Shell ENERGY

12 November 2021

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Sydney NSW 2001

Lodged via email: Electricity.Roadmap@dpie.nsw.gov.au

Dear Ms Finley

RE: Regulations for Part 5 of the Electricity Infrastructure Investment Act 2020

Shell Energy Australia Pty Ltd (Shell Energy) welcomes the opportunity to respond to the New South Wales (NSW) Government's policy paper (the Paper) on regulations to support Part 5 of the *Electricity Infrastructure Investment Act 2020* (the EII Act), which deals with planning, developing and regulating network infrastructure.

About Shell Energy in Australia

Shell Energy is Australia's largest dedicated supplier of business electricity. We deliver business energy solutions and innovation across a portfolio of electricity, gas, environmental products and energy productivity for commercial and industrial customers. The second largest electricity provider to commercial and industrial businesses in Australia[1], we offer integrated solutions and market-leading[2] customer satisfaction, built on industry expertise and personalised relationships. We also operate 662 megawatts of gas-fired peaking power stations in Western Australia and Queensland, supporting the transition to renewables, and are currently developing the 120 megawatt Gangarri solar energy development in Queensland. Shell Energy Australia Pty Ltd and its subsidiaries trade as Shell Energy.

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Overview

Shell Energy commends the NSW Government for its ongoing engagement on the Electricity Infrastructure Roadmap (the Roadmap), including the regulations subordinate to the EII Act. We consider that this consultative approach will result in better design choices, and ultimately better outcomes for NSW electricity consumers.

Our primary feedback on the Paper is as follows:

- We support the Scheme Financial Vehicle (SFV) funding the Infrastructure Planner to undertake preparatory activities and development works. This should enable the Infrastructure Planner to produce robust cost-benefit analyses for each plausible REZ network option, and provide an appropriate level of design detail before tendering for a Network Operator.
- Throughout the planning and approval process for REZ infrastructure, consultation is necessary to inform decisions and give stakeholders confidence that network design choices are in consumers' best interests.

[1] By load, based on Shell Energy analysis of publicly available data

[2] Utility Market Intelligence (UMI) survey of large commercial and industrial electricity customers of major electricity retailers, including ERM Power (now known as Shell Energy) by independent research company NTF Group in 2011-2020.

- The planning process should be designed to enable non-network options (NNOs), where the solution they offer would deliver the greatest net-benefit.
- We recommend additional safeguards to protect consumers from unexpected cost increases, and to ensure the REZ network projects that proceed are those with the greatest net-benefit.

Consistent with our submissions to previous Roadmap consultation papers, we also recommend that the NSW Government circulates a complete set of draft regulations for public comment after the 'tranche three' consultation process concludes. This is consistent with what the Department of Planning, Industry and Environment (DPIE) has previously indicated[3]. We emphasise it here because it appears not to have been mentioned in the tranche three consultation material released so far.

The remainder of this submission provides more detail, including in response to selected questions from the Paper. It is structured to align with the order of the planning and approval process.

The planning and approval process for REZ network infrastructure

General comments

The Paper's Figure 4 summarises the proposed process for "identifying, developing, authorising and making regulatory determinations for a REZ network infrastructure project"[4]. We believe the efficacy of this process will greatly depend on how effectively the Consumer Trustee, Infrastructure Planner and Regulator collaborate. This will involve sharing information, coordinating interdependent activities, and potentially providing input into each other's decision-making processes.

We note that the interactions between the Consumer Trustee and the Infrastructure Planner "are intended to be set out and managed via a set of guidelines to be developed and agreed by both parties (the Network Authorisation Guidelines)"[5]. In our view, the content of these guidelines and how closely they are followed will have a material impact on whether NSW achieves its Roadmap objectives. As highlighted later in this submission, we believe that input from the Regulator may assist the Infrastructure Planner in its decision making. As a result, it may be appropriate to also include the Regulator in the development and substance of the guidelines. We recommend that draft guidelines are circulated for stakeholders to provide feedback.

