

Review of Transpower's process for managing generation grid connections

Final Report

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Commercial in Confidence



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Preface

This report has been prepared for the Electricity Authority by MartinJenkins (Martin, Jenkins & Associates Ltd).

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Executive summary



Executive summary

Transpower's process for managing generation related grid connections has improved materially in recent years and is delivering connections as intended.

However, there are opportunities to improve predictability, transparency and commercial responsiveness to best respond to customer needs.

There are 5 focus areas where continued attention is advised to ensure the process remains fit-for-purpose going forward.

This report, commissioned by the Electricity Authority (EA), assesses how well Transpower's process for managing generation related grid connections is performing (load connections and system operator aspects were not assessed).

The connections process is central to New Zealand's energy system. It manages how new generation and load connect to the grid, enabling renewable investment, electrification, and security of supply.

Connection enquiries have increased sharply in recent years placing sustained pressure on Transpower's processes and resources.

In response, Transpower introduced the Connections Management Framework (CMF) in 2022, shifting from a first-in, first-served approach to a more staged, readiness-based model. Projects now only progress through the connections process when stage-gates are met.

This approach has materially improved on previous arrangements. It has done this by focusing on progressing projects that are well developed and improving efficiency. Transpower has shown a strong commitment to continuous improvement, refining the CMF through review, engagement, and benchmarking. This has increased throughput and reduced backlogs, with further improvements underway.

Overall, the process is working and broadly fit for purpose. We found the process is generally effective, efficient, and fair, supports connection of new generation, and broadly aligns with international counterparts.

However, the process is still maturing in some areas. Several areas for improvement were identified by both customers and benchmarking reports.

Customer feedback highlights uncertainty around timeframes, costs, and outcomes. This can increase project risk and impact financing and investment. **This is particularly important to developers given the increase in project financed developments.**

The current performance framework provides only a partial view of performance, but this is expected to improve with the CS2 measures (performance measures required by the Commerce Commission to measure Transpower's responsiveness to grid connections).

Transpower is attentive to these pain points, and is currently implementing improvements that are focused on these areas.

Given the overall fit for purpose finding, and that most of the identified areas for improvement are being addressed, we have not recommended any substantive design changes. Report suggestions focus on continued oversight, attention and refinement across key focus areas as these recent changes bed in.

The report identifies five focus areas and suggestions going forward. Focus areas include refining process settings, improving transparency and predictability, strengthening commercial responsiveness, improving performance measurement, and managing future system pressures through more substantive process design and policy changes where needed.

To address these focus areas, we suggest that Transpower maintains its current continual improvement focus, and the EA retains oversight of connections process performance given its importance to the energy system.



Report at a glance

Report scope

The Electricity Authority has commissioned this report to obtain an independent assessment of Transpower's grid connections management process for generation projects. The Authority is seeking to understand how the connections process is performing given the importance of its role in the energy system.

Context

- Transpower manages the grid connections process, a critical part of New Zealand's energy system.
- The volume and type of connections has been increasing, imposing pressure on the connection process.
- Transpower established the Connection Management Framework to respond to this pressure.

Overview of the process for managing generation grid connections

- Involves three key stages: application, investigation, and delivery.
- Needs to deliver connections in a timely and predictable way.
- Involves complex infrastructure development and upgrades.
- Must deliver in a context of limited resources, high demand, and high project uncertainty.
- Manages these pressures through a queue and stage gating.

Observations

- Observation 1:** Customers find the process works but they have some pain points
- Observation 2:** The process is generally comparable to international peers
- Observation 3:** Transpower is continually improving the process and is focused on the right things
- Observation 4:** The current set of KPIs provide only a partial view of performance

Fit for purpose assessment

We assessed the connections process against assessment criteria based on the stated process objectives, and what we heard from Transpower and customers about what the process needs to achieve.

We found that the process is fit for purpose but there are opportunities to further mature some areas: predictability and transparency and responsiveness to customer needs.

Suggestions

- We have identified the following focus areas as priorities for continued attention in the short- to medium-term.
- Focus area 1:** Refining process management settings
- Focus area 2:** Transparency and predictability
- Focus area 3:** Commercial responsiveness
- Focus area 4:** Performance measurement
- Focus area 5:** Responding to systemic pressures on the process

Criteria	Assessment
Effective	Mature
Efficient	Mature
Fair	Mature
Predictable and transparent	Sufficient
Responsive to customer needs	Sufficient
System outcomes	Mature



Context



Context

Transpower manages the grid connections process, a critical part of New Zealand's energy system

The connections process manages how generation and load projects connect to the national grid. Transpower manages this process, working with customers building supply and demand side connection to the grid.

This process is a key part of New Zealand's energy system. It enables new generation and electrification demand to connect to the grid in a way that supports system reliability, and underpins the timely delivery of decarbonisation and security of supply objectives.

The volume and type of connections has been increasing, imposing pressure on the process

Since around 2019, Transpower has experienced a marked increase in connection projects. Transpower notes this has been driven by grid scale solar, battery energy storage systems and wind becoming competitive in NZ. Initial enquiries and applications have significantly increased during this period.

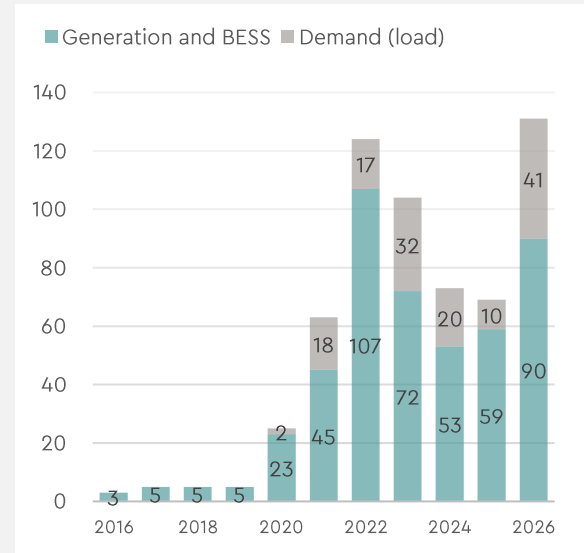
Transpower established the CMF to respond

In response to this increasing pressure, Transpower reformed its grid connections process, establishing the Connections Management Framework (CMF) in 2022. The CMF been continually improved since.

The Electricity Authority commissioned this review given its role in oversight of the electricity system

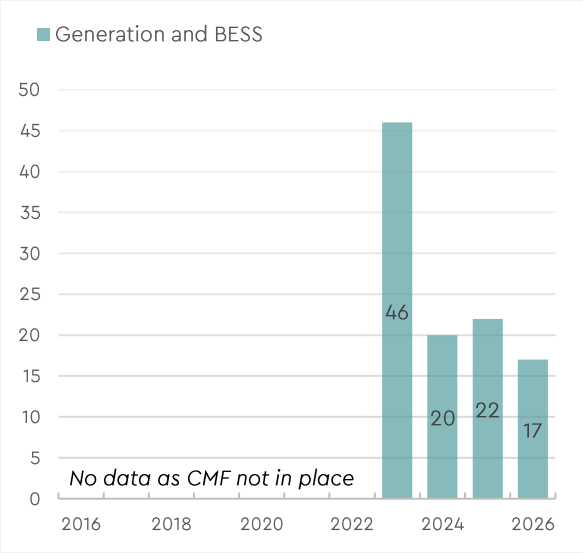
Given the importance of this process to New Zealand's energy system, the EA is keen to understand how the process is performing and whether there are opportunities for improvement. This is relevant to both the EA's oversight of the system, and its role in policy and regulation.

