Liverpool Range – False and Misleading statements in the Response to Submissions (RTS).

The Department of Planning and Environment will assess the DA for the Liverpool Range wind farm (LRWF) under the EP&A ACT (1979).

Why does the Department continue to ignore this clause in that ACT?

> **"148B Offence--false or misleading information**
> A person must not provide information in connection with a planning matter that the person knows, or ought reasonably to know, is false or misleading in a material particular."

The RTS does not contain a contemporary certification from Epuron, so we must assume the original one in the 2014 EA still applies.

> "This Environmental Assessment was prepared and authored by Epuron and the content is not false or misleading"[1]

This submission examines the RTS as to whether it meets the test in Epuron's certification above and whether the RTS is in breach of clause 148B of the EP&A ACT.

Let us start with a quote from page 7:

> "It is estimated to create around 800 jobs in the region during the construction phase. The ongoing operations and maintenance requirements are expected to provide up to 47 jobs locally and up to 78 across NSW once fully constructed (SKM 2012)."

If there is one major benefit to a local and regional community, it is the potential for economic activity brought about by the creation of new jobs during construction, but more importantly, during ongoing maintenance and operations. Locals are not so interested in the gross tonnage of greenhouse gases saved or how many houses could be powered on a windy day.

This statement by Epuron is so grossly deceptive and so misleading, in a material particular, that it alone warrants legal action under section 148B.

Let us examine the "around 800 jobs" during construction. We need to go back to the 2014 EA to find out that the figure quoted there was 829 jobs[2] for a wind farm with a projected capacity of 864 Megawatts. Note the purported accuracy.

How did they arrive at that figure in 2014? I'll give my reasoning. If Epuron thinks I am wrong, then they can **detail the calculations** behind these construction (829) and operations and maintenance jobs (78). Epuron says it bases these predictions on Sinclair, Knight and Merz (SKM) modelling.[3]
SKM was commissioned by the Clean Energy Council (CEC - the wind farm developer's union) to model the financial benefits of wind farms in Australia. Their results were included in a CEC publication "Wind Farm Investment, Employment and Carbon Abatement in Australia". The claim above that the source was SKM(2012) is false as the document is clearly a CEC publication. SKM does not even claim joint authorship, which I find interesting. The underlying SKM report would appear to be the unpublished property of the CEC.

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1 P 279 Liverpool Range Environmental Assessment, July 2014.
2 Confirmed on page 31 of the RTS
3 Page 32, RTS

The CEC report tells us that **data for this modelling was provided by the CEC and individual wind farm developers**. ie, members of the CEC. There is the first problem.

Based on the SKM modelling, the CEC report concludes that, for a wind farm of "50 MW of installed capacity", 48 jobs at the local/regional level would be created as direct employment during construction.[4]

Was Epuron's calculation of 829 jobs arrived at by scaling up from a 50MW wind farm to one of 864 MW. (48*864/50 = 829.44)?

So, does Epuron want you to believe they are building seventeen 50MW wind farms concurrently.

Could there be any other interpretation?
If not, that is totally false and designed to mislead. In the 2014 EIS, page 32, Epuron writes about multiple construction precincts and Epuron more than hints in the RTS that the LRWF will be a staged construction. Even if the RTS didn't say that, construction would be staged, even down to a turbine by turbine approach. How many massive cranes and their support crew are they going to have on-site at the same time assembling turbines? More than one? Two? As they write on page 69 of the 2014 EIS, 2 or 3 turbines would be installed each week.

They are more likely to be building multiple "50MW wind farms" sequentially, so the construction employment opportunities Epuron's EIS and RTS claims are grossly inflated and they know it.

Using that scaling methodology for the LRWF is invalid.
First off, there is no justification for the assumption that 2012 figures supplied by the wind industry would translate to the third decade of the 20th century, so the 48 number itself is not supportable.
Secondly, staffing for an 864MW wind farm cannot be scaled linearly from figures, even if correct, for a 50MW wind farm. There must be some economies of scale.
Also, the mythical 50MW wind farm was composed of 2MW turbines. For a 50MW wind farm composed of 3.6 MW turbines, surely you would need less labour to construct that wind farm, base excavation and slab construction for starters.