Developing a 'network strategy'

DPIE envisages that the Consumer Trustee's biennial Infrastructure Investment Objectives Report (IIO Report):

> *"... will be informed by a network strategy, prepared by the Energy Corporation of NSW (EnergyCo) as Infrastructure Planner, through a joint planning process involving AEMO and the Jurisdictional Planning Body (Transgrid), and which will set out the network infrastructure investments necessary to give effect to the Development Pathway."*[6]

Firstly, we observe that AEMO's advice may differ depending on whether it is acting in its role as the Consumer Trustee, or in its role as the Integrated System Plan (ISP) developer. Secondly, we observe that the "joint planning process" is not yet well-defined. To improve stakeholder confidence in the network strategy and the IIO Report, we suggest documentation that provides details on roles, responsibilities and public consultation requirements for these reports. This could potentially be part of the aforementioned Network Authorisation

[3] DPIE, *Tranche two regulations to support the Electricity Infrastructure Roadmap: Issues Paper*, April 2021, Figure 3, pp 6, Accessed from: www.energy.nsw.gov.au/sites/default/files/2021-04/tranche-two-regulations-electricity-roadmap-issues-paper-210163.pdf
[4] DPIE, *Network Infrastructure Projects (Part 5 of the Electricity Infrastructure Investment Act 2020: Policy Paper*, October 2021, pp 4. Accessed from: energy.nsw.gov.au/sites/default/files/2021-10/network-infrastructure-projects-part-5-of-the-electricity-infrastructure-investment-act-2020-policy-paper.pdf
[5] Ibid, pp 3
[6] Ibid, pp 5

Guidelines. We believe the network strategy must incorporate extensive public consultation, including the ability to question proposed network expansion plans and suggest alternatives.

We also note that, in addition to being NSW's Jurisdictional Planning Body, Transgrid is NSW's primary transmission network service provider (TNSP). While it is sensible to have Transgrid involved in developing the network strategy, some stakeholders may perceive that:

- this gives Transgrid an advantage when it comes to subsequent tender processes to determine the Network Operator for specific REZ network projects.
- the Roadmap's economic regulatory framework incentivises Transgrid to advocate for traditional network options rather than non-network options (NNOs), which may lead to higher costs for consumers.

We recommend that DPIE proactively develops governance and consultation arrangements that address these concerns.

Funding and financing preparatory activities and development works

It is the role of the Infrastructure Planner to determine the most appropriate combination of network and non-network options to facilitate each REZ. Shell Energy strongly supports the SFV making funding available to the Infrastructure Planner for preparatory activities and development works that would support this purpose.

We believe there should be sufficient funding to allow the Infrastructure Planner to assess all plausible options and identify the highest net-benefit option with a reasonable level of certainty. With this in mind, we believe that Paper's examples of preparatory activities (route selection and land acquisition, network studies, community engagement, planning approvals and carrying out a competitive process to select a Network Operator) are appropriate, but non-exhaustive. For example, in addition to community engagement, we believe there should be broader stakeholder consultation on the process to identify plausible options and assess their costs and benefits.

The Paper proposes that:

> *…"the Infrastructure Planner would ultimately recover the costs associated with these activities from the Network Operator once they are awarded the rights to develop the network infrastructure project and the Regulator makes its determination."*[7]

While we agree that the Infrastructure Planner should be able to recover prudent costs, it is not clear why DPIE suggests the Infrastructure Planner should be reimbursed by the Network Operator, which would then recover costs via payments from the SFV (consistent with the Regulator's determination). This seems unnecessarily complex and indirect. To simplify the process and improve transparency for stakeholders, we suggest that the Infrastructure Planner is funded directly by the SFV. This would allow the Infrastructure Planner's costs for each network project to be added as a separate line item when the Regulator makes its annual contribution determination for DNSPs. This is consistent with how DPIE proposes to recover costs for other activities (e.g. administrative costs for the Consumer Trustee; hedging costs for the SFV) that underpin the Roadmap.[8]

[7] DPIE, *Network Infrastructure Projects (Part 5 of the Electricity Infrastructure Investment Act 2020: Policy Paper*, October 2021, pp 17. Accessed from: energy.nsw.gov.au/sites/default/files/2021-10/network-infrastructure-projects-part-5-of-the-electricity-infrastructure-investment-act-2020-policy-paper.pdf

[8] DPIE, *Electricity Infrastructure Fund (Part 7 of the Electricity Infrastructure Investment Act 2020): Policy Paper*, September 2021. Accessed from: https://www.energy.nsw.gov.au/sites/default/files/2021-09/electricity-infrastructure-fund-policy-paper-part-7-eii-act-210458_0.pdf

Identifying the preferred option for a particular REZ network project

Section 30(2) of the EII Act requires the Infrastructure Planner to make recommendations to the Consumer Trustee about "the different options for REZ network infrastructure projects to provide the intended network capacity for the REZ".