INITIAL ENQUIRIES



2026 data is FY YTD

APPLICATIONS



No data as CMF not in place



Overview of the process for managing generation grid connections



How the grid connections process works

The process needs to deliver connections in a timely and predictable way

The connections process needs to deliver timely and predictable outcomes for customers to support investment decisions and avoid unnecessary delays to revenue. It operates alongside other critical project development activities and therefore must progress at a reasonable pace while maintaining system safety and reliability.

The process involves complex infrastructure development and upgrades

The connections process must manage the investigation and construction of new grid infrastructure and upgrades to existing assets. This requires significant upfront engineering work and has the same complexities as other major infrastructure projects, with the additional challenge of ensuring the electricity system remains safe and reliable during delivery.

The process must deliver in a context of limited resources, high demand, and high project uncertainty

There is high demand for grid connections, but limited engineering, construction, and system capacity to progress projects.

Independent of the connections process, project progression is variable and uncertain given developers are simultaneously managing project financing, consenting, property access rights and off take agreements.

The process therefore needs to manage competing demands and uncertain project progression rates to ensure Transpower's scarce investigation and delivery resources are not tied up in projects that are otherwise stalled.

The process manages these pressures through a queue and stage gating

The connections process manages these tensions through a staged, threshold-based approach that seeks to ensure resources are only allocated to projects that are sufficiently ready.

The key stages are application, investigation and delivery, which each stage having thresholds that must be met before moving into the next stage. These stage gates are illustrated on the following page.

Transpower's stated objectives for the CMF

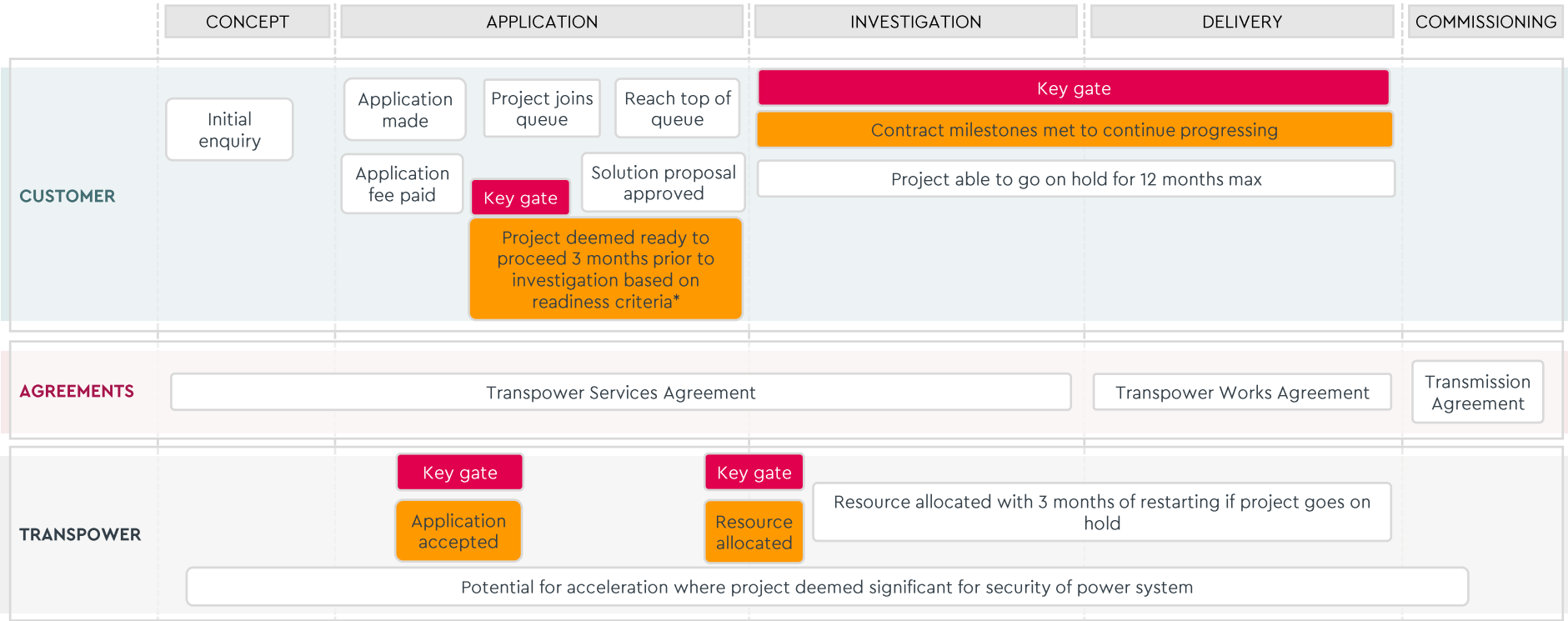
- To ensure a transparent and efficient investigation and delivery process for new connections, focusing resources to well-developed projects and promoting standardisation of end-to-end connection processes
- To provide investors with increased certainty, supporting New Zealand's continued position as an attractive place to invest in new generation and energy storage
- To maximise our contribution in enabling the Government's targets for connecting new renewable generation
- To prevent projects from unnecessarily delaying the connection of other further progressed projects
- To deploy available resources to facilitate grid connections as efficiently as possible
- To maximise Transpower's ability to maintain a safe, secure and reliable electricity supply.



Stage gating milestones across the grid connections management process

This diagram illustrates the stages of the pipeline management process, and the stage gates that projects must meet. The key gates are application acceptance, readiness assessment, allocation of investigation resource, approval of solutions proposal, and meeting project milestones through investigation and delivery.

- *Readiness criteria
- **Schedule:** the investigation start date continues to be in line with the need date
 - **Finance:** the developer can pay the balance of the application fee, and sign a Statement of Works and pay subsequent invoices on a PAYG basis (in other words, FID for the investigation stage has been secured)
 - **Property:** credible progress has been demonstrated to secure necessary rights.

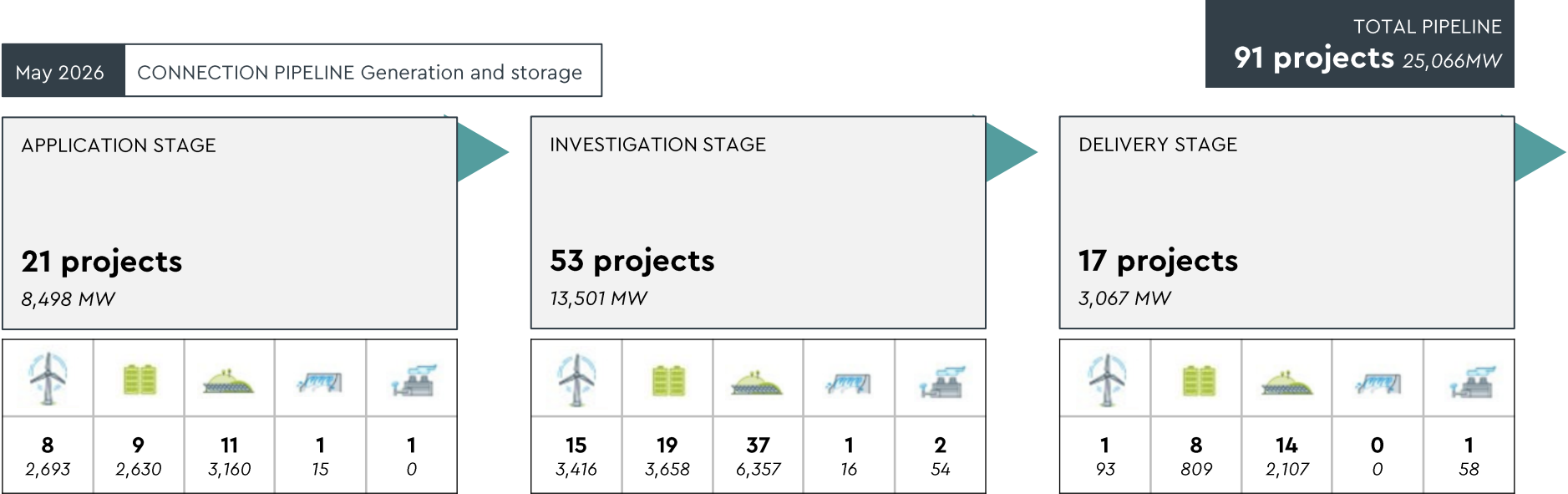


Indicative representation of the process based on Transpower documentation and interviews.

