# OBJECTION TO THE JUPITER WIND FARM PROPOSAL

I object to the Jupiter Wind Farm proposal because:

- The EIS does not establish that the proposal is in the public interest within the meaning of section 79C of the NSW *Planning and Assessment Act 1979*. There is no evidence that it is a viable project, no evidence that it is there is any need for this development and no evidence that it will have any positive public interest;
- The EIS does not enable the decision maker to reliably take into consideration the social and economic impacts in the locality of the proposal, in that the proposed benefits to the local community are selectively chosen, speculative, short term and unsupported by any evidence in the EIS;
- The EIS demonstrates that the site is not suitable for the development proposed in that:
  - There will be a major impact on over 250 residences within 5 km of the proposal;
  - There is no evidence of suitable wind resources;
  - The topography of the project area for the development and the design of the wind farm mean it can only be inefficient; and
  - The elevated location of many of the residences close to the wind farm will accentuate the serious impacts of the turbines in respect of noise, blade flicker, construction disruption and night lighting.
- The proposal will have a catastrophic visual impact on a large number of residences which cannot be realistically mitigated (not that mitigation is the affected landowners' responsibility).
- The cumulative effect of all the negative impacts of the proposal on surrounding landholdings and the local community means that a wind farm in the proposed area is clearly inappropriate.

**The EIS provides no evidence for its contention that this is a viable wind farm development.**

The Planning Assessment Commission (PAC) has no basis on which to legally approve this proposal.

The claim by EPYC that there is a wind resource sufficient to generate 1100 GWh annually is not supported by any evidence at all, let alone independently verified material.

There are other wind farms in the vicinity but they are located on ridge lines with large areas of lower elevation terrain towards the prevailing winds and are better able to capture the wind energy. The proposed Jupiter project is poorly sited as the surrounding terrain will mask the most prevailing winds (see later section).

The Capital 2 wind farm in the area was approved in 2011 but has not been constructed and the developer has sought a further five year extension to the approval. This is an indication that wind farms in the vicinity are not viable.

**The EIS does not establish that there is a need for this project.**

The PAC has no basis on which to legally approve this proposal as the EIS does not establish that it in the public interest.

*Greenhouse Gas (GHG) 'Savings'*

The EIS claims savings of 0.9Mt of Greenhouse Gas (GHG) in 2020 (on the assumption that the project is fully complete and operational by then), however it provides no evidence for this claim. In addition, the EIS admits that the proposal may represent additional generating capacity, rather than a replacement for coal-fired generation, in which case there will be no savings in GHG emissions.

The claim of GHG savings is based on the full operational capacity of the proposed project yet the EIS acknowledges that it will not operate at anywhere this level and so the claims of savings in GHG are grossly overstated (section 2.3.1).

NSW produced 191 million tonnes of saleable coal in 2015-16. Of this 142 million tonnes was thermal coal, ie the type used for electricity generation. The coal industry employs 20,000 people directly and a further 80,000 in mine and non-mine related services. The majority of this coal is exported, with a value of $13.2 billion in 2015-16. Coal generated 10,413 Megawatts of electricity in that period. (Statistics from the NSW Department of Industry, Resources and Energy and the Australian Energy Regulator.)

Clearly the coal industry is vital to the public interest in NSW. It generates employment, income and electricity. Until the NSW Government makes a policy change, any new development which adversely impacts on the coal industry is not in the public interest.

The production of greenhouse gases is a worldwide issue. It is not logical to 'save' GHG in NSW by using wind power at the same time as exporting 142 million tonnes of coal which will be used to generate GHG in other countries. The burning of 142 million tonnes of coal would release 338.16 million tonnes of $CO_2$-e (Carbon Dioxide equivalent), vastly more than will be 'saved' by the Jupiter project. (The conversion factors are sourced from the 'National Greenhouse Accounts Factors' by the Commonwealth Department of the Environment, July 2014).