To identify the best network infrastructure for a REZ, the Infrastructure Planner will need to assess the net-benefit of each option. This information is also necessary for the Consumer Trustee to provide the Regulator with a cap on capital costs that reflects the "next best alternative"[9].

The cost-benefit analysis for each option should be made publicly available and include a breakdown of the parties to whom costs and benefits would accrue. In addition to improving transparency, this will be an important step to inform how REZ costs are recovered from consumers and REZ participants that pay for REZ access rights.

When comparing each option, we believe each cost estimate should have an upper error margin of no greater than 10%. This could be done at relatively low cost by using a Class 3 (-20% to +30%) Association for the Advancement of Cost Engineering (AACE) estimate and an asymmetric error margin. We provided detail on how this could work in a previous submission to AEMO[10]. The rationale for our suggestion is that a larger upper error margin exposes consumers to an unreasonable level of risk – particularly for large projects. Additionally, if there is a larger upper error margin, it will be more difficult for the Consumer Trustee to advise the Regulator of an appropriate cost cap (discussed further in the below "Authorising a network infrastructure project" subsection).

As part of its options analysis, it is crucial that the Infrastructure Planner undertakes meaningful stakeholder consultation. This will help to ensure that the Infrastructure Planner considers all plausible "combinations of network and non-network investments as well as variations in the route and timing of the infrastructure"[11]. In our view, stakeholder engagement should be far more comprehensive than the generic expression of interest (EOI) process conducted for each REZ. At a minimum, stakeholders should also be given the opportunity to provide feedback on a report that stipulates clearly defined network requirements, and the costs/benefits of each option that meets them. This would be analogous to the RIT-T steps prior to the Project Assessment Conclusions Report.

A possible approach would be to include stakeholder representatives as part of a steering committee overseeing the Consumer Trustee and Infrastructure Planner. This could be similar to the ISP's consumer panel and would provide transparency and improve stakeholder engagement with the overall process. At the final stage of the process the consumer panel would issue a report confirming due process occurred and satisfaction with the proposed network augmentation.

Interaction between REZ design, and tenders for LTESAs, access rights and the Network Operator

The Paper explains that, where practical, the Infrastructure Planner will provide a 'preliminary recommendation' regarding REZ design, for the purpose of informing:

1. a competitive tender process for LTESAs and REZ access rights
2. a process to identify the preferred Network Operator(s) for each REZ network project.

[9] DPIE, *Network Infrastructure Projects (Part 5 of the Electricity Infrastructure Investment Act 2020: Policy Paper*, October 2021, pp 20. Accessed from: energy.nsw.gov.au/sites/default/files/2021-10/network-infrastructure-projects-part-5-of-the-electricity-infrastructure-investment-act-2020-policy-paper.pdf
[10] Shell Energy, *RE: Transmission costs for the 2022 Integrated System Plan*, 25 June 2021, pp 4-5. Accessed from: https://aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2021/transmission-costs-for-2022-isp/submissions/shell-energy.pdf?la=en
[11] DPIE, *Network Infrastructure Projects (Part 5 of the Electricity Infrastructure Investment Act 2020: Policy Paper*, October 2021, pp 21. Accessed from: energy.nsw.gov.au/sites/default/files/2021-10/network-infrastructure-projects-part-5-of-the-electricity-infrastructure-investment-act-2020-policy-paper.pdf

DPIE's rationale is that a preliminary recommendation would allow the network solution and LTESA bids for generation/storage to be co-optimised. While this concept appears sensible at a high level, it is important to highlight two key issues.

Firstly, we agree that there are situations where "the final technical solution for a [REZ network] project would benefit from a more certain understanding of the generation and storage mix that will be constructed in the REZ"[12]. However, participants in tenders for LTESAs and REZ access rights will require a level of certainty about the REZ design in order to effectively participate in the bidding process. At a high level, we believe the approach outlined in the Paper's Box 3 is sensible (i.e. with "line route, substation location, timing, staging, cost recovery and the procurement approach" to be mostly fixed at the time of LTESA tendering)[13]. To the extent that the REZ network design is not finalised, we recommend that the LTESA tender process provides detail on each option under consideration, and allows LTESA bids to vary between options.