The System Operator function for connection commissioning is not included in this chart.



There are currently 91 projects and 25,066 MW in the pipeline



Since May 2020, at least 29 generation projects have been commissioned

Source: Transpower.
Note: Number of projects includes those currently on hold at the customer's request (20 in investigation stage and one in delivery) stage.



Observations



Overview of observations

We made four key observations

Observation 1:

Customers find the process works, but they have some pain points

Observation 2:

The process is generally comparable to international peers

Observation 3:

Transpower is continually improving the process and is focused on the right things

Observation 4:

The current set of KPIs provide only a partial view of performance

Observation 1:

Customers find the process generally works, but have some pain points

We interviewed four customers

These customers comprised two generator-retailers and two generation developers.

Overall, customers reported that the connections process generally works and is broadly fit for purpose

Customers reported that the current process represents a material improvement on the previous "first-in, first-served" approach.

The earlier model encouraged customers to enter the queue well before they were ready in order to secure a position. This artificially inflated the queue and created inefficient and perverse outcomes. The shift toward a "first-ready, first-connected" approach, supported by active queue management mechanisms, has reduced much of this behaviour and improved overall outcomes.

Customers also value the:

- Proactive, project-level engagement with Transpower, and its customer focus, which supports problem-solving and delivery
- Greater visibility of the connection pipeline, which improves transparency and informs commercial decision-making.

"There have been a lot of... really meaningful improvements that have been made."

– Customer

Several areas were identified for improvement

While customers generally view the process positively, they identified several areas where it could be further refined to better meet commercial and financing needs.

Noting that Transpower has undertaken continuous improvements, some feedback reflected in this report may reflect historical issues that have subsequently been addressed.

The primary concern relates to transparency and predictability

Customers reported that timeframes and costs can change unexpectedly through the connection process, creating uncertainty. This can be driven by factors such as expanding investigation scope, changing positions on timeframes, unrelated grid upgrades, delays in resource allocation, and limited contractual certainty.

One customer called for more transparency to allow the "market [to] make judgements". They noted that "transparency is the best disinfectant" and that greater transparency will prevent overly optimistic estimations of project timelines.

There is mixed understanding of some process features, including readiness and prioritisation. For example, while the readiness assessment is a key stage gate, this is not explained in the Generation Connection Guide.

Customers suggested improvements such as providing more information on process progression, and increasing the use of fixed contracting and customer-led delivery to improve control and reliability.



Observation 1:

Customers find the process generally works, but have some pain points

The investigation stage was consistently identified as the most unpredictable

Customers reported that projects can stall without clear visibility of timing, and that requirements can change over time. Protection studies were a key source of this variability, as they rely on scarce specialist capability and can expand in scope as issues emerge.

"We will agree a scope and agree a set of outputs that need to be investigated...we complete that investigation activity... ...then there'd be further additions to that, you know, not at our discretion at all, which would increase the scope, increase the time that it took, increase the cost, and basically just delay the process."

– Customer

Uncertainty can also arise from limited visibility on when projects will be resourced following pauses or restarts, as well as changes in personnel or system upgrades.

Transpower targets resource allocation within three months of restart. Forward visibility on project restarts for Transpower is limited, which presents challenges for promptly re-allocating resource.

Performance at this stage is difficult to assess. There are limited measures of investigation

duration, and Transpower is not currently able to report on the proportion of investigations delivered within contracted timeframes due to data limitations.

Anecdotally, some investigations were reported to take substantially longer than published expectations.

Transpower note that investigation progress is often largely driven by the customer, with customers pausing projects to manage other project matters (i.e. financing, consenting, etc)

Customers also noted that aspects of the process could be more commercially responsive

Customers identified opportunities to make the process more commercially responsive. This was through use of fixed-time and fixed-price contracting (including liquidated damages), increased availability of customer-led delivery, addressing first mover disadvantage, and improve the treatment of long-lead equipment and associated upfront payment requirements.

These issues are particularly relevant given the increasing use of project finance for generation developments, where grid connection is a key milestone for final investment decisions

Uncertainty in connection timing and costs can increase financing risk and lead to higher cost of

capital. In some cases, customers indicated this uncertainty had materially affected investment outcomes, including unsuccessful capital raises.

"they've estimated it's going to cost about this much and they think it'll take this long without any commercial implications."

"It makes lenders very, very wary about lending, because it's such a vital part, particularly if there's no liquidated damages...if the project's late, the liquidated damages are used to keep paying the interest that we've borrowed"

– Customer

Customers also reported limited visibility of how other projects are progressing and how this impacts their own timelines, including the effect of embedded or non-visible projects drawing on Transpower resources.



Observation 2:

The process is generally comparable to international peers

The report scope included comparison to international peers

We have relied on two reports (from BCG and Deloitte), that examine how grid connection and pipeline management operate internationally for comparison with Transpower's process.

- BCG. 2025. *Mind the Queue: Connection Reform for the Electricity Grid*. The report considers levers for managing bottlenecks in connection studies and connection delivery based on international examples. New Zealand was not considered.
- Deloitte. 2026. *Customer Connection Review*. This was commissioned by Transpower to benchmark connection charges to its international counterparts.

We summarise our observations below.

International schemes face similar pressures

The comparison reports highlight that transmission operators internationally face many of the same pressures as Transpower. One customer noted there are "fundamental issues that exist in connection queues" elsewhere. These include high volumes of speculative applications and constraints on engineering and delivery capacity leading to congestion in connection processes.

Transpower is using comparable process design features to manage these pressures

Both reports indicate that Transpower's overall approach is broadly aligned with international

practice. Transpower's internal reporting provides that its pipeline management "meets international norms, when applied to NZ market structure, and its throughput is at or above international norms."

- In its internal response to the BCG report (April 2026), Transpower noted that it is "using or plans to use 11 of the 13 levers identified in the study (within the constraints of the New Zealand regulatory regime)."
- Deloitte found that "overall, Transpower's connection process is considered transparent and fair, however there are opportunities to provide more clarity to the market and meet government objectives through earned prioritisation, deeper contestability, greater commercial certainty and escalating commitment".

Some differences in design are expected given the New Zealand-specific context

New Zealand has unique regulatory settings and market characteristics. A key difference is the access regime. Firm transmission access overseas creates value in queue positions and necessitates upfront payments, whereas New Zealand's open access model (without firm access) reduces queue value and supports a readiness-based progression approach.

