rates will increase as there are no provisions for these renewable companies to maintain the roads they use. Donating to the Narrogin show and arts are a great initiative to improve community involvement. What else is going to occur as the length of time that these industrial structures are going to be present is 20 years plus. What is the positive legacy left behind?	SW (Qualtrics)	Section 2.2
Why build legacy housing? The population will decrease after building as no one wants to live near turbines. People leave the land.	Emma Pinnick (Slido)	Section 2.2
If the shire thinks these projects are good for the town they should purchase at above value on all farms and lifestyle blocks that are affected. Those in the dange zone. That means all within 15km of any turbine.	Emma Pinnick (Slido)	Section 2.2

LAND USE, SET-BACKS AND SITING		
QUESTION	**NAME**	**ANSWER**
What guarantees are available for neighbouring properties for damages occurred during construction if these projects - such things as damage to buildings, damage to underground water supplies or rising salinity due to explosive/drilling footings etc, rain drift due to changing winds etc	Bevan steele (Slido)	Section 3.1
Question for the Shire of Narrogin- What criteria does the Shire apply when determining whether wind-turbine host areas on a primary-producer property constitute a 'non-rural commercial use' that could trigger a change from UV to GRV, and what level of risk should landholders be aware of?	Felicity (Slido)	Section 2.4
How Is pest and disease control going to be dealt with in wet years if planes can't fly in the area where turbines are?	Kerryle (Qualtrics)	Aerial access will not be impeded, see section 1.2
What studies have been completed, reviewed and reflected on the social impacts investigated regarding the industrialisation of agricultural landscape - state administration council appeared to demonstrate different weight to application if the land was a lifestyle block compared with prime agricultural land compared with the persons experience living next to them with shire set backs not followed with current approved program, as state legislation supersedes local laws and policies. One property is now going to be surrounded by 12 turbines, with land value likely decreasing because of this and shadows likely occurring into their home with the proximity of the approved turbines.	SW (Qualtrics)	Section 1.4
Why do you support these massive 291 metre wind turbines in a lifestyle block area? Our Narrogin East area is not suitable for these monsters, with over 100 people living as close neighbours. Our health and well being may be compromised and you are supporting the construction of these. Why? put them out in lower populated areas or in your backyard	marion price (Qualtrics)	Section 1.1
We keep hearing from people who live in the metropolitan areas and how they are in favour of these renewable projects - why then are these turbines not being installed along the boarders of the metropolitan areas??? Surely then it would be producing power closer to where it is required?	Alicen (Qulatrics)	Section 1.7
How can Narrogin be considered an appropriate area for wind turbines - when the proposed area has over 60 homes within the proposed area?	Alicen (Qualtrics)	Section 1.7
Why is there an increasing number of wind/solar/battery projects going up in our rural areas when the demand for energy is declining with western power installing stand alone power systems on spur lines	AJ (Qualtrics)	Section 1.7, Section 4.5

LAND USE, SET-BACKS AND SITING		
QUESTION	**NAME**	**ANSWER**
that are not being used because there are less people on farms because neighbours have bought these properties.		
Why is there no regard for the residents concerns whose lifestyle houses are in close proximity to the proposed Wind Turbine project? 1.5km setbacks are a joke for these huge Wind Turbines! It is way too close! Harmful infrasound has been proven to travel 10kms or more and cause serious harm to the health of people and animals. The proposed Wind Turbines are going to be from 6 - 10kms from town, it is NOT a suitable location for them!	Lindsay Epworth (Qualtrics)	Section 1.1
i am not against renewable energy just where they are being built in our populated area in Yilliminning ,. my question: would you be willing to look at the science, listen to peoples first hand experiences with infra sound, noise, flickering, vibrations, plastic shedding, and much more from the installation of these wind turbines , solar panels and batteries so detrimental to close neighbours. " challenging the politicians if it's not right" your youtube "	marion price (Qualtrics)	Section 1.1
How is it acceptable if the proposed Narrogin East proposed wind farm project to go ahead in such as densely populated area?	Brooke Lange (Qualtrics)	Section 1.7; Section 1.1
Pasture contamination is declarable when grazing animals are sold for slaughter, who will cover this introduced cost to farmers?	austin piesse (Qualtrics)	Section 1.8
I came from Rockingham though mundijong the other day, plenty of open space alongside the transmission line. Maybe they should be building turbines there not so far transport.	Barry Price (Qualtrics)	Section 1.7
Have neighbouring property owners had time to undergo their own independent Noise & infrasound analysis and data recording.? (along with land value and water quality testing for at least 3 years.?)	Erin Hutton (Qualtrics)	Section 1.7
There is currently a met mast east of Narrogin. I understand the purpose is to collect wind data to assess a site's suitability for wind turbines, by measuring wind speed and direction at various height. - Exactly what thresholds or levels need to be reached for this project to be given the green light and what are the current readings indicating? - Will there be any transparency to the Shire of Narrogin, the community and immediate neighbours to "prove" that this is an appropriate site from the measures taken?	Cara Borthwick (Qualtrics)	Section 1.7