Secondly, it is important that the planning process does not cause unnecessary delays. Our understanding is that the process would occur as follows:[14]

1. The Infrastructure Planner makes a preliminary recommendation on the REZ network infrastructure project(s).
2. The Consumer Trustee and Infrastructure Planner conduct a tender process for LTESAs and REZ access rights.
3. The Consumer Trustee allocates LTESAs, taking into account the Infrastructure Planner's preliminary recommendation.
4. In order to take the 'composition' of the REZ into account, the Infrastructure Planner finalises the technical design of the REZ network after the Consumer Trustee has allocated LTESAs.
5. The Infrastructure Planner runs a competitive process to select a Network Operator(s)
6. The Infrastructure Planner makes a recommendation to the Consumer Trustee for the specific REZ network infrastructure projects and the Network Operator(s) to undertake them.

We note that this ordering is slightly different than what the Paper suggests in Figure 4, which has the above activities 3 and 5 operating in parallel, rather than sequentially (which wouldn't allow for co-optimisation). We also note that the above 6-step process may be unworkable in practice. For example, formally awarding LTESAs in step 3 appears inappropriate without the network infrastructure having first been finalised and approved by the Consumer Trustee. To address this, step 3 could be altered to be an internal draft allocation of LTESAs (for planning purposes), and a step 7 could be added where LTESAs are formally awarded to the tendering parties after the network design and delivery is confirmed. Given that the network infrastructure typically takes longer to develop than VRE or storage, there are unlikely to be delays caused by this amended process.

Given these issues, we recommend that DPIE provides greater clarity in the next round of consultation. In our view, there will likely be a trade-off between design co-optimisation and speed of REZ implementation – both of which are important to achieving Roadmap objectives.

Competitive process to determine the Network Operator

As discussed in the previous subsection, our understanding is that the competitive process to determine the Network Operator(s) would occur after the Infrastructure Planner finalised the technical design of the REZ. This means that the tender process would primarily be to decide the party responsible for delivering the project(s).

[12] Ibid, pp 22
[13] Ibid, pp 23
[14] Ibid, pp 22

I.e. most network "design decisions would be locked-in", with bidders only having "discretion to vary specific aspects in their proposal" and/or "identify improvements through innovation in design or delivery of the network solution while meeting technical specifications".[15]

Additionally, DPIE is proposing that the bids from prospective Network Operators are binding[16]. In our view, binding bids are appropriate since the primary benefit of a competitive process is to minimise costs for consumers (which wouldn't necessarily happen if the successful Network Operator was able to increase costs after winning the tender).

However, if bids are binding, then a prospective Network Operator may be incentivised to either:

1. submit a bid that has a large upper error margin (e.g. 30% or 40%)
2. submit a higher-than-efficient bid to account for cost uncertainty (particularly given that Network Operators may be reluctant to undertake the early-stage development works to produce an accurate cost estimate without guaranteed recovery of costs).

Both of these issues would be compounded if there was limited participation (and therefore low competition) in the tender process.

To address the first issue, we recommend that the Infrastructure Planner requires each bid's cost estimates to have an upper error margin of 10%. Our rationale is the same as for why 10% should be used as part of the cost-benefit analysis (see previous subsection). This would also make it easier for the Infrastructure Planner to assess different bids, compared with a scenario where different bids had different error margins.

To help mitigate the second issue, it is important that the Infrastructure Planner has undertaken sufficient early works prior to starting the Network Operator tender process. The more advanced the REZ design definition and development (e.g. land acquisition, community engagement, achieving a social licence), the more certainty prospective Network Operators will have on cost and risk. Therefore, after determining its preliminary recommendation for REZ design, it may be useful for the Infrastructure Planner to undertake additional development activities prior to opening the Network Operator tender. To avoid delays, this additional work could potentially occur in parallel with the tenders for REZ access rights and generation LTESAs.

