

Statement in response to the Victorian Government’s “Summary of the Independent Assessment of Plan B”

2 April 2024

We are pleased to provide our response to the Victorian Government’s “Summary of the Independent Assessment of Plan B”.

Background

On Easter Sunday the Government released what it calls the “summary of the independent assessment of Plan B”. Such “independent assessment” was a commitment that the Government made “in good faith” in August 2023. In fact the Government had previously substantively rejected our “[Plan B report](#)”, on the day we released it on 2 August 2023.

We, the Plan B authors, along with a representative from AEMO, were invited as observers of the Government’s “independent assessment”. We made clear our support for what we hoped would be a constructive independent assessment. Transmission expansion planning is a difficult and detailed area of electricity policy. Discussion and constructive peer review can deliver better outcomes. The Government told us that completing this assessment was urgent, and that they anticipated it would be concluded in October 2023.

The Government then appointed Jacobs, without consulting with us. We asked to see the Terms of Reference of Jacobs’ appointment and we asked to be included in Jacobs’ meetings with VicGrid and the Government. Both requests were refused.

VicGrid did not ask a single question of us during this review. Beyond superficial details, Jacobs too had no questions and they did not ask to see our workings, which we were at pains to proffer. Jacobs told us they had no need to see our workings in order to reach their conclusions.

When the Government provided to us what Jacobs' called its "Draft Report" there could be no reasonable doubt that this process was neither independent nor in any meaningful sense an "assessment" in as much as this is intended to reflect the exercise of expertise in pursuit of a robust and honest critique.

Our response

In response to the Draft Report we wrote a letter to the CEO of VicGrid, that is attached to this Statement. The letter explains our rejection of Jacobs' Draft Report and pointed to the major inconsistency between, on the one hand, what the Government has said to the Parliament and the public is the objectives of its electricity policy, and on the other hand what AEMO's modelling showed VNI-West would actually deliver.

The Government's "summary of the independent assessment" purports to summarise Jacobs' report. Implicitly the Government accepts Jacobs' report, though it fails to say this or to explain why. On page 7 however, the Government says that it rejects our claim that the Government's support for VNI-West (what the Government euphemistically calls "policy settings") will "result in energy reliance on NSW".

This is most important. As set out in detail in our letter, AEMO's VNI-West modelling results shows that from 2030, Victoria will be a net importer of around 1/6th of its electricity annually, mainly from NSW, and one-quarter by 2035 onwards. We pointed this out in [May 2023](#) for the first time.

Neither AEMO, nor Jacobs nor the Victorian Government has at any time disputed that this is what AEMO's modelling shows. To be clear these modelling results mean that AEMO is planning for Victoria to depend on NSW for around 40% of its typical electricity needs in more than 20% of all hours by 2040, rising to 35% of all hours by 2050.

Contrary to the Government's assertion, of course such a high level of net import (unheard of in any state in the National Electricity Market over its history) is appropriately described as "energy reliance". With such high dependence on NSW, in electricity supply Victoria will become a vassal state of NSW with little control itself over the security of its supply, or over its prices.

It is unimaginable that a responsible government could consider such a policy without having secured agreement from NSW, that NSW is willing and able to provide so much electricity to Victoria. In the absence of such agreement supply shortfalls in Victoria would have to be anticipated. It is notable that Minister D'Ambrosio has previously been [unequivocal](#) that consumers in Victoria would not be bearing the consequence of supply shortages in NSW. Is it not reasonable to expect that NSW would rightly respond in the same way when the boot is on the other foot?

Of course the Government of Victoria is free to assert that AEMO has got it wrong, so that in fact Victoria will be a net exporter if VNI-West is built. Indeed this is implicitly what the Government is now saying. But then why does the Government also say that it accepts AEMO's claims on the benefits of VNI-West, which arise from Victoria becoming a major

net importer from NSW? Which of these two mutually inconsistent statements does the Government actually believe?

Conclusion

VNI-West is a generation-defining potential infrastructure development. The Government of Victoria has failed to address the questions we have raised about it. As time passes and our studies and advice endures without credible critique, we believe with ever greater conviction that the Government, which has blindly followed AEMO's advice, has made a big policy blunder at considerable and needless cost to consumers, tax payers, clean electricity providers, land holders and the environment.

