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Mr Sebastian Roberts
General Manager
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Dear Sebastian,

TransGrid Revenue Proposal 2018-2023 – Update to Contingent Projects

As the Jurisdictional Planning Body for New South Wales and the Australian Capital Territory, TransGrid has recently completed the annual planning review and published the Transmission Annual Planning Report for 2017.

Since TransGrid submitted its revenue proposal in January 2017, there have been several events that are likely to change the requirements of the transmission network in New South Wales in the 2018-2023 regulatory control period.

- On 10 February 2017, New South Wales experienced unprecedented maximum demand. For the first time in 12 years, maximum demand could only be met by load curtailment and load shedding.
- In March 2017, the Prime Minister announced a feasibility study to add 2,000 MW of pumped storage to the Snowy Hydro scheme.
- In June 2017, the AEMC published the *System Security Market Frameworks Review Final Report*, recommending a greater role for Transmission Network Service Providers regarding system security.
- In June 2017, AEMO forecast higher growth in maximum demand than in previous years.
- In July 2017, COAG adopted the majority of recommendations of the *Independent Review into the Future Security of the National Electricity Market* led by Professor Alan Finkel, including:
  - the development of an integrated grid plan to facilitate the efficient development and connection of renewable energy zones; and
  - identification of priority projects and development of a framework to provide guidance on circumstances that would warrant government support to facilitate specific transmission investments

These events highlight the rapid change in the Australian energy sector at present. In this context of significant change and uncertainty, it is essential that the AER's regulatory determinations provide flexibility for Transmission Network Service Providers to best respond to the key objectives of security and affordability. This will best deliver outcomes that are in the long-term interests of consumers across the entire energy supply chain.

In response to the events above, TransGrid proposes to amend the proposed triggers for four of the contingent projects and include three new contingent projects in the 2018-2023 regulatory control period. The changes are:

- Inclusion of reliability corrective action in the triggers for existing contingent projects that reinforce the network
- Identification of new contingent projects to reinforce the network for the establishment of renewable energy zones and Snowy 2.0, and amendment of the triggers for Support South Western NSW for Renewables to incorporate the establishment of renewable energy zones

New South Wales to South Australia Interconnector (NSI)

TransGrid proposes to amend the proposed trigger for this contingent project to:

- Completion of a RIT-T with a NSW to South Australia interconnector identified as the preferred option or part of the preferred option:
  - demonstrating positive net market benefits; and/or
  - maximising benefits (which may be the least negative benefits) where the identified need is for a reliability corrective action; and/or
  - addressing system security issues
- Determination by the AER under clause 5.16.6 of the NER that the proposed investment satisfies the RIT-T
- TransGrid Board commitment to proceed with the project subject to the AER amending the revenue determination pursuant to the Rules to make allowance for the required capital expenditure.

The trigger is specific and capable of objective verification, relates to a specific location or locations, and is probable but too uncertain to include the proposed contingent project in the forecast capital expenditure in this proposal.

The NSW component of the project has a cost estimate ranging between $279 million (low capacity) to $1,084 million (high capacity) depending on the option. The cost estimate exceeds the applicable contingent project threshold of $30 million or 5% of MAR.

Reinforcement of Southern Network

TransGrid proposes to amend the proposed trigger for this contingent project to:

- One or more of the following events:
  - New generation of more than 350 MW is committed in southern NSW at any current or future connection point(s) south of Bannaby and Marulan; and/or
  - NSW import capacity from Victoria is determined to be increased by more than 350 MW due to committed expansion of southern interconnections
- Completion of a RIT-T initiated in the event of occurrence of any of the above events, including a comprehensive assessment of credible options demonstrating:
  - Positive net market benefits; or
  - Maximising benefits (which may be the least negative benefits) where the identified need is for a reliability corrective action
- Determination by the AER under clause 5.16.6 of the NER that the proposed investment satisfies the RIT-T

- TransGrid Board commitment to proceed with the project subject to the AER amending the revenue determination pursuant to the Rules to make allowance for the required capital expenditure.

The trigger is specific and capable of objective verification, relates to a specific location or locations, and is probable but too uncertain to include the proposed contingent project in the forecast capital expenditure in this proposal.

The project has a cost estimate ranging between $60 million to $397 million, which exceeds the applicable contingent project threshold of $30 million or 5% of MAR.