Comparison report recommendations align with customer feedback on areas with potential for improvement

There is alignment between the findings of the

Deloitte and BCG reports and themes from our customer interviews. Both sources point to similar areas where improvements could strengthen outcomes:

- **Clarity and availability of information.** The Deloitte report recommends Transpower provide clearer signals to the market and government. The BCG report also identifies the importance of information to drive decision making. This aligns with customer feedback seeking greater visibility of the pipeline and improved transparency of project status and progression. While Transpower already publishes detailed information about the connection pipeline, there is an opportunity to explore how information can be further enhanced to best support market decision-making (this is discussed in Focus area 2).
- **Commercial delivery approaches and contestability.** The Deloitte report recommends that Transpower "use contestability to shorten timelines and improve risk sharing" and "become a centre of delivery assurance over execution". The BCG report identified independent connection delivery as a lever for mitigating delivery bottlenecks. This aligns with customer feedback that commercial contracting and delivery approaches could improve delivery efficiency and certainty. Transpower is currently exploring refinements to its approach in this area, and we set out further suggestions on this in Focus area 3.



Observation 3:

Transpower is continually improving the process and is focused on customer pain points

Transpower has demonstrated continuous improvement over time

This improvement process began with the introduction of the Connection Management Framework (CMF) in 2022. This Framework introduced pipeline management mechanisms to manage increased demand.

Since then, Transpower has been continually refining the process.

This includes a review in 2024 based on sector consultation. This found that the "the CMF is working so we are not changing anything fundamental", with several efficiency improvements made.

Transpower has also considered the findings of the BCG and Deloitte reports and considered changes as a result.

Recent improvements aimed at increasing throughput are outlined on the next slide.

Transpower leadership have oversight of pipeline performance

The Transpower Board and CEO have oversight of pipeline performance and the pipeline improvement programme.

Transpower reporting indicates these changes have been successful

Transpower's internal reporting provides the process has:

- increased throughput materially in the last 18 months
- the time taken to move from application to investigation has halved
- the number of un-resourced applications has decreased by 36 in 15 months.

Transpower provides that the connections process is typically not on the critical path for generation projects, although this can happen occasionally due to long lead times for transmission equipment orders.

Transpower is performing against its current KPIs, noting these only provide a partial view of performance

Transpower currently measures itself against 8 KPIs (outlined in Observation 4).

Results show the process is meeting or is close to meeting most of its KPIs. The only KPI with a material gap is the 'longest wait time to investigation'. Transpower also reports that it has 71% customer satisfaction in 2025 for CS1.

While these results indicate good performance for the application and delivery stages, there are no KPI results provided for the investigation stage (a pain

point for customers). This is discussed further in Observation 4.

In addition to these current KPIs, the Commerce Commission has required Transpower to report on a range of new performance measures (CS2). These measure Transpower's responsiveness to grid connections. These measures must be reported on annually through the Regulatory Control Period from 1 July 2025 to 30 June 2030 (RCP4).

A process update on the CS2 measures is provided in the Appendix.

Transpower has a forward work programme for improvements that is focused on the right areas

Transpower plans to or is in the processes of implementing a suite of process improvements with the E2E programme (outlined in the following slide). These initiatives are focused on improving commercial arrangements (customer led policy and long lead equipment framework), communications (formalisation of policy), and process management (readiness criteria, solution proposals, etc).

We consider the focus of this plan is well aligned with addressing the necessary areas for improvement identified by customers and benchmarking reports. This is discussed further in other focus areas.



Observation 3:

Transpower is continually improving the process and is focused on customer pain points

Process improvement	Description	Status	How this improves the process
Readiness criteria (finance, property, schedule tests)	This is a set of minimum requirements projects must meet before progressing through key stages of the process	Implemented	Ensures only sufficiently developed projects progress, reducing queue congestion and improving use of scarce resource
Contract milestones to enforce progress	This is a set of contractual checkpoints that projects must meet to continue through investigation and delivery	Implemented	Prevents projects stalling in the pipeline and enforces ongoing commitment, improving throughput
Solutions proposals (early optioneering)	This is an early-stage process to agree on a clear scope of technical and design work before progressing into preliminary design	Implemented	Brings forward complex work, reducing delays and uncertainty later in the investigation stage
Enhanced communications and pipeline information	This is improved provision of information to customers on process, timelines, and pipeline status	Implemented	Improves transparency and predictability, supporting better commercial decision-making
Formalisation of prioritisation policy	This is a policy framework that clarifies how projects are prioritised when there are competing demands	In development	Provides a more transparent and consistent basis for prioritisation decisions
Long-lead equipment framework	This is a commercial framework for early procurement of equipment with long delivery times	In development	Reduces delays and improves certainty of delivery timelines
Customer-led delivery policy	This is a policy that allows customers to design and deliver connection assets under Transpower oversight	Evolving	Improves flexibility and can accelerate delivery by leveraging developer capability
Area Grid Plans	This is a planning tool that maps regional constraints and interdependencies between project	In development	Identifies constraints and interactions early, improving coordination and sequencing
Early protection studies	This is an approach to undertake protection analysis earlier in the process	In development	Reduces late-stage scope changes and delays caused by complex technical issues
Increased resourcing and specialised teams	This is an increase in staffing and technical capability in constrained areas	Implemented	Addresses key bottlenecks, increasing throughput and reducing delays
Standardised designs	Use of standardised connection designs (e.g. digital substations) to reduce bespoke design work and streamline delivery	Evolving	Reduces design complexity and rework, shortens delivery timelines, and improves predictability of construction
Single gateway	Creation of a unified interface for customers engaging with Transpower as Grid Owner and System Operator	In development	Simplifies customer interactions, reduces duplication, and improves coordination across connection and commissioning processes



Observation 4:

The current set of KPIs provide only a partial view of performance

The current set of KPIs provides only a partial view of performance

Currently, some critical aspects of the process are not captured, including:

- **Duration of the investigation process** – The measure for investigations delivered within contracted time is currently not able to be provided. Additional measures are also needed to fully understand the performance stage. This might include average durations, excluding developer-initiated delays. The CS2 measures will partially capture this but we understand they do not seek to capture average duration of the investigation process.
- **Scale of overruns** – While this will be partially addressed by the CS2 measures, understanding the scale of cost and time overruns through investigation, is important for measuring and improving predictability and reliability.

We recognise the process is inherently difficult to accurately measure due to its stop/start nature, the potential for delays to be driven by the customer, Transpower or both, and that differences in project type and scale that reduces comparability.

Transpower's data collection capability is also maturing, with CRM recently established.

We were advised that customers progress projects in tandem to the connections process, meaning the connection process is often not on the critical path.

The CS2 measures will improve performance monitoring

Going forward, the CS2 measures will improve current reporting, as they seek to capture more information about discrete aspects of the connections process.

The overall performance measurement approach should be fit for purpose as the process matures

Despite the inherent challenges in obtaining accurate data, it is important that process performance is measured to provide confidence to government, regulators and stakeholders that the framework is operating effectively. This is discussed further in Focus area 4.

Transpower internal key performance indicators*	
Measure	Description / Metric
Concept Assessments – time to deliver, working days	Time taken to complete concept assessments
Investigations – deliver within contracted time	Delivery performance against contracted time for investigations
Delivery projects – deliver within contracted time	Delivery performance against contracted time for delivery projects
Delivery projects – deliver within contracted budget	Delivery performance against contracted budget
Longest wait time of project yet to start investigation (generation), months	Maximum wait time for generation projects pending investigation
Longest wait time of project yet to start investigation (non-generation), months	Maximum wait time for non-generation projects pending investigation
Forecast maximum wait time to start investigation (generation), months	Projected maximum wait time for generation projects to begin investigation
Forecast maximum time to start investigation (non-generation), months	Projected maximum wait time for non-generation projects to begin investigation

**Note: While we have reviewed internal reporting on these KPIs, numbers are not published in this report given they were developed for internal indication purposes and are subject to ongoing refinement given the introduction of Commerce Commission CS2 metrics.*



Fit for purpose assessment



Fit for purpose assessment

The process is currently fit for purpose, but maturing in some areas*

We assessed the process against assessment criteria based on the process objectives, and what we heard from Transpower and customers about what the process needs to do.

