

3 JUNE 2013
LIVERPOOL RANGE WIND FARM
COMMUNITY CONSULTATION COMMITTEE
Q&A

The following is a list of questions and comments arising from CCC members at meeting No 1 and the proponent's initial response for discussion purposes.

Community Fund

- The proponent would like to know what are the key concerns of the community (e.g. roads)
 - See section below headed "Concerns".
- The proponent would like to know what benefits the community wants to secure from the project. (e.g. jobs and investments etc)
 - This matter is to be further discussed with the CCC to seek feedback on how to best establish a community fund and to identify what type of local support is required from the project.
 - The CCC has suggested a level of royalty payment from a turbine could be allocated to provide funding for a community enhancement fund.

Community Sentiment

- Generally positive
 - Noted and also observed by Epuron through other consultation with the community.
- Choice to be involved in the wind farm is good.
 - Noted and ability for the community to contribute has been received positively.
- It is important that the proponent is not just here to 'mine with wind' but is here to work with the community
 - As wind is a long term proposition it is important to work alongside the community when developing the project.
- There is a resource grab in general around here and some people are feeling powerless
 - This sentiment was particularly referencing existing mining projects in the region and doesn't want wind farm to follow same.
- Are people unaware about the project?
 - Consultation and awareness is an ongoing process and information is available through a number of different channels.
 - Part of the CCC's purpose is to identify and engage with community stakeholders that may not be aware of the project. Providing stakeholder feedback is an important component of the project.

Community Engagement

- How can the CCC engage apathetic communities early in the project so support for the project continues?
 - Ideas to be further discussed by the CCC.
- What process might we have for bringing other community members to each meeting?
 - The CCC discussed the idea of possibly inviting public to view project information prior to CCC meetings.
- How can the CCC create more opportunities for the community to become informed about the project (such as with an information session).
 - To be further discussed by the CCC.
 - Recent placement of newspaper notification is good example.
 - Channelling information to each CCC member network.

Maximising Community Benefit

- What is the potential benefit to the community in terms of employment in the short and long term?
 - Based on the revised layout;
 - Construction jobs are estimated at around 850 over 2-3 years.
 - Permanent jobs during operations are estimated at around 50 over 25-30 years.
- What is the cost-benefit analysis from the community's point of view?
 - Requirement for community to balance potential impacts against opportunity to capture significant investment and employment opportunities for the region.
 - Provides diversified income to landowners and flow on effects to region.
 - Contributes to renewable energy targets and reduction of greenhouse gasses.
 - Capturing and maximising benefits on offer to the communities involved.
- How can the benefits of the asset be retained in the local area? Direct regional investment from construction should be spent here.
 - Encourage involvement of local skills and services to be involved in the project and be ready to respond prior to construction tender requests etc.
 - Based on the revised layout the EA predicts that the LRWF will have a total capital expenditure of around \$1.3-1.7 billion.
 - Investment of \$260 million in the local region during the construction phase.
 - Investment of \$20 million per annum in the local region during operations.
- How can we ensure local training and skills development for local employment in maintenance roles?
 - Identify skill levels and resources available in the region.
 - Position project skills and resources to compete with other industry such as mining.
 - Involve industry capability networks and support.
- During the construction phase: What can local towns provide in terms of accommodation, food, concrete, trucks and earth moving?
 - Accommodation for construction workers (ideally within 30-60 minutes of the site).
 - Supply of raw materials for civil works, concrete and roads.
 - Excavation equipment and skilled labour.
 - Support services such as mechanical, rural, communications and local provisions.
 - Community support from families and residents.
- What might be the possible tourism impact (positive)?
 - Other wind farms have observed positive tourism impacts and established visitation facilities.
 - Generally requires local willingness to tourism opportunity and contribution to establish facilities.
- How will the wind farm minimise or offset wear and tear on local infrastructure, especially roads?
 - Working closely with local councils and authorities to manage impacts.
 - Traffic and Transport Plan provided to local councils for review.
 - Environmental plans including water and waste management.

Concerns

- What is the effect on the ability to use aerial water bombing during a bush fire?
 - Project will consult with RFS on fire related matters. As with all tall structures in the rural landscape, aerial water bombing near turbines may be impacted in certain circumstances however the increased road access from wind farms provides a significant positive effect.
- What consultation has been done/needs to be done in relation to Defence (aircraft)?