As part of the Network Operator tender process, we recommend that the Infrastructure Planner accepts bids from proponents of NNOs that would improve on (but not necessarily replace) traditional network investment. For example, a 'virtual transmission' solution involving battery energy storage systems (BESS) in strategic network locations may be able to increase a REZ's hosting capacity at a low marginal and social cost. Ideally, this would be taken into account as part of the tender process for LTESAs and REZ access. However, this is challenging because it is impossible to accurately design a virtual transmission solution without first knowing technical information about the preferred REZ network design (e.g. the terminal points of new transmission lines). One way this could occur is via the following process:

- After the Infrastructure Planner released its preliminary REZ network design recommendation, it would undertake additional work in parallel with the tenders for REZ access rights and generation LTESAs (as discussed earlier in this subsection). As part of this additional work, the Infrastructure Planner would seek preliminary information from proponents in response to the preferred REZ design option (e.g. as part of an RFI ahead of the tender). This could include virtual transmission proponents. This information gathering process would need to be confidential to protect commercial-in-confidence information.

[15] Ibid, pp 24
[16] Ibid, pp 24

- If the Infrastructure Planner determined that a virtual transmission solution to increase the REZ hosting capacity appeared viable, and if the LTESA tender process was oversubscribed with good projects, then:
    - For the purpose of the Network Operator tender process, the Infrastructure Planner would split up the REZ into multiple projects, with one of the projects being virtual transmission to increase the hosting capacity. Virtual transmission proponents would participate in this component of the Network Operator tender process. Unlike the tender component(s) that did not deal with virtual transmission, the Infrastructure Planner would not stipulate the specific virtual transmission design. This is crucial to protect the intellectual property of the proponents that participated in the information gathering process. It would also encourage innovative solutions.
    - Decisions on LTESAs/REZ access rights allocations would be conditional on the results of the virtual transmission component of the Network Operator tender process. If there was a viable virtual transmission solution that would 'unlock' attractive REZ projects that otherwise would not have been able to connect, then the Consumer Trustee could award the additional LTESAs and the Infrastructure Planner could recommend the virtual transmission proponent to the Consumer Trustee.

Finally, we note that the Infrastructure Planner will require substantial expertise to undertake early works and to assess bids from prospective Network Operators. To mitigate the risk of real or perceived conflicts of interest, we recommend that the Infrastructure Planner recruits appropriate expertise, and/or seeks independent advice rather than relying on advice from a prospective Network Operator. We recommend publishing governance arrangements (e.g. ring-fencing), that address this issue. Having both traditional network businesses, virtual transmission proponents and consumer representatives engaged in the planning process (via steering committee oversight or another appropriate mechanism) may also address this issue, and simultaneously encourage co-optimisation of physical and virtual transmission solutions.

Authorising a network infrastructure project

When authorising a network infrastructure project, Shell Energy strongly supports the Consumer Trustee placing a cost cap "above which the costs would no longer justify the project"[17]. As outlined in submissions to the AER, [18] AEMO,[19] and the AEMC, [20] we believe a key weakness of the existing RIT-T process is that TNSPs are incentivised to initially underestimate network costs (in order to receive RIT-T approval), before later revising them upwards (when seeking project funding approval). This allows transmission projects to proceed even if they are unlikely to provide a net-benefit. In addition to saddling consumers with inefficiently high costs, this places non-network options (which typically have greater cost certainty) at a disadvantage.

In order to identify an appropriate cost cap, the Consumer Trustee needs to establish the cost at which an alternative project would deliver greater net-value. This alternative project could be a different network option for the REZ under consideration, or the development of a different REZ. As discussed in a previous subsection, the Infrastructure Planner must undertake a detailed cost-benefit analysis of each plausible option for a given REZ project. Given that the Consumer Trustee will presumably make use of this assessment when establishing a

[17] Ibid, pp 6

[18] ERM Power, *RE: AER's draft guidance note to support efficient delivery of actionable ISP projects*, 5 February 2021. Accessed from: https://www.aer.gov.au/system/files/ERM%20Power%20-%20Regulation%20of%20large%20transmission%20projects%20-%20Submission%20to%20Draft%20guidance%20note%20-%205%20February%202021.pdf

[19] Shell Energy, *RE: Transmission costs for the 2022 Integrated System Plan*, 25 June 2021. Accessed from: https://aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2021/transmission-costs-for-2022-isp/submissions/shell-energy.pdf?la=en

[20] Shell Energy, *RE: Transmission Planning and Investment Review Consultation Paper*, 5 October 2021. Accessed from: https://www.aemc.gov.au/sites/default/files/documents/shell_1.pdf

cost cap, it may be appropriate for the Consumer Trustee to collaborate with the Infrastructure Planner to conduct the analysis in the first place. Similarly, we re-iterate that the cost-benefit analysis should be based on costs with an upper error margin of 10% to give the Consumer Trustee reasonable certainty around the cost of the next-best option.