LAND USE, SET-BACKS AND SITING		
QUESTION	**NAME**	**ANSWER**
- To what degree are these measures from the met mast even taken into account when deciding if this site is appropriate for a wind farm, or given the Federal Governments push on renewables, are these measures even used, or is putting a met mast up simply just a tick a box exercise to satisfy approvals?		

HEALTH AND NOISE		
QUESTION	**NAME**	**ANSWER**
What are the mitigating factors for health of neighbouring properties being introduced as a result of operational towers? If none why not - given these will have some sort of impact over the next 20plus yrs?	Bevan steele (Slido)	Section 1.1
Are the local governments going to become the regulatory bodies responsible for Noise, tonality and infrasound assessment and compensation.?	Erin Hutton (Qualtrics)	Section 2.3
How do you get exact data on health etc when hosts sign non disclosure agreements.	Emma Pinnick (Slido)	Section 1.1
Why is there a need to measure negligible current noise with noise loggers in the area? We won't know how noisy the Wind Turbines are going to be until after they are built which will be too late to change. Independent noise loggers that were placed in the already built Kojonup Wind Turbine project, reported 85-105 decibels! This is too loud! Also the residents have complained about this to many and no one is prepared to do anything to stop the noise, the complaints are falling on deaf ears! Whose job is it to fix the noise for the Narrogin East project? You shouldn't be allowed to disrupt so many people's peace and quiet!	Lindsay Epworth (Qulatrics)	Section 1.7
Not one mention has been made of neighbours or potential health impacts. If neighbours are experiencing health impacts as a result of low frequency vibration and infrasound, what will actually be done to resolve these issues as they arise?	Cara Borthwick (Slido)	Section 1.1
All thought out tonight - there has been no mention of the health impacts to those living amount these turbines. Why not? Do you not care about the health of these communities??? How many of you live within 5km of these turbines?	Alicen Johnson (Slido)	Section 1.1
More information is coming to hand regarding Ultranoise which has many different effects and people react differently. Renewable companies, mainly Turbine producers have dismissed Ultranoise as having no effect on humans and animals alike. Humans have varies symptoms and has been effectively dismissed by the proponents. What is the answer.	Maureen Borthwick (Qualtrics)	Section 1.1
Infrasound from Wind turbines is well known to cause extreme health problems! How come this is not required to be measured or assessed? Why don't the noise loggers record	Luke Mead (Qualtrics)	Section 1.1

HEALTH AND NOISE		
QUESTION	**NAME**	**ANSWER**
infrasound? There are no current regulations on infrasound. Why? It is extremely harmful to the health of people and animals. Why is this not acknowledged? Is it easier just to arrogantly ignore the facts? These turbines are getting bigger and producing excessive infrasound and the setbacks are the same as a turbine half the size. Why arnt the setbacks larger considering these larger turbines create more infrasound?		
How is the Developer going to mitigate the effects of infrasound on human, animal and environmental health.?	Erin Hutton (Qualtrics)	Section 1.1
Young children living near wind farms have been known to get cancer from the turbines been so close to their parents houses? A whole cluster of young children. We have new born baby's in this neighbourhood! Do you think this is acceptable??????	Luke Mead (Qualtrics)	Section 1.1