Let us now look at the jobs created during operations. Remember what Epuron said:

> "The ongoing operations and maintenance requirements are expected to provide up to 47 jobs locally and up to 78 across NSW once fully constructed"

On page 256 of the 2014 EIS, Epuron stated:

> "The operational phase of the project is anticipated to create up to 78 annual full time equivalent jobs in the local region for the life of the wind farm"

These jobs "in the local region" are now "across NSW" One, or both, of those statements is false.

Epuron clearly states these jobs are only for Operations and Maintenance. Whilst there is the qualifier "up to", the accuracy to which Epuron estimates (47 and 78) would lead a reasonable reader to believe that they are as accurate as the Epuron experts can calculate.
We are not told what the 31 operations and maintenance jobs outside the local area would be. A few can possibly be explained. By the time the first turbine in the LRWF is commissioned, the project will, no doubt, be controlled by remote supervisory control and data acquisition (SCADA) from a control room located who knows where.
Should Epuron choose GE turbines, those turbines are likely to be remotely monitored.

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[4] Table 1, Page 4 CEC Report

> "On any given day, 24 hours a day, GE Energy's technicians are monitoring over 6,000 wind turbines globally from state-of-the-art remote operations centres in Schenectady in New York state, and Salzbergen, Germany. Each service centre uses automated software for remote resetting and troubleshooting, providing weather information to sites, and maximising turbine production by providing technical assistance to its customers.
> In addition, data collected through the system provides information to diagnose incipient or systematic issues, giving a large team of engineers the insight they need to make recommendations that can reduce turbine downtime. With over 13,500 turbines in operation, GE bases its procedures to resolve turbine faults on the company's own extensive product knowledge, service engineering expertise and years of fleet operation."[5]

Acciona, a Spanish wind energy developer owns and operates three wind farms in Australia, at Waubra in Victoria, Gunning in New South Wales and Cathedral Rocks in South Australia.
The ABC in an online report on Acciona's Spanish wind energy aspirations described the technology it uses to monitor its world-wide wind assets:

> "Spanish firm Acciona gave ABC News access to its control centre in Pamplona where it monitors 9,500 wind turbines around the world on a minute-by-minute basis. A large screen allows employees to zoom in on specific wind turbines — some up to 17,000 kilometres away in Australia — and determine if the blades are pitched perfectly or if maintenance is needed."[6]

By the time the LRWF turbines are operating surely all new wind farms will be remotely monitored, most likely off-shore.

Where did the figure of 78 jobs for operations and maintenance come from? Epuron does not detail the logic they used nor the calculations performed.
The CEC report estimates that the same mythical 50MW wind farm will generate 4.63 local operations and maintenance jobs (or "Local/Regional Direct Employment" as the CEC defines it.).
Using the same invalid logic described above for construction jobs, we get 80 such operations and maintenance jobs (4.63*864/50 = 80.00) – pretty close. If Epuron used a different calculation, they will tell us in detail, rather than refer us to a CEC publication.

The mythical 50MW SKM wind farm was:

> "based on 2 MW turbines and one O&M operative for every six turbines."[7]

On that factor alone, given LRWF's 3.6 MW turbines, you lose nearly half your operations and maintenance workforce estimates.

The comments made above about the invalidity of this methodology can be repeated here.
Note, both construction and operations and maintenance jobs in this scenario put forward by Epuron, only occur if the wind farm is built in its entirety.

Also, operations and maintenance data based on industry input years ago, can be assumed to be lower by the time the LRWF is built due to the technological improvements in turbines.
CWP Renewables, experienced in the actual operation of wind farms in Australia, in a recent document to the Department for the Uungula wind farm, estimated that, for this 249 turbine wind farm that "around 20 jobs during operations"[8] would be created.