The Transmission Efficiency Test (TET)

As mentioned earlier in this submission, we agree that the bid of the winning Network Operator in a REZ network tender process should be binding. Therefore, we agree that the capital and operating costs in the TET should be no higher than those included in the bid.

The Paper flags that bids from prospective Network Operators should include repayment schedules that cover operating and capital costs (including a return consummate with the risk taken). However, these are only some of the cost components the Regulator will consider when conducting the TET. It seems possible that considering the capital and operating cost repayment schedule in isolation may result in a particular bid appearing to have the greatest value, even if it would come at a higher cost once incorporating the other components of regulated revenue stack. Therefore, we recommend that the Infrastructure Planner consults with the Regulator when assessing the bids from prospective Network Operators.

We also observe that the Infrastructure Planner's tender process for prospective Network Operators may not have enough participants to be competitive. Similarly, the Paper explains that some REZ network projects may not go through a tender process (e.g. if the project is primarily an augmentation of a TNSP's existing assets). In both instances, the Regulator should be required to (re)assess capital and operating costs to ensure that they are prudent. However, this could delay the infrastructure development process, so a decision would need to be made as to whether the benefits of this additional assessment outweigh the costs. Additionally, while a Network Operator should be willing to undertake activities based on its bid as part of the Infrastructure Planner's tender process, there is no guarantee the Network Operator would be willing to undertake activities based on a lower value determined by the Regulator. After considering all these factors, we consider where the tender process fails to result in a competitive outcome, consumers' best interests would be served by further review by the Regulator.

Priority transmission infrastructure projects (PTIPs)

In our view, the level of detail provided to date on the PTIP process is insufficient. We recommend that DPIE explores PTIPs more thoroughly in a future round of consultation. We note that this may already be DPIE's intent, given that "the PTIP regime is out of scope" [21] of this current consultation round, but DPIE "would still welcome feedback on this" [22].

To assist DPIE in its thinking, we offer the following preliminary observations.

Transmission projects included in the ISP are often relatively poorly defined because they are at an early stage of development. Therefore, before the Minister chooses a PTIP as their preferred method to address a forecast Energy Security Target (EST) breach, we recommend that the Infrastructure Planner undertakes due diligence and/or additional design work and consultation as necessary.

In our view, this should mimic the process used to identify the preferred option and Network Operator for a REZ project. This would help to:

- reduce the risk of consumers bearing inefficient costs

[21] DPIE, *Network Infrastructure Projects (Part 5 of the Electricity Infrastructure Investment Act 2020: Policy Paper*, October 2021, pp 9. Accessed from: energy.nsw.gov.au/sites/default/files/2021-10/network-infrastructure-projects-part-5-of-the-electricity-infrastructure-investment-act-2020-policy-paper.pdf
[22] Ibid, pp 7

- align the PTIP with broader Roadmap objectives (e.g. by sizing it to align with the 20-year development plan, rather than to solely address a short-to-medium term EST breach)
- ensure appropriate consideration is given to non-network options.

Classifying REZ network infrastructure

Question 2: What are your views on the proposed approach to defining classes of network infrastructure?

The Paper clarifies that the EII Act definition of 'REZ network infrastructure project' means that Part 5 only applies to "network infrastructure projects that form part of a REZ and consist of network infrastructure of a class prescribed by the regulations"[23].

Therefore, it is clearly important for REZ network infrastructure to fall within a class prescribed by the regulations. However, the importance of the specific class for a given piece of infrastructure is less clear. In our view, the utility of different classes will only become apparent once DPIE provides guidance on if/how each class is subject to different regulations. We recommend this occurs in a future round of consultation.

