Chapter 5. Pick a figure, any figure.

Where we examine the claim by Epyc and ERM that the Jupiter wind farm will generate "around" or "about" or "approximately" 32 "employment" or "employment opportunities" or "FTE positions" during the operating phase of the wind farm.

One of the key benefits relied on by wind farm developers is the number of jobs created during construction and operations. The Department also recognizes this. For example in their Biala Assessment in December 2016, they noted as a benefit:

> "making a positive contribution to the local economy by creating jobs"

misleading by omission as that statement is, as you will see.

For the present, we will ignore construction employment opportunities, which could end up partly being temporarily sourced from overseas depending on the turbine supplier and the chosen method of construction.

For ongoing operations jobs, the number has been consistent at 32 both from the Epyc newsletters 6 and 7 (where the figures are "about 32" in the former and "around 32" for the latter).
Also, Dr Shahroo Mohajerani, a director of Epyc Pty Ltd, in her submission for the draft Wind Energy Framework wrote in relation to the Jupiter wind farm:

> "the Jupiter Wind Farm will……contribute to local and regional economy through use of contractors and suppliers during construction and direct employment of approximately 336 personnel during construction phase and about 32 personnel per annum for the operational phase"[1]

and in the EIS, ERM advises that direct employment of approximately 336 would occur during construction and approximately 32 (per annum – whatever that means in this context) during operation.[2]

ERM bases these predictions on Sinclair, Knight and Merz (SKM) modelling.
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, and in the EIS Main Report section 15.6, References, 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 The SKM report would appear to be the unpublished property of the CEC. Has the Department seen it?

Data for this modelling was provided by the CEC and individual wind farm developers.

Based on the SKM modelling, the report concludes that, for a wind farm of "50 MW of installed capacity", 4.63 jobs at the local/regional level would be created as direct operational employment. Later in the CEC report, "jobs" was further defined as FTE (full time equivalents), which is, of course, not the same.
Note that local jobs are now local/regional, whatever that means (I guess the concrete and reinforcing will come from Canberra or Goulburn. ie from where the lowest tender originates.)

[1] Submission (unnumbered) September 16, 2016. Batch 51-100
[2] Main Report. Page 2.6

The CEC (SKM) report does not contain, naturally, any projected figures for the Jupiter wind farm. So, how did ERM arrive at the figure of 32 FTEs?
In the absence of any other justification, we assume they extrapolated the 4.63 figure for a 50MW wind farm to the Jupiter maximum of 350MW. 7*4.63 = 32.41. They appear to have used the same methodology to arrive at the equivalent Biala wind farm EIS figure.

Now, using that methodology for Jupiter is grossly misleading. Nowhere in the CEC report was it said or implied that this tactic was acceptable.

Firstly, 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 4.63 number itself is not supportable.
Secondly, the mythical 50MW SKM wind farm was:

> "based on 2 MW turbines and one O&M operative for every six turbines."[3]

So the key component for operations staffing levels for 4.5MW turbines (Jupiter maximum) would drop from 4.2 to slightly less than 2. For Jupiter you could therefore be talking about eliminating 15 of the 32 employment opportunities. POOF.
Misleading.
Thirdly, staffing for a 350MW wind farm cannot be scaled linearly from figures, even if correct, for a 50MW wind farm. There must be some economies of scale.
Misleading.
ERM cannot guarantee that any "employment opportunities" will be local or even regional.

> "In addition, the Project will provide increased employment opportunities in the local and regional area, and potentially an increase in the regional skilled workforce if local employment opportunities are realized"[4]

In response to a submission to the Biala wind farm on the topic they replied:

> "It obviously cannot be guaranteed that the permanent jobs to be generated by the operation of the wind farm will be fulfilled by local residents, and there is potential that these positions could be fulfilled by commuters from major centres. Notwithstanding, the Project will generate local employment opportunities and potential for up-skilling of the local workforce."

All they could guarantee were "opportunities" and "potential".
Further, ERM cannot guarantee that "employment opportunities" will be Australian.
They advise:

> "(The) Project will be controlled by a remote supervisory control and data acquisition (SCADA) from a control room located within the permanent site operations and maintenance facility. Where required, assistance from an off-site SCADA engineering team may be sought."[5]

Should they choose GE (on the original short list in ERM's Preliminary Environmental Assessment), the turbines are likely to be remotely monitored. (quaintly called off-site assistance above)

> "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.

[3] CEC Report. Page 31
[4] Main Report. Page 15.5
[5] Main Report. Page 3.17

> 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."[6]

Acciona, another Spanish wind energy developer (Epyc Pty Ltd also being over 90% owned by a Spanish property developer, Pryconsa) 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."[7]

By the time Jupiter's turbines are operating (if ever) all new wind farms will be remotely monitored, most likely off-shore.

POOF. There goes another 3 or 4 local operations FTEs (remember, local monitoring was going to be take place from an "on-site control room", as we were advised above, therefore staffed 24/7)
If I know this, so does ERM. So for not factoring this in they are being knowingly misleading again. That, I believe, is an offence.
Who knows what the local and regional operations number will be? I will say a maximum of 10.

On what minimum number of local and regional operations FTEs is ERM prepared to risk the reputation of their consultancy?