The assessment found that overall, the process is fit for purpose. The process is effective, efficient, fair, and supports system outcomes. This is supported by customer feedback, performance data (recognising its limitations), and comparability to international counterparts.

We heard that historically there had been issues relating to the queue, but that these had, to a large extent, been resolved by the introduction of process management mechanisms.

There are two areas in the process where there is room for improvement: transparency of the process, and responsiveness. Challenges in these areas were identified by customers, and correspond with the international comparison reports.

Transpower is already attentive to these challenges and is planning to address them. We explore these areas further in the focus areas section later in the report.

Going forward, the process is likely to remain under pressure given a continuing need for new connections and the scarcity of resource needed to investigate and deliver these connections.

Many process improvements are recent and are still bedding in, with their impact remaining to be seen.

As such, continued attention is required to ensure the process remains fit for purpose.

**Note: There are several caveats to this finding, including the limited availability of KPI metrics on the investigations stage. Caveats are outlined in Appendix 3.*

Criteria	Assessment*
Effective	Mature The process is working as intended and enables connections. This is supported by customer feedback, Transpower's self review, and data that provides from May 2020, at least 29 generation projects have been commissioned).
Efficient	Mature The process makes effective use of scarce resources through stage-gating and active queue management.
Fair	Mature The process is applied consistently and on a non-discriminatory basis. There were some customer views that it was possible for less ready projects to proceed ahead of more ready projects.
Predictable and transparent	Sufficient The process is well documented, but limited predictability of timeframes, costs, and outcomes (particularly in the investigation stage) can provide challenges for customers. The is opportunity for improved transparency and predictability.
Responsive to customer needs	Sufficient The process involves strong customer support but is less responsive to customer needs arising from project financed developments where commerciality, predictability and certainty are desired.
System outcomes	Mature The process supports connection of new predominately renewable generation. Noting there are pressures due to national scarcity of protection engineering capability. There is a need to support process certainty to encourage investment and mitigate any risk related financing costs.

**A more detailed version of this assessment table is provided in Appendix 1.*



Suggestions



Overview of suggestions

Five areas to focus on

Our review has identified five focus areas based on the themes identified by customers, the Deloitte and BCG reports, discussions with Transpower, and our desktop review and analysis.

We identified these areas as priorities for continued attention in the short- to medium-term, making suggestions for both Transpower and the EA.

Given the overall fit-for-purpose finding and Transpower's continual improvement focus, these areas do not represent issues requiring immediate corrective action.

These areas are explained in the following pages.

There are opportunities for both the EA and Transpower to address these focus areas in their respective roles

Under each focus area, we have identified what success looks like and how both Transpower and the EA could action these suggestions given their respective roles.

We recognise that Transpower is already focusing on these areas, and is in the process of implementing changes, or has plans to make continual refinements in these areas. As such, suggestions generally seek maintaining focus as these process changes bed in.

Focus area 1: Refining process management settings

Maintain a continual focus on process management settings.

Undertake periodic reviews on whether the current settings remain fit for purpose given the context.

Focus area 2: Transparency and predictability

Explore opportunities to improve the transparency and predictability of the connection process.

Focus area 3: Commercial responsiveness

Ensure commercial and contracting approaches are best meeting customer delivery needs.

Focus area 4: Performance measurement

Ensure the performance measurement framework continues to mature and is fit for purpose.

Focus area 5: Responding to systemic pressures on the process

Maintain oversight of broader connections system performance, and explore more substantive policy and design levers if the current approach is unable to manage increasing pressures on the connections process.



Focus area 1:

Refining process management settings

Suggestion

- **Maintain a continual focus on process management settings.**
- **Undertake periodic reviews on whether the current settings remain fit for purpose given the context.**

The success of the process primarily depends on the process management settings

Process management settings are the primary lever for delivering a successful pipeline. These settings involve the extent to which the process uses stage gates, readiness assessments, application fees, acceleration policy and other mechanisms to manage the progression of projects through the pipeline.

International and local experience shows insufficient use of these mechanisms can lead to congested queues, backlogs and delays. These issues can slow development and create uncertainty that reduces investor confidence. However, mechanisms also need to be enabling enough so as not to disincentivise legitimate projects through increasing risk or raising barriers to entry.

This means a delicate balance is required to achieve the optimal settings. Sub-optimal settings have the potential to slow energy generation projects, and discourage investment by increasing connections process uncertainty and risk.

While the current settings appear fit for purpose, there will likely be a need for ongoing refinement

Customers and international comparisons indicate current settings are fit for purpose. However, international comparisons also highlight that there is optionality across the range of settings available, with the optimal approach depending on the local context.

Transpower's operating context will evolve over time due to changes in demand for connections, engineering capacity scarcity and other pressures. Many recent changes are also still bedding in, and their full impacts have yet to be achieved. This means ongoing attention and refinement is likely needed to ensure the settings remain optimal.

The next slide summarises key levers based on the international comparison reports.

In Focus area 5, we consider when more substantive changes to process design and system policy may be needed.



Focus area 1:

Refining process management settings

Process management settings	Why this is worth considering	International comparison*	Transpower's current approach
Readiness / minimum maturity thresholds	Enables filtering of early-stage projects that create congestion and uncertainty	Used in UK and AUS.	Readiness is assessed at application stage and using milestones
Queue hygiene	Removes stalled projects so they do not block active or progressing ones	Used in UK.	Projects placed on hold or cancelled through milestone enforcement
Entry fees	Incentivises only committed projects progressing, and can be securitised at application	Range of models used (low to high entry fees), with UK and AUS using securitised entry fees.	Application fee due prior to investigation start, with fees for services and works due at stages.
Value-based prioritisation	Directs capacity to projects with the highest value as defined by policy	UK uses strategic alignment criteria	Only for security-of-supply cases or where project has low resourcing impact
Batch / cluster processing	Reduces duplication by assessing projects together	Used in Italy and Ireland	Moving toward clustering approaches
Increasing investigation pace through resourcing and study efficiencies	Reduces investigation timeframes through efficiency (standardising, granularity at right stage, etc) and increased resourcing	BCG report recommend this as a lever, with use in the USA.	Solution Proposal process introduced
Queue tradability	Allows reallocation of positions but introduces risks of speculation	Not used in comparable jurisdictions	Not permitted

*Based on BCG and Deloitte reports



Focus area 1:

Refining process management settings

Suggestion	What does success look like?	How could Transpower support this?	How could the EA support this?
Maintain a continual focus on process management settings. Undertake periodic reviews on whether the current settings remain fit for purpose given the context.	- Settings adapt to changing demand and system constraints - Stage-gates and queue mechanisms balance efficiency and accessibility - The pipeline is actively monitored, with early intervention to prevent backlog build-up - Settings are regularly reviewed and refined based on performance and feedback	- Maintain continual improvement approach. - Undertake periodic assessment of whether the settings remain optimal	- Maintain oversight of process management settings as the critical feature of the process that drive outcomes for the broader energy system. - Periodically review whether the settings remain optimal, including considering the role of relevant policy and regulation.

Focus area 2:

Transparency and predictability

Suggestion

Explore opportunities to improve the transparency and predictability of the connection process.

Customers highly value transparency and predictability

Grid connection is a critical milestone for generation and load projects, and is often a condition for final investment decisions.

This means customers highly value predictability and certainty about how their connection application is expected to progress. Uncertainty about cost and timeframes is particularly problematic for financiers and investors. This can increase financing costs, and can delay or prevent investment.