We continue to encourage the Victorian Government to prioritise a secure and affordable energy future for Victorians, by abandoning VNI-West and engaging in a transparent and constructive discussion on alternative, evidence-based solutions as outlined in Plan B.

A handwritten signature in black ink, appearing to read 'BRUCE MOUNTAIN', with a long horizontal flourish extending to the right.

Professor Bruce Mountain
Director, Victoria Energy Policy Centre
On behalf of the Plan B Authors

Attachment: copy of 3 December letter to CEO of VicGrid



**Victoria Energy Policy
Centre**

Victoria University
PO Box 14428
Melbourne Vic 8001
Australia
Phone +61 3 9919 1340
Fax +61 3 3 9919 1350
vepc.org.au

3 December 2023

Mr Alistair Parker
Chief Executive Officer
VicGrid

By email

Dear Alistair

Thank you for sending us a copy of Jacobs' Draft Report. This letter is a submission in response to that Draft Report. As we had previously indicated, we reserve our right to publicly release this letter when VicGrid releases Jacobs' final report or VicGrid/the Government releases its decision on this review.

We have addressed this letter to you and, by extension, to the Government since the issues now lie with you and the Government not with Jacobs.

VicGrid told us that it commissioned Jacobs to assess "*The Plan B report's assessment of VNI-West*" ... and ... "*The Plan B strategy outlined in the report*". VicGrid also

communicated this publicly in its “holding statement”. As you know during the process of this review, we repeatedly sought clarification from VicGrid that this is, in fact, what Jacobs were asked to do. We were repeatedly told by VicGrid that this was what Jacobs were asked to do.

Yet, this is not what Jacobs has done.

Plan B’s objectives

As you know, the Plan B Report begins with the objectives that Plan B is designed to meet. These are not the same objectives that AEMO says “VNI-West” is designed to meet (i.e. interconnection between NSW and VIC).

Having established Plan B’s objectives we then established Plan B and “Extended-VNI-West” (a suite of projects that includes VNI-West, that meets Plan B’s objectives). Our report then presents a pair-wise comparison that covers renewables hosting capacity, cost, curtailment, social and environmental impacts and so on.

One of the objectives for Plan B was that 95% of Victoria’s electricity demand should be supplied by renewable electricity produced in Victoria by 2035 (and 65% by 2030). This objective is not one that we invented. Rather, it is consistent with the Government’s election [promises](#) and the Objects of the existing Renewable Energy (Jobs and Investment) Act 2017 in which these election commitments will be legislated (we understand in 2024).

Specifically, these Objects include “*to support the development of projects and initiatives to encourage investment, employment and technology development in Victoria in relation to renewable electricity generation; and to contribute to the reduction of greenhouse gas emissions in Victoria and to achieve associated environmental and social benefits*”.

What Jacobs has done

Jacobs has said that our Plan B objective is not consistent with the specific wording in the Act (Part 2, Clause 7), which defines the targets for renewable electricity as “*a percentage of electricity generated in Victoria*”, rather than as a percentage of the load in Victoria. In fact, Jacobs says that the two are “*fundamentally different*”.

This could be correct, but not necessarily so. Specifically a “fundamental” difference between a renewable electricity target specified as a proportion of demand or as a proportion of generation in Victoria would only arise if Victoria’s coal generators closed (and Victoria’s gas generation was constrained) and the consequent electricity shortfall was not almost entirely replaced with renewable electricity produced in Victoria.

In this case, the ratio of renewable electricity produced in Victoria to electricity production in Victoria would be higher than the ratio of renewable electricity produced in Victoria to Victorian demand, because the difference is imported electricity. If this

happened, the Government might be able to claim that it had met its renewable electricity target (as defined Clause 7 in the Act). But this would be at the expense of having to import electricity (from NSW mainly). Furthermore there is no guarantee that that imported electricity would be renewable.

Jacobs insists that “*Unless decision makers adopt the changed VRET formulation ... it is unnecessary to evaluate VNIW as Extended VNIW in the way described in the Plan B report ...*” Jacobs has therefore necessarily assumed that Victoria will become a substantial net importer of electricity from NSW. Victoria must necessarily become a substantial net importer in order to satisfy Jacob’s claim of a “fundamental” difference between a target specified as a percentage of demand and a target specified as a percentage of generation.

