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Productivity Commission's inquiry into investing in cheaper, cleaner energy and the net zero transformation

Transgrid welcomes the opportunity to respond to the interim report of the Australian Government Productivity Commission's inquiry into investing in cheaper, cleaner energy and the net zero transformation Inquiry.

As the primary Transmission Network Service Provider (TNSP) for NSW, Transgrid is committed to operating and advocating for outcomes that are aligned to the National Electricity Objectives (to promote the long-term interests of consumers with respect to price, quality, safety, reliability, security and emissions reduction). Our transmission network is at the heart of the National Electricity Market (NEM) and is vital to achieving the nation's net-zero emissions targets, by connecting geographically and technologically diverse, low-cost renewable generation and emerging lower-emissions electrical load.

We strongly support work to progress reforms that will ensure that consumers have access to cheaper, cleaner and reliable energy that benefits everyone. This is essential for a productive and prosperous net-zero economy.

We broadly support the recommendations outlined in the interim report as they are positive steps in ensuring we can deliver on the net zero target. This includes:

- Ensuring consistency, clarity and transparency in emissions policies across policy frameworks, Federal and Jurisdictional arrangements and planning framework integration.
- The introduction of a new emissions-reduction incentive to cover heavy vehicles.
- Changes in environment laws to expedite approvals for clean energy projects and better protect the environment.
- The introduction of measures that would assist in streamlining the approval process including national environmental standards, tighter timelines in designated 'go zones' and improvements to offset arrangements.

Transgrid is dedicated to delivering electricity at the lowest possible cost by operating efficiently and making prudent investments in new infrastructure and technology. However, we believe these measures are limited in their ability to make a meaningful impact on reducing the cost of meeting emissions targets and speeding up approvals for new energy infrastructure. This is because:

- As a TNSPs, we are regulated by the Australian Energy Regulator (AER), who assess our investment proposals and set the 'prudent and efficient' level of expenditure for the business. Certain aspects of the draft recommendations will require higher cost investments than what is currently being utilised to achieve the same outcome. Low-emissions solutions that may cost

substantially more would need to be justified to consumers and the AER. This can present a hurdle for regulated business in justifying these decisions.

- We acknowledge the interim report recommends several improvements to environmental approvals; however, these are limited to the federal level. Transgrid projects also require approval at the state level therefore, improvements in state approvals will have a material impact on speeding up environmental approvals and ultimately decreasing delays in major project delivery.

Our response to the Productivity Commission draft recommendations is contained in the attached submission.

We look forward to working with the Productivity Commission to advance reform in the sector that will allow a smooth transition to net zero. If you or your staff require any further information or clarification on this submission, please contact Zainab Dirani at [REDACTED] Policy and Advocacy Manager.

Yours faithfully

[REDACTED]
Monika Moutos

General Manager of Regulation, Policy and Governance

Productivity Commission - Pillar 5 Investing in cheaper, cleaner energy and the net zero transformation

1. Reducing the cost of meeting emissions targets

Transgrid is the Transmission Network Service Provider (**TNSP**) for NSW & ACT. Our transmission network is at the heart of the National Electricity Market (**NEM**) and is vital to achieving the nation's net-zero emissions targets, by connecting geographically and technologically diverse, low-cost renewable generation and emerging lower-emissions electrical load.

Transgrid acknowledges that greenhouse gas (**GHG**) policy settings and related mechanisms should be reviewed holistically, including settings impacting the energy, transport and industrial sectors. Therefore, we support the Productivity Commission (the **Commission**) performing this important review. The Commission should work closely with stakeholders, analysts and bodies across sectors to ensure that any final recommendation is appropriate and achievable.

The Commission's has proposed four recommendations that aim to minimise the cost of meeting Australia's emissions targets and ensure more consistent and comprehensive incentives to reduce emissions. The Commission has proposed:

- Draft recommendation 1.1 - Reducing emissions in the electricity sector after 2030.
- Draft recommendation 1.2 - The Safeguard Mechanism should cover more industrial facilities and carbon leakage provisions should be improved.
- Draft recommendation 1.3 - Introduce an emissions-reduction incentive for heavy vehicles and phase-out policy overlaps for light vehicles.
- Draft recommendation 1.4 - Apply frameworks to achieve emissions targets at least cost and improve transparency.

Transgrid's response to each of these recommendations is provided below.

Draft recommendation 1.1 - Reducing emissions in the electricity sector after 2030

The Commission has proposed that governments should prioritise introducing enduring, broad-based market settings in the electricity sector beyond 2030. This includes creating nationally consistent incentives for lowest-cost clean energy and embedding investment incentives to ensure reliability and system security are maintained.

Transgrid supports this recommendation as it will create a nationally consistent emissions reduction policy and incentives that support the effective and efficient decarbonisation of the electricity sector. Achieving net zero in Australia will require deep emissions cuts in the electricity sector and an expanded low-carbon grid will be essential to reducing emissions in other sectors.