Reinforcement of Northern Network (QNI Upgrade)

TransGrid proposes to amend the proposed trigger for this contingent project to:

- One or more of the following events:
  - Committed retirement of more than 1,100 MW of generation in the Hunter or Central Coast area; and/or
  - New generation of more than 1,100 MW is committed in northern NSW at any current or future connection point(s) north of Armidale; and/or
  - New generation of more than 350 MW is committed in northern NSW at any current or future connection point(s) south of Liddell and Bayswater.
- Completion of a RIT-T initiated in the event of occurrence of any of the above events, including a comprehensive assessment of credible options demonstrating:
  - Positive net market benefits; or
  - Maximising benefits (which may be the least negative benefits) where the identified need is for a reliability corrective action
- Determination by the AER under clause 5.16.6 of the NER that the proposed investment satisfies the RIT-T
- TransGrid Board commitment to proceed with the project pursuant to the AER amending the revenue determination pursuant to the Rules to make allowance for the required capital expenditure.

The trigger is specific and capable of objective verification, relates to a specific location or locations, and is probable but too uncertain to include the proposed contingent project in the forecast capital expenditure in this proposal.

The project has a cost estimate ranging between $63 million to $1,600 million, which exceeds the applicable contingent project threshold of $30 million or 5% of MAR.

Support South Western NSW for Renewables

On 14 July 2017, COAG adopted the majority of recommendations of the *Independent Review into the Future Security of the National Electricity Market*. The adopted recommendations include the development of an integrated grid plan and identification of priority projects to facilitate the efficient development and connection of renewable energy zones.

It is probable that the integrated grid plan will identify renewable energy zones and priority projects in New South Wales. However, the location and scope of the renewable energy zones is not sufficiently certain to be included in the ex-ante capital expenditure forecast in the revenue proposal.

TransGrid has interest from renewable energy proponents seeking to connect to its network in South Western New South Wales. Therefore, it is probable that South Western New South Wales may be identified as a renewable energy zone in the integrated grid plan.

TransGrid proposes to amend the proposed trigger for this contingent project to:

- One or more of the following events:
  - New generation more than 400 MW is committed in South Western NSW (west of Wagga); and/or
  - New generation in North West Victoria:
    - exceeding 800 MW for connection to the Ballarat – Waubra – Ararat – Horsham 220kV Lines or connection point(s); and/or
    - exceeding 200 MW for connection to the Redcliffs – Weman – Kerang 220kV Lines or connection point(s); and/or
    - exceeding 500 MW for connection to the Ballarat – Terang – Moorabool 220kV Lines or connection point(s); and/or
    - exceeding 1,500 MW in the North West Victoria zone.
- Two or more of the following:
  - Inclusion of renewable energy zones in South Western NSW and/or North Western Victoria in AEMO's Integrated Grid Plan or similar plan as recommended by the Independent Review in to the Future Security of the National Electricity Market by Professor Alan Finkel and accepted by the COAG Energy Council
  - Notification to TransGrid by the Federal Government, COAG Energy Council, NSW Government, Victorian Government or the Energy Security Board that it considers that augmentation of the transmission network to deliver increased capacity from South Western NSW is required in order to meet or manage the expected demand for prescribed transmission services or comply with an applicable regulatory obligation or requirement associated with the provision of prescribed transmission services
  - Completion of a RIT-T relating to the augmentation
- TransGrid Board commitment to proceed with the project subject to the AER amending the revenue determination pursuant to the Rules to make allowance for the required capital expenditure.

The trigger is specific and capable of objective verification, relates to a specific location or locations, and is probable but too uncertain to include the proposed contingent project in the forecast capital expenditure in this proposal.

The project has a cost estimate ranging between $89 million to $473 million, which exceeds the applicable contingent project threshold of $30 million or 5% of MAR.

Reinforcement of Southern Network in Response to Snowy 2.0

The Federal Government's announcement of the Snowy 2.0 expansion occurred after the submission of TransGrid's regulatory proposal. As a consequence, TransGrid did not include a contingent project in its regulatory proposal addressing the transmission augmentation that would be required in order to effectively utilise the output of an expanded Snowy 2.0 scheme. TransGrid's proposal does include 'Reinforcement of Southern Network' as a contingent project. However, the scale of this contingent project as contemplated at the time of the Revenue Proposal is not sufficient to accommodate the transmission augmentation required to connect Snowy 2.0.