Since we do not make such an assumption, Jacobs has decided that our objectives are not plausible and so it refuses to assess Plan B against Extended VNI West.

Accordingly, Jacobs does not compare Plan B to Extended VNI-West in all the measures of that comparison (renewable hosting capacity, curtailment, cost, electricity price impact, power system security impact, social and environmental impacts). In fact, in several areas (curtailment, hosting capacity, price impacts, social and environmental impacts) Jacobs either relieves itself altogether of the requirement to perform a comparative assessment, or it chooses a definition of Plan B and VNI-West entirely inconsistent with how we had defined them.

To summarise Jacobs’ assessment in its own words: “*If decision makers accept some or all of Plan B’s proposed differing objectives and they become required objectives, then VNIW would need to be re-worked and optimised, or a different set of projects conceived for evaluation (one option for which might be Plan B or an extension of Plan B) to make it compatible with the changed objectives.*”

Is the Government’s energy policy to turn Victoria into a major electricity importer?

As we noted earlier, we understood the Government’s renewable electricity targets to be consistent with the Objects of the Government’s legislation, i.e. to expand renewable electricity generation in Victoria. This is consistent with the long history of the Government’s communication of its renewable electricity policy “[Making Victoria a Renewable Energy Powerhouse](#)” and its election promises “[In Victoria, we’re not just talking about climate action. We’re getting on with it](#)” and with the Energy Minister’s statements in the [Victorian Parliament](#) and [publicly](#).

It is unclear therefore how AEMO has convinced the Government into accepting VNI-West when AEMO’s analysis says VNI-West will drastically reduce the rate of renewable generation expansion in Victoria and turn Victoria into a major net importer of electricity from NSW.

We have covered this in published articles, the [first](#) of which explained that VNI-West would drastically reduce the rate of renewable electricity expansion in Victoria. The

[second](#) article then explained, consistent with the observations in the first article, that AEMO's VNI-West modelling showed Victoria becoming a net importer of 16% of the electricity it consumes in 2030 and of 26% by 2040. Neither VicGrid nor AEMO nor Jacobs (or anyone as far as we know) has disputed these articles.

At the time of those articles we had thought that the Government had misunderstood AEMO's analysis and that after we had pointed out the truth of the matter, drawing on the results of AEMO's analysis, the Government would reject an interconnector recommended by AEMO that AEMO's analysis shows will deliver outcomes that are so clearly at odds with the Government's policy.

Evidently we were wrong in our assumption of how the Government would respond to this evidence. And now we see that a consultant hired by VicGrid dismisses Plan B because it rests on objectives that assume that the Government is not seeking to turn Victoria into a major net importer of electricity from NSW. Since you have told us that VicGrid accepts Jacobs' report, you are also therefore saying that Plan B can be dismissed from the proper comparative assessment you have repeatedly told us would be done, because Plan B assumes that Victoria has a policy not to become a major net importer of electricity from NSW.

Would it not therefore be true to say that the Government's actual energy policy is quite different to the policy it has communicated to the public and Parliament? Specifically how can the Government agree with Jacobs that Plan B's objectives are implausible but then also argue that the Objects of the Government's renewable electricity legislation (and the many public and parliamentary pronouncements that the Government has made on renewable electricity expansion in Victoria) are true?

To put it more plainly: how can the government claim that the objective of its law is "*to encourage investment, employment and technology development in Victoria in relation to renewable electricity generation*" when actually the basis of its dismissal of Plan B must mean that the Government's policy is actually to drastically reduce the rate of renewable electricity expansion in Victoria (relative to the past and present) and consequently to require the importation of large amounts of electricity from NSW?

To get a sense of what this means, over the last 11 years Victoria has, on average, *exported* enough electricity to meet 4% of NSW's demand (and at the most - in 2016 - the last year before Hazelwood's closure, 10%). Yet, as we explained, AEMO's VNI-West modelling says that Victoria will be *importing* 16% of its electricity from NSW by 2030 and 26% by 2040.

This is an enormous shift in energy policy, not a minor detail. Victoria has never imported as much as 16% of the electricity demand in VIC. The highest net import ever – in 2019 the only year that Victoria ever imported electricity from NSW since the NEM was created - was less than 1%.