Customers also use certainty to manage other interdependent aspects of the project, like development of the generation project itself, off take agreements, etc.

These concerns, and the value of transparency and certainty were also highlighted by the Deloitte and BCG reports. Transparency and investor certainty are also stated objectives of the process.

Improving transparency would materially support market confidence, enable more efficient investment decisions, and reduce the risk premium applied by investors and financiers.

Transpower's summary of stakeholder feedback on its 2024 review was that "Submitters were strongly in favour of further transparency by Transpower on timeframes and throughput of the pipeline. There was some concern about publishing confidential information."

Transpower is progressing changes to improve transparency and predictability

We recognise that Transpower has made meaningful progress on this area since 2022. There is a range of information on its website about how the process works, its policies, pipeline information, and interactive maps (TPR Envision).

Transpower has also recently implemented several changes that will improve predictability like solutions proposals and is exploring initial protection studies (summarised above).

We also recognise there is a natural limit on the information that can be provided due to commercial sensitivities.

There is a need for ongoing focus on improving transparency and predictability

Given the value of this to customers, there is a need to continue exploring opportunities for improvement, and to review the impact of the recent process improvement going forward.

The following slide outlines specific areas that could support this.



Focus area 2:

Transparency and predictability

Areas to consider	Why this is worth considering	Transpower approach
Project specific communications Ensuring project specific communications are consistent and accurate, with early notification of risks of delays.	Improves predictability by giving customers clear and timely information on progress and risks.	Dedicated customer teams provide ongoing engagement and updates. Transpower also provides grid related information on its website (i.e. Envision Opportunities).
Clarity of published documentation Including clear policies and procedures so customers understand the process.	Reduces confusion and rework by ensuring customers clearly understand requirements and process expectations. Examples of opportunities for refinement include: • Clear publication of the readiness test (we were unable to identify published articulation of this) • Ensuring indications of investigation stage duration are accurate (website currently provides this stage is weeks but we heard anecdotally this can last for years in some cases).	Documentation published online and being continuously improved for clarity and accessibility.
Pipeline information Providing granular information, recognising confidentiality constraints.	Improves transparency so customers can better understand queue status and make informed decisions.	Publishes pipeline data and project status updates, with increasing granularity while managing confidentiality.
Reporting performance measurement Reporting statistics on averages, max and min durations, scale of overruns, and other measures for specific stages of the process.	This can provide customers with realistic indications of progression through the process, recognising that all projects are different. This is discussed further in focus area 5.	Performance data is improving but still maturing.
Process design to improve predictability Ensuring the process is designed in a way that avoids risk of unpredictable timing, scope and cost increases.	Customers identified concerns about late stage scope, timing and cost increases, primarily arising from protection studies, or unrelated grid upgrades.	Transpower has progressed initiatives on (e.g. solutions proposals) and is exploring early protection studies that provide early identification of the potential for complex investigations.



Focus area 2:

Transparency and predictability

Suggestion	What does success look like?	How could Transpower support this?	How could the EA support this?
Explore opportunities to improve the transparency and predictability of the connection process.	- Timeframes, costs, and risks are transparent and understood at each stage - Emerging changes are communicated early and clearly - Customers have visibility of pipeline position and dependencies - Process rules and expectations are clearly articulated and consistently applied - Uncertainty is actively managed to support investment confidence	- Continue to progress current initiatives in this area. - Explore other opportunities to improve this area, including through engaging with customers and project financiers if needed.	- Maintain oversight of transparency and predictability as an important feature of the process that drive outcomes for the broader energy system. - Continue to support this as part of the EA's role in information publication. - Consider whether policy and regulatory settings are aligned.

Focus area 3:

Commercial responsiveness

Suggestion

Ensure commercial and contracting approaches are best meeting customer delivery needs.

There is a need for commercial responsiveness given the number of project financed developments

As described above, project finance is becoming the norm for generation developments. This increases the need for the connection process to be commercially responsive, by providing commercial arrangements that meet the needs of investors and financiers.

Transpower is already progressing initiatives on this

Transpower has recognised these challenges and is actively progressing improvements to its commercial and contracting approach.

Transpower provides it will continue to review commercial arrangements to better balance system needs with customer investment decision-making. This includes updating its customer-led delivery policy (which Transpower notes it at an early stage of maturity) and refining approaches to long-lead equipment procurement.

There is an opportunity to maintain a focus on ensuring the process is responsive to commercial needs of customers

While these initiatives represent meaningful progress, there remains an opportunity to maintain a strong focus on how well the process meets customer commercial needs as recently enacted changes bed in.

Customer feedback highlights ongoing interest in this area. The Deloitte benchmarking indicates that Transpower sits toward the low-flexibility, utility-led end of the spectrum, with limited flexibility in how connections are built, delivered, owned, and maintained.

Continued attention to these issues will be important to ensure the process is best enabling investment, manages risk premiums, and remains aligned with evolving market expectations.

A summary of priority areas for focus are outlined on the following slide.



Focus area 3:

Commercial responsiveness

Areas to consider	Why this is worth considering	Transpower approach
Greater use of customer led delivery Customers design and deliver connection assets themselves, with Transpower providing oversight and assurance	Developers indicated preference for a greater ability to self-deliver to gain greater control over cost, schedule, and financing risk, and to mitigate delivery capacity constraints	Transpower acknowledges that customer-led delivery is at an early stage of maturity and is formalising guidelines and QA capability. It has been testing customer led delivery approaches with a suite of pilot projects which have been subject to customer related delays. It reports that no major issues have been reported to date, and that Transpower will continue to build capability to support this. Transpower expects to refine the model over time while retaining responsibility for core system integrity functions.
Fixed-schedule and fixed price contracting Contracting model where delivery timeframes and costs are agreed upfront rather than based on cost-plus arrangements	Improves cost and schedule certainty, which is critical for project-financed developments and reduces financing risk and delays	Transpower only offers cost-plus arrangements. KPIs report delivery performance, metrics on time and budget close to targets, however contractual certainty remains limited under current arrangements.
Addressing first mover disadvantage Early projects can bear a disproportionate share of costs for shared or oversized infrastructure	Creates fairness concerns and can discourage early investment where cost recovery from later users is uncertain	Transpower note that the Transmission Pricing Methodology sets out first mover disadvantage rules. Transpower also note that these may not fully resolve cost allocation concerns if new interconnection assets are required, and that it has raised its concerns as part of the TPM operational review.
Long lead items Managing equipment with long manufacturing lead times and early payment requirements	Can delay delivery if procurement is not managed early and create financing pressure if payments are required well in advance.	Transpower provides that it is expanding the range of equipment suppliers and developing a framework for selective pre-ordering.



Focus area 3:

Commercial responsiveness

Suggestion	What does success look like?	How could Transpower support this?	How could the EA support this?
Ensure commercial and contracting approaches are best meeting customer delivery needs.	- Commercial and contracting arrangements provide sufficient certainty on cost, timing, and risk allocation to support project financing decisions - Customers have access to delivery models (e.g. customer-led delivery or alternative contracting approaches) that provide appropriate flexibility and control - Risk is allocated in a way that is understood, proportionate, and does not unduly increase financing costs or delay investment - Commercial arrangements are responsive to different project types and financing structures (including project-financed developments) - The process supports timely progression to final investment decision, with connection risk not acting as a barrier to viable projects - Financing parties (lenders/investors) have sufficient confidence in connection arrangements to support capital raising on reasonable terms	- Continue to progress current initiatives in this area. - Explore potential for fixed price/schedule contracting.	- Maintain oversight of commercial responsiveness as an important feature of the process that drive outcomes for the broader energy system. - Consider whether policy and regulatory settings are aligned.