BUSHFIRES, WILDLIFE AND ENVIRONMENT		
QUESTION	**NAME**	**ANSWER**
Who is accountable for a fire during construction or operation	Tyron Whitten (Slido)	Section 3.3
What investigation regarding negative impacts to wildlife including the endangered carnaby cockatoo which reside in this shire ?	SW (Qualtrics)	Section 1.3
What immediate and future environmental benefits will the Narrogin region see as hosts of these turbines?	Gareth Keeling (Slido)	Section 1.8
Can you please outline the effects of eco systems and harm to humans especially that of bird species (Black cockatoo).	Natasha Pettit (Qualtrics)	Section 1.3
Can aerial fire fighting equipment be used around operational turbines	Tyron Whitten (Slido)	Section 1.2
Extreme fire danger rating - unable to switch off, when machinery that farmers use would have to be grounded not in use during these periods nominated by the shires movement ban provisions. Shire of Narrogin and dfes have they developed a robust ground control measures if a fire were to orginate from land in which wind farms are present. In Wagin the fire last year, experienced bush fire brigade members said that they would not volunteer to those properties with windfarms due to safety concerns, is the Shire and dfes aware of the current status of volunteers if they would be willing to enter a property with wind turbines to assist in the fire suppression efforts ? If not, are the farms with turbines present required to have more access to suppression onsite services or pay a levy to pay for professional paid fire fighters to defend their property? Because without volunteers attending there are limited paid fire fighters present in this shire.	SW (Qualtrics)	Section 1.2
On February 6th 2022 the Yilliminning area endured a horrific fire with homes, buildings and animals lost. Ariel support was paramount in saving lives and homes. If these turbines are installed & another fire event unfolds - how will the 60 surrounding homes and the town, be protected without adequate aerial support.	Alicen (Qualtrics)	Section 1.2
How can the government and powers at B promise that the communities will be safe if a fire is in the direct area of the windmills being that if they can’t be turned off aerial bombers cannot be used?	Natasha Pettit (Qualtrics)	Section 1.2

BUSHFIRES, WILDLIFE AND ENVIRONMENT		
QUESTION	**NAME**	**ANSWER**
Who will ultimately be held liable for fires emanating from Wind or Solar farms.	austin piesse (Qualtrics)	Section 3.3

CARBON EMISSIONS, NET ZERO AND RENEWABLES		
QUESTION	**NAME**	**ANSWER**
Why are we ruining our land scape with so called renewable energy. While we export cheap coal for other countries to burn for cheap power while we ruin ours?	Bill benn (Slido)	Section 1.5
Australia's omissions are 1 percent of the world omissions, why are you promoting these renewables in our country when other counties are no longer supporting these wind farms /turbines as they are not proving efficient. Our prime Agricultural land will become an industrial grave yard. do you care?	marion price (Qualtrics)	Section 1.5
Why does the west Australian government continue to back renewables when all over the world other countries are abandoning these projects due to their inefficiencies?	Alicen (Qualtrics)	Section 1.5
Labor's net zero policy if so obviously failing - not only in reaching it's own excessive targets but is measurably damaging households and businesses with crippling energy cost increases. We in regional australia should be pleading to find a way out of the disparaging rabbit hole that we find ourselves in that is - using good productive agricultural land and replacing it with turbines. The rest of the world is quietly abandoning net zero. NO G20 country is on track to meet their 2030 targets.	Andrew Borthwick (Qualtrics)	Section 1.5
97% of global CO2 levels are made by nature. Australia is responsible for less than 1.5% of that. So if the tiny anthropogenic 3% of 0.04% is really causing climate change it needs to be shown and explained how Mother Nature's 97% does not.	Andrew Borthwick (Qualtrics)	Section 1.5
Seeing as though the rest of the world are moving away from Wind Turbines due to their cost, inefficiency, unreliability and the adverse health effects caused by them, why is Australia not taking note of other countries failures and changing their plans and scrapping Wind Turbine projects?	Lindsay Epworth (Qualtrics)	Section 1.5, Section 4.6
Why are we so generously being advised this is the best way at go towards net zero, and yet, to my knowledge no cost benefit annalysis rationalism, net benefit has been produced. Any hard questions has been met with silence, or if pushed, answered with obscurity and or deflection.	Andrew Borthwick (Qualtrics)	Section 1.5
Why is it so important to build so many more turbines when only 20% or less are producing power at any one time. In a lot cases power is being potentially produced, transmission lines are in place and yet the customer or customers are not receiving cheap power or power at all.	Maureen Borthwick (Qualtrics)	Section 1.5

CARBON EMISSIONS, NET ZERO AND RENEWABLES		
QUESTION	**NAME**	**ANSWER**
Australia is 20-25 years behind the likes of Germany and yet, Germany has one of the highest cost of power generation in the comparable world. They are now shutting down turbines and solar farms permanently and importing cheap nuclear power from France. In the mean time jobs are disappearing and businesses are closing down mainly due to the high cost renewables. Why is this so?		
I want to know why anybody would want to build enough turbines with generating capacity seven times the total capacity of the west Australian grid and not even adding the capacity of solar farms being built. Is it just foreign companies ripping off the Australian taxpayer or are these things so inefficient.	Barry Price (Qualtrics)	Section 1.7
How is it renewable in the long run? Why is it Australia is being pushed into having these when world wide countries are saying no to the 2050 carbon emission scam?	Natasha Pettit (Qualtrics)	Section 1.5
If 40% of our state electricity is generated by rooftop solar - and 4.5 out of 10 houses have solar as you just said…. Why not just put solar on every home and business rooftop? Then a few people would not have to pay the price for everyone else's electricity.	Alicen Johnson (Slido)	Section 1.7
Not in favour of wind turbines but solar and bats with a diesel gen on all residents as Powering WA said it is aircon that uses extra power	Frank Goater (Handwritten)	[Personal opinion – no question]