Importing 16% by 2030 and 26% by 2040 establishes such a high level of dependence that Victoria's electricity security and prices will be substantially in the hands of

producers (and the transmission system) in NSW. This begs the question: has the VIC Government discussed this with the NSW Government? Managing the enormous supply (and price) risks associated with such a policy would require the fulsome (and public) agreement of the NSW Government?

Is it not also most important that the Government explains to the people of Victoria – particularly the communities and landholders affected by WRL-VNI - that actually the sacrifice they are being asked to make is so that Victoria can become a large net importer of electricity from NSW?

If the Government's energy policy is not to turn Victoria into a substantial net importer of electricity, why does it support a transmission augmentation intended to deliver that?

Of course the Government might say that the future is uncertain and Victoria might continue to be a net exporter to NSW, not a net importer, as AEMO intends and predicts. Perhaps so. But then if the Government doesn't trust AEMO's analysis - which establishes the benefits of VNI-West based on Victoria becoming a substantial net importer - why is it pursuing VNI-West?

If the Government wishes to dismiss Plan B on the basis of a reasoned, evidence-based critical analysis, Jacobs' report does not provide such basis. To the contrary, Jacobs' report and the Government's acceptance of it, has exposed a very serious and troubling inconsistency in the Government's energy policy.

But what of the Government's own critique of Plan B? The Government (and VicGrid) has also had plenty of time to, itself, present a reasoned assessment of Plan B. But we have yet to hear a single substantive criticism of any aspect of it from the Government or VicGrid. Specifically, during the process of this review VicGrid has not asked us a single question on any aspect of Plan B.

We noted that in the Government's holding statement that the Government has said, referencing a comment in AEMO's Press Release on our Plan B report, "*AEMO's assessment of the report has indicated significant concerns. The Government's review of the Report to date has not provided any reason to date to change direction.*" We have asked VicGrid to tell us what these "significant concerns" are and to tell us what the Government's review of our report has found. We have not had a reply to this request.

Next steps

We believe that the Government of Victoria is sincere in its desire to decarbonise electricity supply in Victoria and it is vexing that the Government persists in supporting an interconnector that – on the AEMO's own evidence – so clearly undermines the Government's policy, and at great cost to communities, consumers, the environment and affected land holders.

In the attachment to this letter (starting on the next page) we have added a few comments on aspects of the detail of Jacobs' report, for completeness only. We consider the technical content of Jacobs' work to be poor quality although this is not its biggest flaw: Jacobs' refusal to do what it was instructed to do (and VicGrid's acceptance of that) renders the Jacobs report irrelevant to the assessment of Plan B.

It is now clear that there is a very serious gap between the Government's apparent energy policy and its actual energy policy. The issues in the development of VNI-West, while germane, are overshadowed by much bigger challenges of energy security and energy independence that arise from turning Victoria into a state that will depend on NSW for so much of its electricity supply.

While we continue to be willing to cooperate with VicGrid and the Government on its assessment of Plan B, the much more pressing issue for the Government seems to be to confirm and properly communicate its actual energy policy to the Parliament and people.

Yours sincerely

A handwritten signature in black ink, appearing to read 'BRUCE MOUNTAIN', with a long horizontal flourish extending to the right.

Professor Bruce Mountain
Director, Victoria Energy Policy Centre
On behalf of the Plan B Authors

Attachment

Jacobs has failed to provide any evidence for its conclusion that a second interconnector is justified

In our Plan B report we pointed out that neither NSW nor VIC (on AEMO's cost assumptions) has a comparative (cost) advantage in the provision of renewable electricity, dispatchable generation or storage. We also pointed to AEMO's evidence that greater diversity of renewable electricity production can be obtained intra-state than between NSW and VIC.

Since releasing our Plan B report we also wrote and published an [article](#) that presented statistical research quantifying the very high correlation – by hour of day - of wind/solar generation in NSW with that in VIC.

A second [article](#), not long after, explicitly quantified the value of the diversity of wind and solar generation in NSW and VIC by calculating the value at which electricity from the wind or sun traded over VNI-West would need to be priced in order to justify the cost of VNI-West. It found that for solar the average price of intra-regionally traded production would need to be \$714/MWh and for wind it would need to be \$299/MWh. Such high prices reflect the very high correlation of solar production / high correlation of wind production between NSW and VIC, and the enormous cost of VNI-West. The necessary conclusion from this is that the low diversity in wind and very low diversity in solar can't justify the cost of VNI-West.