As it stands, DPIE is proposing four classes of REZ network infrastructure:

1. transmission assets as defined in the NER,
2. distribution assets as defined in the NER
3. non-network options not covered in the first two classes that meet transmission or distribution needs
4. plant or services providing system security support for a REZ.

As part of a future round of consultation, we recommend that DPIE clarifies:

- the definition of 'system security support'
- how an asset would be regulated if it spanned multiple classes (e.g. a pair of BESS providing virtual transmission and system security support services could potentially be classified in classes 3 and 4).

Question 3: Are there any risks to the effective delivery of a REZ if the necessary system strength services are not included as a class of network asset under the EII Act?

In our view, it may be appropriate to remove the fourth proposed asset class (system security) if:

- it is clear that assets providing system security were covered under one of the first three classes; or
- the national framework allows for assets providing system security services to the REZ receive appropriate compensation.

We make these comments with the knowledge that DPIE is considering "whether system strength services need to be included as a class of network assets for REZ projects, or may instead be delivered under the national framework"[24]. If system strength for REZs is delivered under the national framework rather than via the Roadmap, then there does not appear to be a clear case for the 'system security' asset class unless DPIE is concerned with system security issues other than system strength.

Further, system strength is poorly defined as a technical concept in that it can mean different things in different contexts. Therefore, before including "system strength" as a class of network assets, the various interpretations

[23] Ibid, pp 11
[24] Ibid, pp 12

should be clearly defined and communicated to all industry stakeholders. For the sake of clarity, we believe the various forms of "system strength" should be broken down into their sub-components which may include:

- provision of synchronising voltage waveform
- removal of harmonic distortion
- provision of power absorption or generation for global system frequency control purposes, and local voltage phase angle control purposes
- provision of fault current in the event of a power system fault
- provision of reactive power absorption or generation for local power system voltage control purposes
- provision of control system damping systems to prevent or dampen inter-regional and intra-regional oscillations
- provision of control system damping systems to prevent or dampen sub-synchronous and super-synchronous oscillations.

Each of these services can be provided individually or as part of a package with inverter technology, whereas they may not be available from traditional physical transmission lines, or they may initially be available but disappear as existing synchronous generation assets are decommissioned. The need for these services must be correctly assessed taking into account the relevant generator performance standards for connecting generating or integrated resource units, so as to ensure services are not procured unnecessarily at additional cost.

Transitioning assets into the national framework

Question 17: Is there a need to clarify the process for transitioning of assets between the NSW and national frameworks?

The Paper states that:

> *"The EII Act allows for the possibility that a Network Operator's asset base under the EII Act could be transitioned into a Network Operator's regulatory asset base under the national framework (that is, into the regulatory asset base determined by the AER under the National Electricity Rules)."*[25]

Our understanding is that DPIE's intent is that assets may transition for the purpose of reducing administrative complexity, and that this would be considered on a case-by-case basis at the discretion of the Regulator. However, we observe that different consumers pay under the two frameworks.

- Under the national framework, TNSPs recover all costs from transmission customers via transmission use of system charges.
- Under the Roadmap, the Network Operator's costs are recovered via payments from the SFV, which receives its income primarily from distribution-connected customers (excluding those who are exempt) and REZ access fees from connecting generators.

It is not clear why reducing administrative complexity for a Network Operator is justification for re-allocating Roadmap costs to different consumers. Additionally, the transitioning process may reduce transparency for stakeholders interested in understanding how much the Roadmap costs compared with other network investments.

[25] Ibid, pp 43

As long as there is a difference between the parties that fund Roadmap infrastructure and the parties that fund network infrastructure under the national framework, we do not support the transitioning process the paper describes.

Conclusion

Shell Energy thanks the NSW Government for the opportunity to provide early-stage feedback on the Part 5 regulations. This submission offers a range of suggestions relating to: enabling the Infrastructure Planner to undertake sufficient early works, undertaking sufficient stakeholder consultation, enabling NNOs where they deliver a net-benefit, and protecting consumers from unexpected cost increases. We also recommend a subsequent round of consultation with more detail provided by DPIE (e.g. a full set of draft regulations).

We look forward to engaging further as the NSW Government continues its Roadmap consultation.

If you would like to discuss this submission further, please contact Matthew Ladewig, Policy Adviser at [redacted] or on [redacted].

Yours sincerely

Libby Hawker
GM Regulatory Affairs & Compliance
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