*Risks of Renewable Energy*

The claim that additional renewable power generation is required is based on the 2015 ESOO report. However, the 2014 ESOO report found that the existing generating capacity was sufficient to meet forecast demand. The claim of increased demand is based on the high and medium energy demand scenarios and ignores the low demand scenario. With dramatic rises in electricity prices and the rapid take up of solar photo-voltaic power generation coupled with battery storage by households, why is the low demand scenario not

more likely? In addition, due to its inherently unreliable and intermittent nature, wind generation currently requires 100 per cent back up through fossil fuel power sources.

It is impossible to sustain a modern industrial economy using uneconomic, intermittent and unreliable power sources, as has been demonstrated in South Australia were high power prices and unreliable supply due to a high reliance on wind generated electricity have seen manufacturing industries leave the state and where domestic electricity supply has proved unreliable.

The electricity generation and supply market is obviously complex and volatile and there is no certainty that the approval of additional wind generating capacity is required. In addition, there is a large number of already approved wind farm projects not yet constructed which could easily meet any shortfall in capacity. The Commonwealth Wind Farm Commissioner has advised that currently approved wind generating capacity is sufficient to meet Australia's Renewable Energy Target three times over.

The EIS claims that the project 'would contribute significantly to directly achieving the current RET target of 33,000 GWh of large scale renewable energy by 2020'.

Even assuming that the project is fully operational by 2020 it will not make a significant contribution to meeting the RET. It is estimated to generate 1100GWh which is 0.3 per cent of the RET.

There is no public interest in favouring the private gain of foreign speculators in the wind industry over the loss of community amenity and the reduction in likely economic activity in the area surrounding poorly sited and developed wind farm proposals.

**The EIS does not address the SEARs requirement to examine alternatives to the project.**

The PAC has no basis on which to legally approve this proposal as the EIS does not comply with the Secretary's Environmental Assessment Requirements (SEARs) in that it does not address alternatives to the project.

The EIS casually dismisses the 'do nothing' option with an unsupported assertion that this project will reduce the production of GHG.

The EIS does not address the large scale adoption by Australian households of solar photo-voltaic generation coupled with battery storage which has far greater capacity to meet additional electricity demand than new, intermittent and unreliable wind generation projects.

The EIS states in section 2.2.0 that "It is acknowledged that additional intermittent generation alone may not materially improve the reliability of the system …"

The recent disruptions to domestic and industrial electricity supplies in South Australia clearly show that unreliable electricity generation is not in the public interest.

**This is an inefficient project.**

The EIS makes an unsubstantiated claim that the project will generate an average of 1100 GWh of electricity annually. The installed capacity of 350 Mw, would, if run continuously, generate 3066 GWh annually, [(350x24x365)/1000 = 3066)] which is an efficiency of less than 36%. There is no evidence of the wind energy available at the site, or any evidence that the proposed site is suitable or superior to other sites.

The issue of renewable energy and the mix with other forms of power generation is a complex issue and society is entitled to insist that only the most efficient projects are approved. Jupiter will not be an efficient wind farm, even if the unsupported claims of its capacity are accepted. The EIS provides no evidence that this is a worthwhile project.

At the community meeting with the Department on 13 December 2016, the view was expressed that it would not be commercially sensible to develop the project if the wind resources were not adequate. However, EPYC have admitted that they have no intention of developing the project. No credibility can be placed in the claims in the EIS in these circumstances.

**$300 million can be better spent.**

The poor efficiency of the project and the poor choice of site indicate that an investment of $300 million would achieve better outcomes in terms of efficient power generation, use of resources and local impacts if directed elsewhere.

**The claimed benefits to the local community are fictitious.**

The local economic benefits claimed for the project are selective, speculative, short term, unsupported by any evidence and unsupported by any commitment by EPYC in respect of local employment and use of local services.