How did Jacob's respond to this evidence?

1. First on the evidence that neither NSW nor VIC (on AEMO's cost assumptions) has a comparative (cost) advantage in the provision of renewable electricity, Jacobs did not dispute this. But they suggested it was irrelevant since there are many reasons other than cost affecting generation investment (they mention technical performance, siting factors (land availability, existing usage and land cost), population density/neighbours, environmental constraints, grid access and strength, congestion). Of course such factors affect generation expansion and operation but there is no reason to suggest (and Jacobs do not suggest it anyway) that there is a systematic difference between VIC and NSW on these factors. So, the evidence of no comparative cost advantage between NSW and VIC does matter.
2. Second Jacobs claims that there are many benefits of interconnection that are not (or are not fully) valued in AEMO's modelling. They claim in this regard, the sharing of reserves, storage, production, "decarbonisation measures" (whatever that is) and ancillary services. But where is the evidence for this? The "market modelling" that AEMO performs claims to value *all* of these things except ancillary services, which is a small and increasingly regional, not multi-regional market.

3. Third, contradicting their complaint that AEMO's market modelling undervalues interconnection, Jacobs then insist that our analysis of comparative cost is not credible because it has not been assessed using a "market model". Jacobs do not say what they mean by "market model" but presumably it would be some form of constrained optimisation calculation such as those used in RIT-Ts or in the development of the Integrated System Plan. We have no objection to such models – they can be useful learning tools: in academia the development and use of such models is standard fare in masters level studies. But of course if society had any confidence that "market models" could decide how to allocate resources efficiently, we would have no need for markets. This means that in any realistic regulatory system market models are useful learning tools and not more than that. VicGrid has wisely agreed with this and developed a Victoria Transmission Investment Framework that wisely sets "market models" aside. In addition, as any half-decent modeller knows, through the selection of assumptions and the characterisation of the technical and commercial arrangements, market models can give you whatever answer you want, and model results are not replicable in practice. Therefore dismissing critical scrutiny on the basis that it does not originate in a "market model" is trite.
4. Fourth, Jacobs simply ignored the evidence we presented in Plan B and in our articles on the value of diversity. Rather than at least trying to critique this evidence, Jacobs produce their own "analysis". This consists of a bunch of poorly described line charts, scatter charts, bar charts, a couple of tables of weather data in Sydney, Melbourne and Brisbane in February 2023, a few tables of daily average correlation coefficients (of what?) for a few months, and a screenshot of a powerpoint slide from Ofgem on "hard-to-monetise benefits" of interconnection. Jacobs calls these charts "tranches of evidence". But there is no development of any analysis or argument or reasoning linking any of these "tranches of evidence" or telling the reader just what the evidence is. They are more like handfuls of mud thrown at a wall hoping that something will stick. Once they have exhausted their stock of charts, Jacobs then concludes with nothing. Yes, nothing! For heaven's sake!
5. Finally, elsewhere in its report, Jacobs reports on a "simple simulation model" which uses various assumptions to conclude that the Plan B will require at least 100 GWh of storage in Victoria. This is not surprising. Our research in South Australia finds that an enormous volume of storage is needed to come close to fully decarbonising electricity supply, assuming that only carbon-based alternatives of dispatchable generation are available. But what is the consequence of this for VNI-West? Jacobs does not model what would happen if VNI-West was built. As we noted in our [submission](#) on AEMO's Options Report (which Jacobs ignored), AEMO's modelling claims that the main benefit to Victoria for the development of VNI-West is that it substitutes unnamed generic pumped hydro generators in Victoria, for cheaper battery storage in NSW. The obvious question (which we have asked of AEMO and it has no answer) is why an interconnector is needed to access battery storage in NSW than can be built just as cheaply in Victoria.

Our claim stands.