Focus area 4:

Performance measurement

Suggestion

Ensure the performance measurement framework continues to mature and is fit for purpose.

The current set of KPIs provides only a partial view of performance

This is explained in Observation 4. We understand there is a degree of inherent difficulty in measuring processes, and that Transpower's systems are not yet mature (CRM was introduced in October 2025).

The CS2 measures will make a meaningful improvement, although there remains an opportunity to ensure the measures are capturing aspects of the process that are important to customers (e.g. scale of overruns, average duration of investigations, etc).

It is important that performance measurement is robust to provide confidence to stakeholders

This is useful to the following parties:

- **Transpower** – to demonstrate its process is performing, and to proactively identify and understand any areas of weakness that may need addressing.
- **Government and regulators** – to understand the performance of the broader generation system. To inform any related or necessary changes to policy and regulation given many aspects of the process are driven by the regulatory settings (e.g. Transpower's ability to proactively invest, etc). More substantial changes to the process might be required in future if demand increases.
- **Generators and investors** – to provide confidence the process works, and enable informed planning and investment decisions

There is an opportunity to improve performance measurement

There is an opportunity to strengthen the performance framework so it provides a fuller picture of how the process is performing, particularly through the investigation stage. This could include measuring variability and overruns (time and cost) and segmenting data by project type. A more detailed overview is provided on the next slide.

This would need to be balanced with the practical difficulties in obtaining this data, recognising that CRM / software investments may be required.



Focus area 4:

Performance measurement

Areas to consider	Why this is worth considering	Transpower approach
Measuring more aspects within the investigations process, and linking measures to customer outcomes	Capturing metrics relevant to customer concerns and outcomes will support both understanding the process, and identifying areas for improvement. CS2 measures will improve this but still do not capture the full picture of measures of interest to customers. This might include capturing average durations of the investigations process, or the scale of time and cost overruns. This would enable assessments of predictability, which is relevant for project-financed developments. Projects vary significantly, limiting comparability. Segmenting performance by typology may enable more meaningful insights and avoid misleading averages.	Transpower has not historically been able to provide comprehensive investigation metrics, but new CS2 measures are expected to improve visibility across process stages. Transpower recognises the difficulty of comparing projects due to differences in scale, complexity, and stop/start nature, and is continuing to evolve its measurement approach.
Periodic customer experience theme feedback and engagement	Systematic collection of customer experience themes would provide insight into how the process is working in practice, including emerging pain points around predictability, communication, and commercial arrangements. This complements quantitative metrics and helps ensure the process remains aligned with customer and investor needs.	Transpower has sought customer feedback through reviews of the CMF.
Improving data collection systems and capability	Strong data systems enable accurate measurement of performance, identification of bottlenecks, and more reliable reporting of timelines.	Transpower has historically prioritised progressing projects over measurement, but will need to invest in systems and tools to support improved data capture and reporting.

Focus area 4:

Performance measurement

Suggestion	What does success look like?	How could Transpower support this?	How could the EA support this?
Ensure the performance measurement framework continues to mature and is fit for purpose.	• Performance reporting provides a complete and credible view of how the process is performing across all stages, including investigation • Key dimensions of performance (time, cost, variability, and overruns) are measured and understood • Reported data reflects customer-relevant outcomes, including predictability and reliability of delivery • Performance information is sufficiently robust to support oversight by regulators and inform process improvements • Insights from performance data are actively used to identify issues, prioritise improvements, and refine the process over time • Stakeholders (regulators, customers, investors) have confidence in reported performance and can use it to inform decisions	• Consider whether the performance measurement framework could be made more robust. • Invest in the necessary systems to obtain the data needed to measure the process.	• Maintain oversight of performance reporting to inform future policy considerations. • Engage with the Commerce Commission to ensure the current reporting measurement framework provides the necessary information to enable oversight of the process.

Focus area 5:

Responding to systemic pressures on the process*

Focus area

Maintain oversight of broader connections system performance, and explore more substantive policy and design levers if the current approach is unable to manage increasing pressures on the connections process

The process is likely to be subject to supply and demand pressures into the future

Ultimately, the success of the process depends on whether the supply of connection resource can meet the demand for connections.

We understand there are pressures on both supply and demand:

- **Scarcity of protection resource** – We were advised that there is a shortage in New Zealand of engineers with protection speciality. This can be a key constraint through the investigations process. While Transpower is exploring ways to ensure best use of available resource (like the solutions proposal), there is of course a limit to efficiency gains.
- **Increasing number of connections (both generation and load)** – Transpower's information shows a substantial increase in generation projects in recent years, with FY26 expected to be the largest value in customer investment contracts in the last 5 years. We also understand that there is potential for growing numbers of load projects (e.g. data centres), which draws on the same connections resource.

Transpower provide, "As more projects progress through the connection process, we expect there to be increased pressure on our delivery teams to manage generation and storage connections against competing work programmes."

BCG report that increasing demand for connections can bring significant delays, citing the example that in the UK "the volume of connection applications to the transmission network has grown approximately tenfold. This has led to an average delay of over 5 years for UK projects".

These pressures may warrant more fundamental changes to the process design and/or changes to broader electricity system policy if they increase

While these pressures can be managed by efficiency gains within the current system design to a certain extent, a significant increase in system pressures may warrant consideration of more substantive levers.

The BCG and Deloitte reports illustrate the range of more substantive levers that are available to manage pressures on the process. An overview of these are outlined in the next slide.

Of course, any substantive change should be assessed as suitable in the New Zealand context, need to avoid creating market uncertainty, and may need to be enabled by policy and regulatory changes.

Focus area 5:

Responding to systemic pressures on the process

Areas to consider	Why this is worth considering	Transpower approach
Value-based prioritisation / acceleration This is prioritising projects based on certain criteria	International benchmarking shows prioritisation is a lever to influence overall system outcomes where capacity is constrained, but requires clear and transparent criteria to maintain fairness. Feedback received by Transpower on its 2024 review was that "Most submitters did not support the idea of increasing Transpower's scope to accelerate projects. Submitters argued this could undermine the integrity of the CMF, could have unintended consequences and risks being exploited. However, there was support from other submitters, noting it encouraged efficiency and readiness."	Developing prioritisation principles to enable acceleration in defined cases. Limited ability to prioritise beyond security of supply, or where resource demand will be minimal (Access and Occupation process).
Anticipatory investment Investing ahead of confirmed connections to enable future demand	International evidence shows early investment can reduce delays and avoid late-stage constraints. Provides faster delivery but introduces risk around asset utilisation and cost recovery. We were advised this is limited by current regulatory settings (e.g. approvals, investment tests).	Progressing Area Grid Plans to identify future constraints.
Whole-of-system optimisation Coordinating grid and system operation decisions to optimise overall outcomes	We were advised by Transpower that "as the complexity of the system increases, there will be greater pressure on operational costs and risks." Transpower provided an example: "A relatively low-cost special protection scheme generation runback capex solution increases operational costs and risks for the System Operator (SO). This issue manifests in two ways (1) the connecting party is not charged for the SOs additional costs (therefore a whole of system cost cannot be considered); and (2) the SO is not funded in the short term for the additional costs it faces."	Transpower provide that this is "currently managed through agreed policy between the Grid Operator (GO) and SO."
Connection model This is how access to the grid is allocated when capacity is constrained (open vs managed access)	Open access supports fairness and competition, but limits ability to actively manage scarce capacity as demand increases. We were advised that the current model is driven by the regulatory settings, with the Commerce Commission's requirements for Transpower to offer new investment contract in workably competitive ways. The generally accepted view (although not set out in the Electricity Industry Participation Code) is that Transpower operate an open access regime.	Operates a connect-and-manage open access model.
Commercial risk allocation settings This is how cost and delivery risks are shared between Transpower and developers	Current allocation of cost and timing risk can affect financing and delivery outcomes, particularly for project-financed developments. These are partially driven by regulatory settings.	Uses a cost-plus, pass-through model.