We are further misled

ERM and the developer (and the Department as quoted above) are only too happy to talk about the local and regional jobs Jupiter will create but the other side of the argument is not addressed.
Let us start with a bit of logic. The National Electricity Market as a whole, and NSW in particular, do not require any more grid based electrical capacity for the foreseeable future (20 years)[8]. So, is ERM saying that we 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 will close in 2017 whether they are excited about the 32 employment opportunities 5 kms South East of Tarago.

Also, where have they factored in the significant increase in electricity prices that has already happened and will continue to happen with these and other closures? Every extra dollar spent on electricity is lost to the local community, leaving less to be spent locally which means fewer jobs.

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[6] http://www.windpowermonthly.com/article/989462/ge-remote-turbine-monitoring
[7] http://mobile.abc.net.au/news/2016-10-23/spain-aiming-for-100pc-renewable-energy-company-director-says/7957738?pfmredir=sm
[8] AEMO. 2016 National Electricity Forecasting Report

Where have they factored in the hundreds of millions of dollars of losses that did occur as the result of the South Australian blackouts (which would not have occurred if wind farms had not caused their existing baseload to be closed) and will surely occur in NSW should we follow down this same path. As in South Australia, industry will close and take its jobs with it. Epyc and Jupiter must own a share of these huge impacts.

Another question the department could ask. Are Jupiter hosts employing more locals today than three years ago? Or less?

Is the project creating new jobs or are they utilizing existing jobs. When I build a dam, or Epyc excavates a turbine base, are we creating a new job? A bulldozer only needs one operator (presumably sitting around waiting for the Jupiter wind farm to commence construction).

Whilst property devaluation is not a Planning determinant, it is certainly an economic impact, which is why developers keep claiming no such devaluation occurs. Mr Eid, from Epyc was at the Department's meeting in Crookwell discussing the new Framework. He heard the locals talking about "worthless" properties next to wind farms. So did the Department representatives who will eventually sign the Jupiter Assessment.
On top of that economic loss is the loss of investment in the area. We all know that Jupiter is proposed for an area of rural residential character. Why would those of us already here make any significant new investment, and thus support or create jobs, with this industrial monstrosity hanging over our heads.
Why would the area attract significant new investment from outside?

A Jupiter resident put it clearly in a letter to the editor of the now defunct Bungendore Mirror in August, 2014:

> "I learnt early in my business life to try not to alienate a customer, let alone a whole group. So I was surprised to see the letter from John de Groote from Divalls (Mirror 23rd July) extolling the benefits to the community of wind farms. There is no doubt that wind farm developments bring investment and jobs, but the real question is how many jobs do they drive away. As the owner of a lifestyle property and a repeat Divalls customer, let me give you an idea..
> We came to Palerang for a "tree change". We wanted to live the dream: the quietness and the freedom. We left the cities, the noise, the pollution, the industry and the stress.
> We bought 100 acres. We built a house and sheds and fences. We upgraded our roads. We bought our stock and built our yards and shelters. We brought down the power We landscaped. We built new dams, laid pipes, bought pumps and the sewerage system.
> We got the toys we never had in the big smoke, the tractors and ride-ons and chainsaws and chippers and slashers. We provided work for the vets and the farriers. We patronized the supermarkets, the restaurants, the chemists, the pubs, the service stations. We were not buying an existing house in town where the buyer just replaces the seller. We bought in new capital. There is no mortgage. None of our income goes to the bankers in Sydney. At a rough guess that's a seven figure sum, and it continues.
> And I'm one of hundreds. How many jobs did we create? One wind farm of the size of Jupiter, south of Tarago will stop lifestyle investment dead.
> The residents and businesses of Palerang and Goulburn Mulwaree need to make up their minds. You can either cover the shires with wind turbines or encourage investment from people like us. You can't have both.

Mr de Groote's opening sentence was "Companies go where resources are aplenty" I'll close with "Lifestylers go where wind farms aint""

I haven't been to Divalls since. Mr Degroot no longer works there.

And even more misleading

Let us briefly touch on the construction job opportunities. ERM told us "approximately 336" construction positions (FTEs) would be generated by the Jupiter project. Notice the degree of accuracy. Not "approximately 335" nor "approximately 330". A reasonable reader is entitled to believe that ERM, by saying "approximately 336", is advising that this figure will be as accurate as their professional expertise can deliver.

How did they arrive at that figure?

The CEC report, based on the SKM modelling, concluded 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.[9]

Lo and behold, when you extrapolate up to a 350MW wind farm, you get the figure 336.

So, ERM wants you to believe the proponent is building seven 50MW wind farms concurrently.

Could there be any other interpretation?

If not, that is totally false and designed to mislead. ERM advises in the EIS that this will be a staged construction. They only plan to have one mobile concrete batching plant for the three precincts. How many massive cranes and their crew are they going to have on-site at the same time assembling turbines? More than one?

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

Remember, Murray Curtis, ERM Director, signed off that:

"the information contained in the EIS neither false nor misleading."

The departmental employees likely to sign the Assessment for Jupiter, Mike Young and Nicole Brewer should closely examine the economic impacts related to NET job opportunities.

For too long, some wind farm consultants have been allowed to submit misleading EISs, and we have three years of research to back that up. For too long they have been protected by departmental inertia.

[9] CEC Report. Page 4