Jacobs recognises that VNI-West will fail to reduce curtailment but, like AEMO, dismisses this

In our submission on AEMO's Project Assessment Conclusions Report and in our Plan B report, we drew attention to the fact that on AEMO's own analysis, VNI-West makes a very minor improvement to the very high levels of curtailment (of wind) in Western Victoria REZ, briefly improves curtailment of solar in the Murray REZ before reverting back to existing levels and makes curtailment worse of solar in the Central North REZ. In a separate [article](#) we drew particular attention to the fact that AEMO's market modelling ignored congestion:

"Their modelling assumes that these generators get income based on prices that are established as if they are not curtailed and there are no network losses. So the solar farms that AEMO claims in its modelling will locate in the SW NSW REZ will be making huge financial losses. A problem? Not for AEMO, "NEM reform activities," it says, will sort this out. In other words, new market arrangements will compensate distant renewable generators for their curtailment."

In our Plan B report we draw attention to the fact that AEMO had failed to calculate the "efficient" level of curtailment:

"This is because in their modelling they do not price renewable generation at the level needed to actually finance that generation, i.e. by taking account of its curtailment. Rather they assume it is not curtailed and neither is it charged for marginal losses. AEMO therefore do not correctly calculate the efficient combination of generation, storage, and demand to meet customers' needs. "

As we noted in the Plan B report, this is no cause for concern for AEMO:

"... AEMO says that its modelling has delivered results that are "not necessarily the outcomes that would emerge from the current regulatory structure" ... But AEMO then says that "NEM reform activities, such as the Post 2025 project, are being looked at separately by the market bodies to ensure the regulatory and market arrangements are fit to best address the needs of power consumers, today and into the future"

What does Jacobs have to say about this? Well, Jacobs do not contest our calculation of curtailment based on AEMO's modelling results. Instead, much like other of our conclusions they don't like, they just blithely wave it away: "Congestion is a parameter of note" they patronisingly inform us "but is not in itself an objective that necessarily achieves the overall NEM objective". If that was not enough to make you fall off your seat, Jacobs then repeats AEMO's line that it is someone else's problem to fix the curtailment of the renewable generation that their transmission proposals cause: "Given that the Victorian government's policy is to encourage renewable generation and that outcome is faced with a competitiveness barrier, Victoria may need to look for means to stimulate the investment in some other manner".

We already know that pushing an enormous interconnector with such huge environmental, landholder and consumer impacts and that effectively does nothing to meaningfully reduce the curtailment of renewables in Victoria, posed no concern to AEMO. Evidently Jacobs is similarly unperturbed. Such irresponsible nonchalance leaves us flabbergasted.

Our claim stands.

Jacobs accepted AEMO's false claims that additional transmission expansion beyond WRL-VNI is not required in Victoria

Jacobs said that AEMO did not claim that the only transmission augmentation required in Victoria after WRL-VNI West is a 500kV line to Western Victoria and possibly a 220kV line to Shepparton and no other transmission augmentations in Victoria were included in AEMO's modelling of VNI-West. But Jacobs ignored AEMO's VNI-West PACR and Options Report modelling which shows no other transmissions augmentations in Victoria other than a 500kV line to Western Victoria and possibly a 220kV line to Shepparton. Jacobs also ignores AEMO's response to our submission on the Options Report where AEMO explicitly claim no other transmission augmentations in V2 and V3.

So, there is extensive further additional transmission expansion – which AEMO claims it did not say would not occur - and yet which AEMO did not include in its modelling (and which Jacobs ignores in its assessment of VNI-West). Jacobs, like AEMO ignored VicGrid's Initial REZ Development Plan which contains twelve new transmission lines (much of them in line with what we had proposed in Plan B).

Jacobs' conclusions on power system stability impacts of VNI-West are not plausible

Plan B pointed out that WRL-VNI West have approx. 1,000 single points of failure (SPoF) in Victoria alone, as a failure of any of its double circuit towers (due to severe lightning, destructive winds, wildfires, flooding or sabotage) would take out both 500 kV circuits which will be a crucial supply of electricity to Southern Victoria.

Plan B drew particular attention to WRL as it will be frequently very heavily loaded. But Jacobs only investigated a double circuit outage on the lightest loaded section of VNI West north of New Kerang and even then assumed loading well below that forecast by AEMO. Jacobs completely ignored the severe risk to Victoria from a double circuit outage of WRL. They have not assessed our claim, they ignored it.