The EIS

- does not address the detrimental employment effects in the coal mining, coal transport and coal fired electricity generation industries caused by the adoption of wind energy generation. These are likely to far outweigh the dubious employment benefits claimed for the project;
- does not address the costs to Australia of purchasing all the wind turbine generator (WTG) components overseas or the consequent loss of jobs in Australian manufacturing;
- ignores the GHG emitted in construction of the wind farm infrastructure and the WTGs;
- ignores the development in the local area that will be frozen out by the locking up of land for the WTG and the 'discouragement' of further residential development in the area which has the potential to generate far more employment and use of local services than a sterile wind farm;
- has no details of the benefit sharing arrangements or of the arrangements with the hosting landowners. Details of payments to individual landowners can be

confidential, but if EPYC claim they are beneficial to the local community then this should be substantiated;
- claims benefits to the local community from a community enhancement fund, yet no such fund has been negotiated.

EPYC have acknowledged that they have no intention of constructing and operating the Jupiter project so their claims of benefits to the local community from its construction and operation are valueless.

**Inappropriate Site**

The terrain surrounding the site makes it unsuitable for a wind farm.

The average height of the ground on which the WTGs are to be placed is up to 200m below the level of the surrounding ridgelines which will mask all the WTGs in the northern precinct from the prevailing winds from the west and the east which represent 62% of the wind resources of the area (see p21 of Appendix L). The EIS implicitly accepts this in section 2.6.1 where it states "Average wind speeds vary throughout the project area depending on topography affecting local wind conditions".

The EIS does not consider any other sites so the community cannot place any value on claims that this is a suitable site for a wind farm with 88 WTGs.

The design of the layout of the WTGs proposed for the Jupiter proposal is extremely inefficient. Due to site constraints the WTGs are clustered together in such a way that they will interfere with one another, reducing the effectiveness of WTGs shadowed by those in front. The close proximity of the turbines will also concentrate the noise emissions, crowd the visual field of view and increase the risk of bird and bat strikes.

**The local employment claims are unrealistic**

EPYC have acknowledged that they have no intention of constructing and operating the Jupiter project so their claims of employment within the local community from its construction and operation are valueless.

Most of the local employment claimed by the EIS occurs during the construction phase yet this is almost totally comprised of earth moving and concrete production and pouring. However, there are no local concrete suppliers and only small scale earthmoving contractors.

In addition, even if there is any local employment in these fields it will be short term.

The results of an employment model that does not take account of local realities are meaningless. How can $104 million of local benefits be substantiated?

The EIS claims that 32 people will be employed locally during the operation of the wind farm. We have seen a statement by Infigen, a prominent developer and operator of wind farms, which operates wind farms with 557 megawatts of installed capacity in three states. It has a team of 58 people. Only three people are placed at wind farms in three states, the rest are in the Sydney head office. That is, local employment during the operation stage is virtually non-existent.

**EPYC's prime reason for their choice of site is access to the grid not the wind resource**

The EIS admits that the reason for the choice of this site is easy access to the 330kV transmission line. In section 2.6.2 it states "The distance to nearby transmission networks is a factor that influences the commercial feasibility of wind farm projects, and being able to connect to the immediately adjacent TransGrid network within the project area was a significant factor that informed the selection of the project's location."

And at section 2.6.3 "This project in this location capitalises on the available wind resource and direct access to the existing grid infrastructure."

**The project is 'free riding' on investments made by others.**

The project is located to get a low cost connection to the electricity grid, it captures the benefit of the road improvements made to allow the construction of other wind farms in the vicinity and it even has the benefit that most of the land for the project has already been cleared. This not only saves costs for the project it reduces the risk of having to make changes to accommodate concerns around losses of woodland flora and fauna.

Without these free goods the viability of the project may well be questionable but the EIS provides no material on which this can be assessed.

**Mitigation is the developer's responsibility**

The community does not accept that screening of their views constitutes mitigation of the visual impact of the wind farm.

The EIS treats mitigation as the responsibility of the non-hosting landowner whose visual amenity is reduced. Why should a non-hosting landowner further degrade his or her visual amenity by reducing their view to alleviate the visual pollution constructed by the developer?

The developer should have sole responsibility for mitigation and this does not include requiring non-associated landowners to suffer screening. If a wind farm expected to generate excessive noise could it realistically propose that effective mitigation would be to require nearby residents to wear ear muffs?