There are three GHG Scopes. These include:

- Scope 1 - Direct emissions from sources owned or controlled by the organisation. This includes sulfur hexafluoride (SF₆), a GHG used as an electrical insulator in high-voltage equipment, and petrol/diesel generated by our vehicle and plant fleet.

- Scope 2 - Indirect emissions from electricity consumed. This includes Transgrid's indirect emissions from transmission system loss and electricity generated to power offices, depots and non-network assets.
- Scope 3 - Indirect emissions from upstream and downstream value chain activities. This includes purchased goods and services by Transgrid.

At a high level, our interpretation of this recommendation appears to only address Scope 2 emissions but does not materially impact Scope 1 or Scope 3. Overall, the focus of incentives on zero-emissions generation technology alone does not address barriers to reducing Transgrid's own Scope 1 and Scope 3 emissions, prolonging their impact in the electricity sector and broader economy.

Given this recommendation mainly addresses scope 2 sources, Network Service Providers (**NSP**) have limited pathways to pursue technologies and decisions that will materially reduce Scope 1 and Scope 3 emissions. This is because NSPs are restricted by regulatory processes and funding approvals. For example, currently high-voltage non-SF₆ solutions are generally more expensive than SF₆ solutions (where non-SF₆ solutions are available). The higher cost solution would essentially need to be justified to the Australian Energy Regulator (**AER**). This is often a barrier to NSPs investing in non-SF₆ solutions. Therefore, restrictions on our regulatory obligation would need to be addressed for any meaningful advances in this area to be made.

We note that the recommendation also highlights the need for an investment incentive to ensure reliability and system security. It is unclear how an incentive will link to reliability and system security. The NEM is entering the deep transition phase, which is between 2025 and 2035. In this phase, we will build out thousands of kilometers of new transmission to connect renewables as coal retires. During this phase, Transgrid is responsible for ensuring sufficient system strength to keep the grid stable. To do this, we must invest in the new technologies and capabilities, and contract with system strength providers to keep the network operating safely, securely and reliably for energy consumers. As such, ensuring reliability and system security will be particularly important.

We recognize that the Commission's report does not cover the issues raised by the NEM review. The draft NEM review recommendations seek to address short-, medium- and long-term investment signal needs, in service of the National Electricity Objective (which explicitly includes emissions reduction). We encourage the Commission to ensure that there is consistency in the recommendations made between this Interim report and the NEM Review to ensure there is no discrepancy, duplication or implementation complexity which could affect customer outcomes.

Draft recommendation 1.2 - The Safeguard Mechanism should cover more industrial facilities and carbon leakage provisions should be improved

The Commission has proposed that the Australian Government should lower the Safeguard Mechanism threshold so that it covers more industrial facilities. For context, the Safeguard Mechanism requires Australia's highest greenhouse gas emitting facilities to reduce their emissions in line with Australia's emission reduction targets of 43% below 2005 levels by 2030 and net zero by 2050.

Transgrid is not captured by the Mechanism, however we support this recommendation as it will ensure ongoing efficiency of the Safeguard Mechanism and continue to drive decarbonisation. We believe this change will be a critical enabler of domestic and global decarbonisation efforts. We would encourage the Commission to work closely with directly impacted stakeholders, analysts and bodies across sectors to refine recommendations in this area. This would collate industry wide ideas that can assist in the upcoming review of the Mechanism which is expected to commence in 2026/2027.

Draft recommendation 1.3 - Introduce an emissions-reduction incentive for heavy vehicles and phase-out policy overlaps for light vehicles.

The Commission has proposed that the Australian Government introduce a new emissions-reduction incentive to cover heavy vehicles.

We broadly support this recommendation, however there are currently several barriers to this proposal. These include:

- Internationally there are currently limited alternatives that businesses can procure to switch heavy vehicles and equipment from fossil fuels to electric vehicles, low-carbon liquid fuels or any other method to reduce emissions.
- Where alternatives technologies are available, the cost of substitutes is substantially higher in most cases. As a regulated business, one of the main considerations when making an investment decision between different solutions is costs to consumers.

Transgrid relies on its heavy vehicle fleet to maintain and build out the network to support the transition to net zero. A risk in our own decarbonisation efforts is the availability of commercially viable alternatives to critical technology and equipment, including our heavy vehicle fleet, and the cost of any alternative. Transgrid acknowledges that energy affordability is crucial to consumers, and so we are dedicated to delivering electricity at the lowest possible cost by operating efficiently and making prudent investment decisions in new infrastructure and technology.

Given this, we are supportive of further exploration and development of low emissions vehicles that are comparable in price to the current fleet.

Draft recommendation 1.4 - Apply frameworks to achieve emissions targets at least cost and improve transparency.