FINANCE AND ECONOMICS		
QUESTION	**NAME**	**ANSWER**
What amount of TAX did your organisation pay the Australian government last year?	Clive Bartron (Handwritten)	Section 1.10
At a cost of 23 million dollars per turbine - how long do they need to operate for until they break even and produce income? Or is that not known due to most of the costs being funded by government (tax payers)?	Alicen Johnson (Slido)	Section 3.4
If the state govt has allocated $547.4 million for Collie to transition out of coal how come theres no funding issued to Narrogin to transition into taking this new energy system?	Bevan steele (Slido)	Section 4.8
What costs are there when they stop working out in the community and the farmers?	Natasha Pettit (Qualtrics)	Section 1.6
How are you going to protect our property values? No one wants to live next door to Wind Turbines. There have already been a couple of properties that have struggled to sell due to their proximity to the Narrogin East proposed site!	Lindsay Epworth (Qualtrics)	Section 1.4
Why are we tax payers having to pay the bill for these?	Natasha Pettit (Qualtrics)	Section 4.9
Does the land value in terms of rates go up or down for property hosting wind turbines? And what about their neighbours?	Tyron Whitten (Slido)	Section 1.4

OPINIONS AND POLITICS		
QUESTION	**NAME**	**ANSWER**
Can you ask for a show of hands for who doesn't support the projects	Tyron Whitten (Slido)	[Answered on the night]
Everyone who spoke talked about benefits to the community, can you list some negatives	Tyron Whitten (Slido)	Section 1.9, Section 3.2
Why is the state government and renewable energy companies fact checking the quackery people are spinning about renewable energies? Why is not enough being done to address climate change? Why is the government allowing this right winged and bigoted behaviour to spread false facts?	Lim (Qualtrics)	Section 1.9
What can the state government do to stop right winged propaganda impacting on clean energy? It's not being regulated uneducated people in the rural areas like farmers who unfortunately statistically are not well informed formed and have not been exposed to critical literacy- I.e don't know the difference between a peer reviewed article vs a Facebook blog are believing A.I generated garbage	Lim (Qualtrics)	Section 1.9
Are there any studies or data showing how much fossil fuel companies or media outlets have spent on anti-renewable campaigns in Australia?	Kate (Qualtrics)	Section 1.11
How has media ownership, particularly by outlets like News Corp, shaped public understanding of renewable energy?	Kate (Qualtrics)	Section 1.11
How can we as a community get renewables to happen when our own shire president is actively against it?	Lucinda (Qualtrics)	Section 2.1
What can the state and federal government do about stopping politically motivated elected members?	Lucinda (Qualtrics)	Section 4.7
Please explain? This is corruption at its highest! https://www.facebook.com/share/v/1ASUSNuU63/?mibextid=wwXIfr	Lindsay Epworth (Qualtrics)	Section 1.1
You guys should be ashamed!	Lindsay Epworth (Qualtrics)	[Personal opinion – no question]

OPINIONS AND POLITICS		
QUESTION	**NAME**	**ANSWER**
energy literacy in Australia you speak about in your you tube , you say "appropriate level of knowledge that empowers them person to make informed rational energy decisions and actions which have a positive outcome for the individual and ultimately society at large" so my question to you is i'f the government has permitted these renewable energy projects to be built in my front yard with no regards for my health and wellbeing, where is my power to make rational energy decisions?????????? GONE	marion price (Qualtrics)	[Answered on the night - the reason why the information night was held]
Why is Australia being made to participate in this program when the communities in direct hit of these eyesore and destructive projects when the vast majority don't want them?	Natasha Pettit (Qualtrics)	Section 1.5
It's time to act upon the facts rather than disregarding them and destroying peoples lives. It is an absolute disgrace and it should be against the law. If you are going to build a wind farm knowingly it will negatively effect people's lives shame on you.	Luke Mead (Qualtrics)	[Personal opinion – no question]