The EIS subtly assumes that by failing to accept a further reduction in the views available from his or her residence through screening, the non-host landowner agrees to the degradation in his visual amenity represented by the wind farm. We do not accept this. The visual impact of a wind farm proposal should be assessed without consideration of the prospects of non-associated landowners screening their views.

**The Visual Impact Assessment is not accepted as objective**

The community considers the visual impact assessment to be a series of purely subjective judgements and does not admit that it has any assessment credibility.

It is astounding to me that the assessment is so subjective and has no objective standards at all. There are now many approved wind farms in NSW and even more in other states of Australia and over the rest of the world. Surely over these assessments some basic limits and thresholds have been established. The only measure that seems to be objective is the noise limit of background noise plus 5dBA. Even this measure is open to strong objection as it relies on modelling and compliance is often ignored.

Even apparently basic measures such as:

- the distance a turbine of a particular height can be from a non-involved land holding;
- the number of turbines visible from a non-involved land holding; or
- the extent of rural residential development that would rule out a wind farm;

are missing.

*Absence of Qualifications*
Visual impact assessments can apparently be carried out by anyone with a vague connection to landscape design. There are no accepted formal qualifications for this 'skill'. It appears that the only qualification needed is previous experience writing subjective assessments that meet wind farm developer requirements. The Department implicitly recognises this in its *Wind Energy: Visual Assessment Bulletin* of December 2016 where it expects assessments to be carried out by "professionals from natural resource management and design professions (for example environmental planners, geographers, landscape architects or other visual resource specialists)". Why not artists, photographers, graphic designers, etc who also have recognised skills in assessing what is visually acceptable? Why not the members of the local community, the people who actually live there and have the visual amenity being assessed?

*Lack of Objective Assessment Standards*
At the community meeting held by the DPE on 7 December 2016 DPE officials promised the community an objective assessment of the Jupiter proposal. When questioned about the objective standards that would be applied the Department admitted that there were none.

The Cloustons consultant admitted to the Community Consultation Committee on 13 December 2016 that the assessment was subjective but that he had had years of experience

making these judgements. I'm sure we have all had years of experience making subjective judgements. Our subjective judgement is the visual impact of the proposed Jupiter wind farm ranges from High to Catastrophic for all residents within 12 kilometres of the project.

I have serious concerns that there can be an objective assessment without existing objective assessment methods, limits, standards and thresholds for visual impact, impact on the rural residential nature of an area, the construction impacts, the impact on the environment and the measures to be taken into account in assessing the public interest. Sensible pre-existing measures would go a long way to ensuring that only worthwhile projects were developed. The lack of such measures will continue to see speculative, ill-sited and divisive projects, such as the Jupiter proposal, brought forward.

I acknowledge that perhaps this is not easy and note that the Department's *Wind Energy: Visual Assessment Bulletin* attempts to set out a process for visual assessment. However, the Bulletin does not establish any limits or thresholds apart from a subjective turbine height/distance measure. The rest of the Bulletin is a concoction of further subjectivity dressed up as a rational process.

The assessment of the impact on local landowners, the local economic benefits of wind farms could be assessed through a survey of residents surrounding existing operating windfarms. While such a survey might be difficult to design and carry out, it could gather information on the impact of wind farms from hosts, associated neighbours, non-associated neighbours, other landowners with prominent visual impacts, local businesses etc. A survey could also map changes in attitudes over time.

**The logic of the visual impact assessment is flawed**

The EIS assessment of the overall visual impact on a non-host landowner works by diluting high visual impacts by those lower on the scale. The impact is 'measured' according to five factors: Receptor Sensitivity; Distance; Quantum of View; Period of View and Magnitude of Change. An example is that a residence which has a large number of turbines visible might receive a Moderate rating against Magnitude but if the turbines are not close it will receive a Low rating for Distance. The combined rating would be Moderate/Low.