Consequently, TransGrid now wishes to propose a new contingent project for inclusion in its revenue proposal, to cover the works that would be associated with expanding the transmission network to enable use of Snowy 2.0. TransGrid considers that augmentation of the network to connect Snowy 2.0 is likely to be an efficient response to meet or manage the expected demand for prescribed transmission services over the 2018/19-2022/23 period, given the announced retirement of Liddell in 2022 and the prospect that the Federal Government will commit to the Snowy 2.0 expansion, although the timing and magnitude of the augmentation is not yet known. It is therefore appropriate to treat this augmentation as a contingent project, rather than incorporating it into TransGrid's capital expenditure forecast.

TransGrid proposes the following triggers for a contingent project to augment the Southern Network should a commitment be made to build Snowy 2.0.

- Notification from Snowy Hydro that its Board, with the approval of its constituent shareholders (being the Commonwealth, NSW and Victorian governments), has made a final investment decision to proceed with Snowy 2.0
- Two or more of the following:
  - Inclusion of the Snowy 2.0 transmission augmentation in AEMO's Integrated Grid Plan or similar plan as recommended by the Independent Review in to the Future Security of the National Electricity Market by Professor Alan Finkel and accepted by the COAG Energy Council
  - Notification to TransGrid by the Federal Government, COAG Energy Council, NSW Government, Victorian Government or the Energy Security Board that it considers that augmentation of the transmission network to deliver increased output from Snowy 2.0 is required in order to meet or manage the expected demand for prescribed transmission services or comply with an applicable regulatory obligation or requirement associated with the provision of prescribed transmission services
  - Completion of a RIT-T relating to the augmentation
- TransGrid Board commitment to proceed with the augmentation subject to the AER amending the revenue determination pursuant to the Rules to make allowance for the required capital expenditure

The trigger is specific and capable of objective verification, relates to a specific location or locations, and is probable but too uncertain to include the proposed contingent project in the forecast capital expenditure in this proposal.

The project has a cost estimate ranging between $831 million to $1,228 million, which exceeds the applicable contingent project threshold of $30 million or 5% of MAR.

The proposed contingent project trigger addresses the uncertainty in relation to the process by which investment in the transmission network to support Snowy 2.0 may occur, and recognises that the AER may determine that the investment is necessary to meet the expected demand for prescribed transmission services or comply with an applicable regulatory obligation or requirement associated with the provision of prescribed transmission services, even where a RIT-T assessment has not been completed.

TransGrid anticipates that transmission investment to enable the output from Snowy 2.0 to be used to meet electricity demand will form part of AEMO's inaugural integrated grid plan, due by mid-2018. The requirement for AEMO to produce this plan was a recommendation of the Finkel Review, which has recently been endorsed by the COAG Energy Council.

TransGrid is currently exploring the application of the RIT-T to a Snowy 2.0 expansion. However, it has concerns that the timing of the RIT-T process (which is expected to take around 18 months) and uncertainty around key aspects may mean that it is not completed by the time at which the Federal Government intends to make a decision to commit to the Snowy 2.0 expansion, which TransGrid currently expects to be in June 2018. The Federal Government's timing for a decision to expand Snowy 2.0 is driven by the announced date for the closure of the Liddell generator in March 2022, and the need for output from Snowy 2.0 to be available at that time in order to ensure the continuing reliability of electricity supply to NSW.

As recognised in the Finkel Review, the RIT-T may not be a suitable tool to apply to such infrastructure expansion. The RIT-T process is subject to uncertainty and potential dispute, in particular because of the requirement to model uncertain future market outcomes, at a time of unprecedented change in the sector. The recent COAG review of the RIT-T highlighted a range of key areas in which additional guidance on how to apply the RIT-T is desirable, including the incorporation of environmental policies and system security benefits, which are expected to be material in the case of the Snowy 2.0 augmentation. Whilst the AER is currently tasked with providing this guidance, it is unclear that this will be available whilst TransGrid is applying the RIT-T to the Snowy 2.0 augmentation. Any debate around the methodology to be adopted in the RIT-T at the time at which TransGrid is undertaking this analysis has the potential to further extend the timeframe for completing the assessment, and risks the additional supply not being available when Liddell retires.

The COAG Energy Council has also now endorsed the potential role for governments in supporting specific transmission investments, outside of the RIT-T process, in line with the Finkel recommendations. It is therefore possible that a different process may apply that directs TransGrid to complete the augmentation, in the event that the Federal Government confirms its intention to proceed with the Snowy 2.0 expansion.

TransGrid notes that following the triggering of a contingent project, it would be required under the NER to submit a forecast of the total capital expenditure for the contingent project, and that the AER would consult on and determine whether it is satisfied that the proposed expenditure reasonably reflects the capital expenditure criteria, taking into account the capital expenditure factors. As a consequence, it would remain incumbent on TransGrid to demonstrate the prudency and efficiency of the proposed investment, with the AER having the ability to review and challenge that demonstration.