The Commission has proposed that the Australian, state and territory governments should improve the transparency of emissions-reduction policies by consistently including estimates of their cost-effectiveness in impact analyses.

Transgrid is supportive of the development of a cost-effectiveness benchmark that can be used to ensure the most efficient pathway to reduce emissions is integrated into policy, through the development of national target-consistent carbon values (**TCCV**) or a social cost of carbon (**SCC**).

In 2024, an emissions reduction objective was incorporated into the NEO which aimed to integrate emissions reduction and energy policy. As part of this change, an interim Value of Emissions Reduction (**VER**) was published to value emissions reductions within regulatory processes. The value was set at \$33/tCO₂-e in 2024, with an escalation applied each year to 2050.

The value of the Interim VER is unlikely to drive changes to operational practices and investment behaviour in the short-medium term, particularly for hard-to-abate emissions sources. This is due to the currently high-cost differential between legacy technology options and emerging alternatives (e.g. SF₆ alternatives, green steel, etc.). The market is anticipating the development of a Final VER, which will either supersede or confirm the interim value by 30 June 2026.

We believe the Final VER:

1. Should be considered in the context of any agreed national benchmarks to ensure the most efficient decarbonisation of the energy sector is pursued whilst balancing electricity consumer outcomes of cost efficiency and investment prudence.
2. Should be in line with AER's VER (or vice versa).
3. Threshold could be higher as the current VER value is too low to make any meaningful changes. A higher VER will allow networks to consider alternative solutions that have lower emissions. Indicative modelling suggests that the current value is not driving meaningful changes that allow for low emissions investment decision.

2. Speeding up approvals for new energy infrastructure

As the primary TNSP for NSW and the ACT, Transgrid is responsible for planning the shared transmission network. Transgrid is committed to working closely with landowners, communities,

First Nations peoples, regulators and local councils to minimise environmental and community impacts throughout the planning, construction, and operation of new transmission lines. For each augmentation on our network, environmental approval is a major milestone of each project.

The Commission has made several recommendations to improve regulatory standards and speed up approvals. These include:

- Draft recommendation 2.1 - Reform national environment laws.
- Draft recommendation 2.2 - Set up a specialist 'strike team' for priority projects.
- Draft recommendation 2.3 - Establish a Coordinator-General for priority projects.
- Draft recommendation 2.4 - Consider the energy transition in approval decisions.

Transgrid agrees that environmental approvals are a critical part of a project, however in our experience, the multi-layer approval process and the time delay in getting government approvals slows down major projects and consequently the energy transition.

Draft recommendation 2.1 - Reform national environment laws

The Commission has proposed that the Australian Government should reform environment laws to expedite approvals for clean energy projects and better protect the environment.

Transgrid supports the various reforms proposed to national environmental reforms, which have the potential to increase project approval and development, without compromising environmental outcomes. Measures including national environmental standards, tighter timelines in designated 'go zones' and improvements to offset arrangements should assist in streamlining the approval process.

In addition to the proposed measures, we believe the approval process could be materially simplified through the accreditation of state government approvals as also meeting Commonwealth requirements (so there is one single set of approval conditions). This will remove misalignment of definitions between State and Commonwealth approvals for the interconnector between New South Wales and South Australia (**Project EnergyConnect**) which resulted in compliance risks in relation to clearing. This resulted in Project EnergyConnect requiring a variation to resolve this. Additional improvements could have included a shared Commonwealth and NSW portal to inform regulators of events/ milestones.

If accreditation of state approvals is not adopted, we suggest:

- New provisions to allow modification of an existing Environment Protection and Biodiversity Conservation Act 1999 (**EPBC**) approval (similar to States) without requiring a completely new EPBC referral and approval.
- More flexible provisions to vary approval conditions – currently, conditions can only be varied if 'convenient' for protecting a protected matter.
- Updates to standard conditions of approval (including approval definitions and administrative requirements) are needed to better define and reflect large linear projects. For example, for Project EnergyConnect:
 - A condition requires that a pre-clearance survey must be published on the website prior to commencing any clearing in that area where ground disturbance is proposed. This is difficult to manage and is resource intensive given the linear nature of the transmission line (700km) and staged vegetation clearing. This has resulted in hundreds of pre-clearance survey reports being submitted.
 - The definition of 'completion data' needs greater clarity and is not well-defined for a large linear project.

We understand the recommendations outlined in the Interim report apply at a federal level, however there is merit in the Federal Government working with State Governments to more effectively streamline environmental approvals. Transgrid's major projects run through state lands, and therefore improvements in state approvals will have a material impact on speeding up environmental approvals and ultimately decreasing delays in major project delivery.