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[5] http://www.windpowermonthly.com/article/989462/ge-remote-turbine-monitoring
[6] http://mobile.abc.net.au/news/2016-10-23/spain-aiming-for-100pc-renewable-energy-company-director-says/7957738?pfmredir=sm
[7] CEC Report. Page 31
[8] Uungula PEA, November 2016, Page 6

For Liverpool Range, I will predict that the maximum FTEs, either employees or local contractors will be approximately 15, not 47. Prove me wrong.

We are further misled on the jobs issue

Epuron and the Department of Planning are only too happy to talk about the local and regional jobs a wind farm will create but the other side of the argument is never addressed.
Let us start with a bit of logic. The National Electricity Market as a whole, and NSW in particular, does not require any more grid based electrical capacity for the foreseeable future (20 years)[9]. So, is Epuron saying that they are going to add additional jobs to produce electricity that is not required? Of course not. Jobs in the grid based sector will be lost to compensate and more. Ask the employees of the Northern Power Station at Port Augusta in South Australia which closed in May 2016 or the Hazelwood Power Station in Victoria which closed earlier in 2017 whether they are excited about the employment opportunities 325 km northwest of Sydney.
We have raised previously with the Department the negative impact of a wind farm on jobs fueled by local property development, both of new subdivisions and existing. The General Manager of the Warrumbungle Shire Council in his 2014 submission wrote of the impact on unused building entitlements. He would know.
Another question the Department could ask. Are the LRWF hosts employing more locals today than seven years ago? Or less?
Is the project creating new jobs or are they partially utilizing existing jobs? When I build a dam, or Epuron excavates a turbine base, are we creating a new job? A bulldozer only needs one operator (obviously not sitting around waiting for the LRWF to commence construction).

By the way, can the construction jobs be guaranteed to be filled by Australian residents rather than 457 visa holders.

As mentioned in a previous wind farm submission, departmental planners and management likely to sign the Assessment for the LRWF should closely examine the economic impacts related to both gross and **NET** job opportunities, and if they do not have the in-house skills, contract some truly independent expertise.
For too long, some wind farm proponents have been allowed to submit misleading EISs, and we have more than three years of research to back that up. For too long they have been protected by departmental inertia.

More from the RTS.

On page 5 we learn about Epuron

> "The Proponent for the project is Epuron Pty Ltd, an Australian renewable energy company established in North Sydney in 2003. Epuron is one of the most experienced wind energy development companies in NSW, as well as a significant developer of solar projects across Australia. Our projects include:
> - Cullerin Range Wind Farm (15 turbines, 30 megawatts, operating)
> - Gullen Range Wind Farm (73 turbines, 165 megawatts, operating)
> - 7 megawatts of off-grid solar projects owned and operated by Epuron including:
>   - o TKLN Solar;
>   - o Uterne Solar at Alice Springs; and
>   - o Yulara Solar at Ayers Rock Resort
> - White Rock Wind Farm (up to 119 turbines, 175MW under construction)

[9] AEMO. 2016 National Electricity Forecasting Report

- Silverton Wind Farm (up to 170 turbines, 203MW under construction)
- Yass Valley Wind Farm (up to 79 turbines, approved)
- Rye Park Wind Farm (up to 84 wind turbines, recommended for approval)

Epuron is a leader in its field with 573 MW of wind turbines in operation or construction resulting from its development work, significantly more in NSW than any other developer. Epuron also owns and operates more off-grid utility-scale solar power stations than any other Australian company."

To the uninitiated, Epuron is to be applauded for its contribution to the renewables sector – look at all those wind farms it owns and operates (or are we expected to deduce that as the miniscule solar projects are specifically described twice as owned and operated by Epuron, obviously the others aren't).

Epuron's web site tells the real story.