The community believes that that the ratings should be cumulative. So if there are turbines visible in the distance a rating of Low for distance might be defensible but if there are large numbers of turbines visible, which might receive a Moderate rating, this would reinforce the visual effect and so the combined rating should be Moderate/High.

A consistent visual assessment would see a greater difference between residences than can be represented through a simple 6 step rating. The EIS rates 59 residences as having High visual impact. For example, residences in Lakeview Drive (J3, J76a and J76b) are less than 2km from the northern precinct and will have unimpeded views of almost every turbine, including views of nearly 30 from base to tip. Such an Impact is surely 'Higher' than the

impact on residences also rated High but which are further away or with views of fewer turbines.

A more accurate system would give greater weight to cumulative effects. This can be achieved by giving a numerical value for each component of the rating and totalling the values to get an overall rating. So, using the scale proposed in the EIS:

| EIS Rating | Numerical value |
|---|---|
| Negligible | 1 |
| Low | 2 |
| Moderate Low | 3 |
| Moderate | 4 |
| Moderate/High | 5 |
| High | 6 |

The overall rating would total the ratings given for each factor so a residence rating High on all five factors would receive a rating of 30.

To rate the individual summary ratings, an alternative would range from the existing ratings through Very High, Severe, Devastating to Catastrophic, ie

| Numerical Rating Range | Rating |
|---|---|
| 1 | Negligible |
| 2-4 | Low |
| 5-7 | Moderate Low |
| 8--10 | Low |
| 11-13 | Moderate |
| 14-16 | Moderate High |
| 17-19 | High |
| 20-23 | Very High |
| 24-26 | Severe |
| 27-29 | Devastating |
| 30 | Catastrophic |

For example using the ratings in the EIS for Viewpoint 9 would see the following re-rating

| | Magnitude | | | | | |
|---|---|---|---|---|---|---|
| RECEPTOR IDENTIFICATION | Receptor Sensitivity | Distance | Quantum of View | Period of View | Magnitude of Change | Summary |
| EIS Rating | Moderate | Moderate | Moderate | Moderate | Moderate | Moderate |
| More accurate rating | 4 | 4 | 4 | 4 | 4 | 20 (Very High) |

For Viewpoint 11 (Roseview Road) the result of the use of the more accurate rating system is:

| | **Magnitude** | | | | | |
|---|---|---|---|---|---|---|
| RECEPTOR IDENTIFICATION | Receptor Sensitivity | Distance | Quantum of View | Period of View | Magnitude of Change | Summary |
| EIS Rating | High | Moderate | High | High | High | High |
| More accurate rating | 6 | 4 | 6 | 6 | 6 | 28 (Devastating) |

This is not inconsistent with the views of the Land and Environment Court in *Tenacity Consulting v Waringah* [2004] NSWLEC 140 where the Senior Commissioner noted that 'It is usually more useful to assess the view loss as negligible, minor, moderate, severe or devastating."

**The cumulative impact of multiple wind farms in the area**

The Jupiter proposal, if approved, will be in addition to three other approved wind farms in the area. The cumulative effect will seriously reduce the attractiveness of the area for rural residential living and further reduce the economic prospects for the region. Even the EIS admits "The re-occurrence of wind farms within a region, due to the wind resource in the area, has the ability to alter the perception of the overall visual and landscape character, irrespective of being viewed in a single viewshed."

**Cumulative Assessment of All Impacts**

The EIS treats each impact as a separate issue and assesses each as being not severe enough to prevent the project being approved. However, if taken as a cumulative impact they all add to a total impact that is so severe that the project should not be approved.

The EIS does not attempt to assess the cumulative impact of the acknowledged impacts in respect of:

- noise;
- visual impact;
- loss of economic opportunities in the local area;
- construction disturbance;
- environmental damage;
- television reception;
- mobile phone reception;
- blade flicker;
- reduced bushfire fighting capability;
- the cumulative impact of multiple wind farms in the area

Taken as a whole, the cumulative impact of the proposal is such that it has too great an impact on the local area to be approved.