Given this, Transgrid also makes the following recommendations for improvements to the NSW assessment and approvals frameworks to achieve better outcomes for consumers and a more timely and smooth transition to net zero:

- Similar to the recommendation to adopt a risk-based approach to EPBC assessments, a risk-based approach should be applied to State assessments. Environmental assessment requirements should be better tailored to each project and be proportionate to the level of environmental risk a project poses.
- Enforce time limits on comments/ submissions on Environmental Impact Statements and post-approval management plans from other Government agencies. There should be adequate screening/filtering of comments prior to proponents receiving these to ensure that only key issues/items need to be addressed.
- State government should lead cumulative impact assessments, particularly in renewable energy zones.
- Acknowledgement that the NSW *Biodiversity Conservation Act 2016* and Biodiversity Assessment Method (**BAM**) are not fit for purpose for large linear projects as they have resulted in:
 - Substantially inflated 'assumed presence' offset liabilities (which range in the hundreds of millions of dollars) that do not reflect actual biodiversity impacts, and that cannot be offset, where these costs are passed onto energy consumers.
 - Delays to project approvals and construction. Extensive and time-consuming engagement is required with regulators for each project to identify and negotiate assessment methodologies and post-approval requirements.
- Where project timeframes, scale of survey and/or land access preclude delivery of BAM minimum survey requirements, a commitment to facilitating a pragmatic risk-based approach to estimating assumed presence species impact liabilities that reasonably reflect likely impacts of the project at approval is required.
- Consistent allowance for temporary (partial) impacts within easements – incentivise proponents and delivery partners to continue to avoid and minimise clearing during construction (rather than full clearing of an area/ easement).
- Reasonable consideration of 'whole-of-project' biodiversity outcomes when evaluating offsets delivery:
 - e.g. the Project EnergyConnect - East project avoided ~45% of biodiversity impacts estimated in the Biodiversity Development Assessment Report (**BDAR**). This avoidance is not considered when evaluating offset outcomes, despite the project delivering offsets substantially in excess of real-world impacts.
- Consistency of approach and advice across Conservation Programs, Heritage and Regulation (**CPHR**) regions.

- Facilitate proponent delivery of best-practice offset acquittal at lowest-cost to the consumer via allowance to defer offsets post-construction (three years post-approval - in line with timeframe for Strategic Offset Delivery Agreements):
 - Confirmation that deferred offsets can be used for projects (and concurrence from the Minister for Environment) needs to be provided upfront to give projects certainty on offsets delivery. Proponents require significant time and resources to deliver offsets prudently and efficiently.
 - The most cost-effective and best-practice approach (for biodiversity outcomes) to offsetting is through the establishment of new Biodiversity Stewardship Agreements (BSAs). However, sufficient time is needed for proponents to establish these BSAs and, generate and retire credits. Depending on the project and renewable energy transition timeframes, the opportunity to deliver best-practice offsets is not always available to the proponent.

Draft recommendation 2.2 - Set up a specialist ‘strike team’ for priority projects and Draft recommendation 2.3 - Establish a Coordinator-General for priority projects

The Commission has proposed the creation of:

- A ‘strike team’ within the Commonwealth Department of Climate Change, the Environment, Energy and Water (**DCCEEW**) with resources to efficiently assess applications against the EPBC Act and,
- an independent Coordinator-General to track the progress of approvals, help resolve delays and report to the Energy and Climate Change Ministerial Council.

Transgrid welcomes these proposals.

In addition to these two recommendations, Transgrid recommends that resourcing (a ‘strike team’ and an independent Coordinator General) should be extended into the post-approvals phase and during the construction phase to resolve any compliance related delays:

- Resolving roadblocks (stakeholder and agency review and input to draft post-approval management plans) to allow construction to commence soon after State and Commonwealth approvals have been received. It took 7 months for Project EnergyConnect – West, 9 months for Project EnergyConnect – East and 13 months for Snowy 2.0 Transmission Connection post-approval management plans to be approved after Commonwealth approvals were received, to allow construction to commence.
- For example, resourcing constraints that occurred in Project EnergyConnect resulted in the variation to conditions taking eight months for a decision to be made and seven months for the Commonwealth to respond to an incident investigation.

Draft recommendation 2.4 - Consider the energy transition in approval decisions

The Commission has proposed that the EPBC Act 1999 (Cth) should be amended to require the Minister to consider the needs of the energy transition when deciding whether to approve an energy project that will have a significant impact on a matter of national environmental significance.

We strongly agree that any assessment under the EPBC Act should consider economic and social factors of a project, along with environmental impact. This should include a requirement to consider how a project might affect Australia’s energy transition.

3. Addressing barriers to private investment in adaptation

The Commission has proposed four recommendations that aim to improve adaption, resilient housing and increase responsibility of the Climate Change Authority.

Transgrid is broadly supportive of the proposed recommendations and encourages the Commission to work with affected parties to ensure there are no unintended consequences.