Cullerin Range was sold to Origin Energy in 2007
Gullen Range was sold to Goldwind in 2014
White Rock was sold to Goldwind in 2014
Silverton was sold to AGL in 2012
Rye Park was sold to Trustpower in 2014
Yass Valley has a status of "Under Option" as does Conroy's Gap (missing from the above RTS list).
Liverpool Range, yet to be approved, also has a status of "Under Option". Epuron must be confident.

So, Epuron, the "Australian renewable energy company" would appear to produce **not one** Kilowatt Hour of wind based renewable energy and given the history above, is not likely to.
And apparently, Epuron currently employs or contracts **not one** construction or operations and maintenance person on a wind farm in NSW.

Their claim in the RTS is not false, as they are the leaders in their field (successfully navigating the wind farm planning process), just knowingly misleading to a reasonable person such as a Land and Environment Court Commissioner.

Misleading

I do not intend to list every false or misleading statement in the RTS in this submission. Let me mention my original 2014 submission and just one other.
A number of submissions, including mine (110639), mentioned the impact on property prices. The best descriptor offered by Epuron of my 3 pages would be:

"Property values will be adversely affected by the construction of the wind farm."

To which Epuron replied in total (except for a reference to an unknown Clean Energy Council publication and the author's personal opinions):

"Wind farms do not negatively impact property prices"

False
(and the Department knows that)

Epuron, on P42 writes as a descriptor of an issue raised in submissions 110892/4 from the Lodges:

"Wind farms are not effective and coal fired power stations will always be required."

I'll leave it to Mr and Mrs Lodge to determine whether that summarizes their particular issue, but seeing Epuron believes that to be the issue raised, how well did they answer it?

> "Wind turbines are more efficient at converting energy to electricity than coal fired power stations. Wind turbines convert 45% of wind energy into electricity compared to 29-37% efficiency for coal power plants in Australia."

What has that got to do with the issue raised? The effectiveness of wind farms that the Lodges draw attention to is their inability to provide reliable and continuous production. Epuron knows this, but wanders off the topic in a deliberate attempt to mislead.

> "Many countries around the world generate electricity without the use of coal"

What has this got to do with the issue raised? We are talking about NSW which gets its baseload primarily from coal. Other countries are reliant on nuclear and hydro for much of their baseload, options no longer available to Australia. (I can guess at many countries in the no-coal category: The Vatican, Monaco, Nauru, Tuvalu, San Marino, Liechtenstein, Saint Kitts and Nevis, Maldives etc.
I can't think of any major country that doesn't get some of its baseload from coal, either in-country or via an interconnector.)
The issue the Lodges draw attention to is that wind power cannot replace base load capacity to any significant degree. Epuron knows this, but wanders off the topic in a deliberate attempt to mislead.

> "CSIRO has recently released modelling that shows a feasible scenario where South Australia could generate 80% of its electricity using renewable sources (CSIRO 2016)."

The CSIRO model shows that in 2036 for 3 days in summer and 3 days in winter that renewables could support an 80% scenario. We are not told what the model said for the other 360 days (2036 is a leap year).
I especially liked this quote:

> "Overnight demand is met from battery storage, in combination with some baseload, peaking gas and a small amount of dispatchable biomass"

Fairy tales from a once great organization.

I'll close with an observation that, in the Department's media release for this second exhibition period, the most senior merit assessor Mr Young once again seems to form a positive opinion about the modifications at this very early stage of the merit assessment process:

> "Since the Department's public exhibition of the proposal two years ago, Epuron has reconsidered its plans and made changes, which reduce environmental impacts."

> "Changes include cutting 16 turbines to reduce the total number of turbines to 272, changing the alignment of the electricity transmission line to reduce clearing of native vegetation, and changing the access points to reduce impacts on nearby residents,"

I will probably wait in vain for a media release that quotes him saying something like:

Green Bean Design has once again submitted a VIA which underestimates the visual impact of the LRWF turbines on non-associated residences and has also submitted wireframes in support that, as published, vastly underestimate the turbine magnitude.