Jacobs also say that a total collapse of Southern Victoria could be avoided by inter-tripping and run-back schemes. This is trite. Only the 600MW Portland Smelter is likely to be available for a direct intertrip, there are no other point load in Victoria that comes close to this in size. Furthermore even if an inter-trip scheme could somehow be implemented, it would require blacking out a large proportion of Greater Melbourne and the smelter. Astonishingly Jacobs is evidently not aware of the 2016 black out of South

Australian on the loss of less than 500 MW on Heywood. WRL, according to AEMO will be carrying 3,000MW.

Our claim stands.

Jacobs ignores the inability to run all Snowy 2.0 pumps and the implication of this for VNI West's claimed benefits

The Plan B authors advised Jacobs that a fault on the 500 kV network near Loy Yang is certain to cause transient instability of the Victorian Power system when all of the Snowy 2.0 pumps are on-line.

Jacobs undertook a transient stability study but just with the existing Tumut 3 pumps on-line, not the 2000 MW of Snowy 2.0 pumps online, and claimed that that addressed the concerns raised by the Plan B authors.

This is laughable. Had Jacob's undertaken the correct study with all pumps on-line at Snowy 2.0 and Tumut 3, they would then have had no basis for their claim that VNI West enables access to the benefits of Snowy 2.0. Snowy 2.0 is useless if it cannot pump.

Jacobs were also advised that a fault on the 330 kV transmission lines near Lobe's Hole near Snowy 2.0 when all pumps are on-line is certain to cause all units to "pole-slip" which could destroy them. Jacobs ignored this warning and do not mention this serious risk in their report. Again, this means that it will not be feasible to run all snowy 2.0 pumps at the same time.

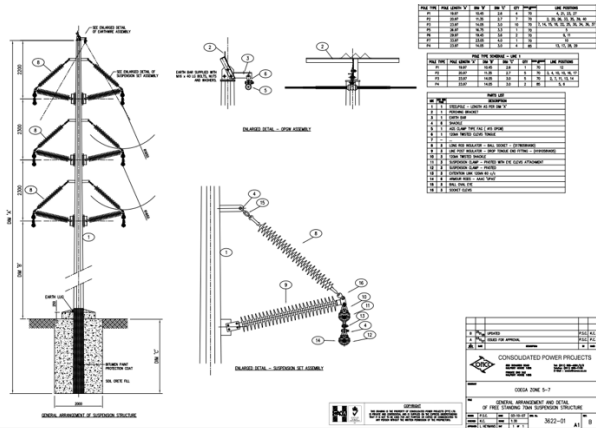
Our claims stand.

Socio-environmental impacts of Plan B vs WRL-VNI West

During the Review of Plan B, the authors realised that the most aesthetically pleasing option for the Plan B 220 kV transmission lines is a pole type of structure instead of traditional lattice steel towers. A pole structure is much less visually intrusive and can even be run along the sides of roads and highways (as shown below). The authors engaged the services of a South African tower design expert who prepared the pole design illustrated below.

The Plan B MCA analysis assumes lattice towers, A pole type tower would score even lower in the measure of visual impact. If Plan B was run alongside roads and highway, socio-economic impact would be even lower, particularly if the existing 220 kV lines are removed and the easements relinquished.

What did Jacobs do with this information? Blithely ignored it.



Jacobs claim that the deliverability of Plan B is similar to WRL-VNI West.

This is sully. WRL-VNI West will need most of the 220 kV upgrades in Plan B in order to connect the 500 kV to the existing and new renewables in Murray River REZ and Western Victoria. But WRL-VNI West also requires 500kV/220kV transformers, reactors, circuit breakers as well as series compensation, and reactive compensation equipment, none of which is required for Plan B. Furthermore very few companies and skilled workers can design and construct 80m high 500 kV lines. However, steel pole 220 kV lines are an off-the-shelf product available in a month from China and India.

Our claims stand.

Jacobs fails to assess comparative capital costs

Jacobs accepted AEMO’s costing without explanation, despite the detailed critique of AEMO’s costing which we set out in our Consultation Report submission and Plan B report, every single bit of which Jacobs blithely ignored.

Our claims stand.

Jacobs fails to assess comparative price impacts

Jacobs did not compare Plan B to Extended VNI-West. As we noted in the letter, Jacobs explicitly do not compare Plan B to Extended VNI-West. Yet here they purport to draw conclusions on price impacts by comparing Plan B just to AEMO’s estimate of the cost only of VNI-West. Pathetic.

Our claims stand.