Support Central Western NSW for Renewables

On 14 July 2017, COAG adopted the majority of recommendations of the *Independent Review into the Future Security of the National Electricity Market*. The adopted recommendations include the development of an integrated grid plan and identification of priority projects to facilitate the efficient development and connection of renewable energy zones.

It is probable that the integrated grid plan will identify renewable energy zones and priority projects in New South Wales. However, the location and scope of the renewable energy zones is not sufficiently certain to be included in the ex-ante capital expenditure forecast in the revenue proposal.

TransGrid has interest from renewable energy proponents seeking to connect to its network in Central Western New South Wales. Therefore, it is probable that Central Western New South Wales may be identified as a renewable energy zone in the integrated grid plan.

TransGrid proposes a new contingent project to support Central Western NSW for renewables. The proposed trigger is:

- New generation more than 900 MW is committed in Central Western NSW (west of Wollar and Mt Piper)
- Two or more of the following:
  - Inclusion of a renewable energy zone in Central Western NSW in AEMO's Integrated Grid Plan or similar plan as recommended by the Independent Review in to the Future Security of the National Electricity Market by Professor Alan Finkel and accepted by the COAG Energy Council
  - Notification to TransGrid by the Federal Government, COAG Energy Council, NSW Government, or the Energy Security Board that it considers that augmentation of the transmission network to deliver increased capacity from Central Western NSW is required in order to meet or manage the expected demand for prescribed transmission services or comply with an applicable regulatory obligation or requirement associated with the provision of prescribed transmission services
  - Completion of a RIT-T relating to the augmentation
- TransGrid Board commitment to proceed with the augmentation subject to the AER amending the revenue determination pursuant to the Rules to make allowance for the required capital expenditure

The trigger is specific and capable of objective verification, relates to a specific location or locations, and is probable but too uncertain to include the proposed contingent project in the forecast capital expenditure in this proposal.

The project has a cost estimate ranging between $120 million to $455 million, which exceeds the applicable contingent project threshold of $30 million or 5% of MAR.

Support North Western NSW for Renewables

On 14 July 2017, COAG adopted the majority of recommendations of the *Independent Review into the Future Security of the National Electricity Market*. The adopted recommendations include the development of an integrated grid plan and identification of priority projects to facilitate the efficient development and connection of renewable energy zones.

It is probable that the integrated grid plan will identify renewable energy zones and priority projects in New South Wales. However, the location and scope of the renewable energy zones is not sufficiently certain to be included in the ex-ante capital expenditure forecast in the revenue proposal.

TransGrid has interest from renewable energy proponents seeking to connect to its network in North Western New South Wales. Therefore, it is probable that North Western New South Wales may be identified as a renewable energy zone in the integrated grid plan.

TransGrid proposes a new contingent project to support North Western NSW for renewables. The proposed trigger is:

- New generation more than 800 MW is committed in North Western NSW (north of Bayswater and Liddell)
- Two or more of the following:
  - Inclusion of a renewable energy zone in North Western NSW in AEMO's Integrated Grid Plan or similar plan as recommended by the Independent Review in to the

Future Security of the National Electricity Market by Professor Alan Finkel and accepted by the COAG Energy Council

- Notification to TransGrid by the Federal Government, COAG Energy Council, NSW Government, or the Energy Security Board that it considers that augmentation of the transmission network to deliver increased capacity from North Western NSW is required in order to meet or manage the expected demand for prescribed transmission services or comply with an applicable regulatory obligation or requirement associated with the provision of prescribed transmission services
- Completion of a RIT-T relating to the augmentation

> TransGrid Board commitment to proceed with the augmentation subject to the AER amending the revenue determination pursuant to the Rules to make allowance for the required capital expenditure

The trigger is specific and capable of objective verification, relates to a specific location or locations, and is probable but too uncertain to include the proposed contingent project in the forecast capital expenditure in this proposal.

The project has a cost estimate ranging between $500 million to $750 million, which exceeds the applicable contingent project threshold of $30 million or 5% of MAR.

TransGrid appreciates the AER's preference for material changes affecting revenue proposals under consideration to be notified to the AER so changes can be accounted for as part of the revenue determination. Please feel free to contact Nicola Tully, Manager/Prescribed Revenue and Pricing, on (02) 9284 3120 should you require clarification or further information on these proposed changes.

Yours faithfully

Anthony Meehan
Executive Manager/Strategy and Regulation