- Epuron has consulted with the Civil Aviation Safety Authority (CASA), Airservices Australia (ASA), Aerial Agricultural Association of Australia (AAAA) and the Department of Defence in relation to the project.
- No material concerns have been raised to date and the layout has taken relevant matters into account.
- What is EMI from turbines?
 - A study was undertaken using ACMA (Australian Communications and Media Authority) data on registered transmitters and receivers and this has been taken into account for the design of the wind farm. It is considered unlikely that that wind farm will affect signals from existing mobile phones towers, microwaves or digital television signals.
- Is EMI the same or different to EMF?
 - Electromagnetic fields (EMFs) are a type of low-frequency electromagnetic radiation emitted from virtually everything electrical and electronic in our modern world. This typically includes power lines, transformers, electrical panels, building wiring, computers, lights, clocks, appliances, televisions, hairdryers, mobile phones, cordless phones, microwave ovens, Wi-Fi equipment and TV/radio/mobile phone towers.
 - Electromagnetic interference (EMI) is a common problem in which electromagnetic fields (EMFs) interfere with the proper functioning of a complex electronic or computer system, or one of its components. These interference problems can range from an annoying jitter of the image on a TV or computer screen or disruptive static on a radio station, to malfunction or shutdown of sensitive computer and electronic equipment. For example, there is great care taken in the assignment of frequencies and power outputs for radio and television stations, mobile phone towers and various wireless devices to make sure that the EMF signal from one station or device does not overlap and interfere with the EMF signal from another device or station.
- How are wind farms viable when there is no wind?
 - Viability of wind farms is fundamentally driven by the available wind resource. The LRWF project has been measuring and assessing the available wind resource on the project site for a number of years. Assessment of the data indicates the project is viable and supports the development of a wind farm.
- Noise impacts?
 - As part of the EA wind farm noise is carefully managed through design and layout optimisation of turbines relative to the surrounding environment. In NSW the methodology and criteria used in the assessment of wind farm noise are in line with the South Australia Environmental Protection Authority (SA EPA) Environment Noise Guidelines for Wind Farms (February 2003), World Health Organisation (WHO) limits, construction noise guidelines (DECC Interim Construction Noise Guideline 2009) and blasting impact to the ANZECC Guidelines.
- Visual intrusion?
 - As part of the EA a Landscape and Visual Impact Assessment is prepared which involves a comprehensive evaluation of the visual character of the landscape in which the wind farm would be located, and an assessment of the potential significance of landscape and visual impacts that may result from the construction and operation of the wind farm, taking into account appropriate mitigation measures.
 - Photomontages are prepared from identified public view locations and for uninhabited dwellings located within 2km of a proposed wind turbine.
- What research has been done on the impact to Livestock?
 - Many thousands of wind turbines have been operating in rural areas around the world for a number of decades and have not shown to impact livestock.
- Can the government override a landowner's choice to be involved in a wind farm?

- Development of wind farms can only proceed on land where the involved landowners are willing to host turbines and provide their consent (under agreement).
- What are the impacts on property values?
 - A study published by the NSW Valuer General in August 2009 found that wind farms do not impact property values.

Project Questions

- What decisions can be influenced on the project by the CCC?
 - This can depend on when the CCC is established relative to the projects development status. For the LRWF project the CCC was established after the Environmental Assessment was lodged with the DPI. While the CCC is not a decision making body it can influence some decisions for the LRWF project including the level of community involvement, proposals for a community enhancement fund, feedback on layout and prioritising areas of concern and of benefit to the community.
- Will the project go ahead if there is a change of government?
 - At a state level, regardless of the political party in government the project will be assessed by DPI on its merits and a determination made as to whether it can proceed.
 - At a federal level, current policy mechanisms to support renewable energy, like the RET, are in place and supported by both sides of government.
- If a land owner still wants to come on board with this project can they?
 - Yes it is still possible for landowners to join the project but the relevant merits must be assessed on a case by case basis as the opportunity to join the project reduces as the development process matures.
- Will there be a stage 2 in this project?
 - Theoretically the LRWF project area is of suitable size and scale to accommodate a second stage in the future but does not form part of the current EA.
- Can the grid be DC instead of AC?
 - Not in this instance. The wind farm is connecting to an existing Transgrid AC electricity grid network and is required to meet their standards.
- How many turbines are in each shire?
 - 1 in Liverpool Plains.
 - 56 in Upper Hunter.
 - 231 in Warrumbungle.
 - 0 in Mid-Western Regional but accommodates new overhead powerline to Ulan.

General Understanding

- Will we get cheaper electricity?
 - Electricity generated from the wind farm is not available for direct sale to participating landowners or electricity consumers in the region. Wind farm electricity is generated and sold at the high voltage wholesale level onto the grid network to Energy Retailers (like AGL) who then sell to their residential and commercial customers at lower voltages.
- What is the life expectancy of a turbine?
 - The life expectancy of a modern wind turbine is approximately 20-25 years.
- What is the cost of the upkeep of turbines?
 - For modern wind turbines the estimated maintenance costs are in the range of 1.5% to 2% of the original investment value per annum.
- What is the distance between turbines?
 - Turbine spacing adopted in the LRWF design is 3x6 rotor diameters. Based on a 126m rotor diameter the turbine spacing would be 378m for turbines spaced perpendicular to the wind and 756m for turbines spaced downwind.