Focus area 5:

Responding to systemic pressures on the process

Suggestion	What does success look like?	How could Transpower support this?	How could the EA support this?
Maintain oversight of broader connections system performance, and explore more substantive policy and design levers if the current approach is unable to manage increasing pressures on the connections process.	• The connections process continues to function effectively under increasing demand, without sustained congestion or deterioration in performance • System-level pressures (e.g. demand growth, resource constraints) are proactively monitored and clearly understood • Where pressures exceed what existing settings can manage, more substantive process, policy, or regulatory responses are considered in a timely way • Changes to process design or system settings are implemented in a coordinated way that maintains investor confidence and system stability	Engage with stakeholders, government and regulators to explore more fundamental changes where warranted.	Explore more substantive changes to the process and broader system, and accompanying policy and regulatory changes if the current process is unable to manage supply and demand pressures.

Appendices



Appendix 1: Fit for purpose assessment



Overall finding: The process is fit for purpose but is likely to remain under pressure

Criteria	Rating	Assessment
Effective Does the process enable timely connection to the grid?	Mature	- The process enables connection of generation and load projects and is broadly working as intended. - Since May 2020, at least 29 generation projects have been commissioned. - Transpower notes connection is not typically on the critical path for development, although this can occur in some cases once projects enter investigation or delivery, where timelines can extend. - Observed delays are generally driven by resource and external constraints (e.g. engineering capacity, supply chain, project readiness) rather than fundamental design issues. - The process has responded well to increased demand, with material improvements in throughput and backlog reduction over recent years. - Overall design is broadly aligned with international approaches to managing queue congestion and complexity.
Efficient Does the process make optimal use of scarce resources?	Mature	- The process management levers (e.g. readiness criteria, milestones, removal of stalled projects) are designed to ensure resources are efficiently allocated toward sufficiently mature and progressing projects. - The process is subject to ongoing refinements that are focused on improving efficiency.
Fair Is the process fair?	Mature	- The CMF applies consistent entry criteria, fees, and readiness tests, supporting non-discriminatory access to the queue. - Queue progression is based on readiness rather than project type or sponsor, supporting a principled and technology-neutral approach. - Stakeholder concerns about fairness generally relate to differences in project maturity and visibility, rather than inconsistent application of rules. Perceptions of fairness could be improved through clearer documentation, transparency of readiness criteria, and pipeline visibility. - Cost allocation issues for first-mover disadvantage and earlier than necessary payments for long lead items remain areas of concern for some participants.

Overall finding: The process is fit for purpose but is likely to remain under pressure

Criteria	Rating	Assessment
Predictable and transparent Is the process easy to understand and engage with?	Sufficient	- The process is generally transparent, with published documentation, visible stage gates, and pipeline information supporting customer understanding. - However, stakeholders report difficulty predicting timeframes, costs, and outcomes with confidence, particularly through the investigation stage. - Uncertainty is driven by factors such as evolving scope (e.g. protection studies), changes in system conditions, and limited forward visibility of resourcing. - Documentation and process design could be further strengthened to improve clarity of readiness criteria, expected timeframes, and variability, supporting greater investor confidence.
Responsive to customer needs Does the process respond to customer needs?	Sufficient	- Transpower demonstrates a strong customer service focus, with proactive engagement and support at the project level. - The framework is responsive where projects are well-developed and able to progress quickly through stage gates. - Customers identified opportunities to make the process more commercially responsive. This was through use of fixed-time and fixed-price contracting (including liquidated damages), increased availability of customer-led delivery, addressing first mover disadvantage, and improve the treatment of long-lead equipment and associated upfront payment requirements.
System outcomes Does the process support broader system objectives of enabling electrification?	Mature	- The process supports connection of new predominately renewable generation. - The process does provides connection on an open access basis. - The process needs to support investment, through providing necessary certainty and reducing risk. - This includes managing the cost of investment through avoiding risks and their associated investment premiums. There is the potential to provide greater predictability and certainty through the process to manage investment risk, and financing costs. - Broader system outcomes are influenced by external constraints (e.g. workforce availability) rather than the design of the CMF itself. Continued pressure from increasing demand may require ongoing refinement or more structural responses over time.

Appendix 2: CS2 measures



Emerging CS2 performance measures

Ref	ComCom Report Section	Name
CS2.C1	27.1.6. c(i)	Commissioning : number
CS2.C2	27.1.6. c(ii)	Commissioning: dollar value
CS2.C3	27.1.6. c(iii)	Commissioning: load – median days
CS2.C4	27.1.6. c(iii)	Commissioning: load – mean days
CS2.C5	27.1.6. c(iv)	Commissioning: gen – median days
CS2.C6	27.1.6. c(iv)	Commissioning: gen – mean days
CS2.C7	27.1.6. c(v)	Commissioning: number delivered within contracted time
CS2.C8	27.1.6. c(v)	Commissioning: % delivered within contracted time
CS2.C9	27.1.6. c(vi)	Commissioning: Exceed cost – number of projects
CS2.C10	27.1.6. c(vi)	Commissioning: Exceed cost – avg % overrun
CS2.C11	27.1.6. c(vii)	Commissioning: meet or less cost – number of projects
CS2.C12	27.1.6. c(vii)	Commissioning: meet or less cost – avg % underrun

Ref	ComCom Report Section	Name
CS2.A1	27.1.6.a(i)	Initial enquires: number
CS2.A2	27.1.6 a(ii)	Enquiries to formal investigation: average days
CS2.A3	27.1.6. a(ii)	As above: min days
CS2.A4	27.1.6. a(ii)	As above: max days
CS2.A2 – alt1	27.1.6 a(ii)	Enquiries to formal investigation: average days
CS2.A3 – alt1	27.1.6. a(ii)	As above: min days
CS2.A4 – alt1	27.1.6. a(ii)	As above: max days
CS2.A2 – alt2	27.1.6 a(ii) – alt	Application to formal investigation: average days
CS2.A3 – alt2	27.1.6. a(ii) – alt	As above: min days
CS2.A4 – alt2	27.1.6. a(ii) – alt	As above: max days

Ref	ComCom Report Section	Name
CS2.B1	27.1.6. b(i)	Investigation started : number
CS2.B2	27.1.6. b(ii)	Concept assessments delivered: average days
CS2.B2 - alt	27.1.6. b(ii)	Concept assessments delivered: average days
CS2.B3	27.1.6. b(iii)	Investigation delivered: number delivered within contracted time
CS2.B4	27.1.6. b(iii)	Investigation delivered: % delivered within contracted time
CS2.B3 - alt	27.1.6. b(iii) – alt	Investigation delivered: number delivered within contracted time
CS2.B4 - alt	27.1.6. b(iii) - alt	Investigation delivered: % delivered within contracted time

Appendix 3: Review scope



Review scope

This review was commissioned by the Electricity Authority to understand the performance of the connections management process.

SPECIFIC COMMISSIONING	REFERENCE IN THE REPORT
Performance against KPIs and stated service standards	Observation 3 summarises KPI reporting, with fulsome reporting in Appendix 2.
Customer feedback and common experience themes	Observation 1 summarises this.
Current status of Transpower's improvement programme	Observation 3 summarises this.
Contextual sense-check of whether Transpower's arrangements are reasonable by international or cross-sector standards.	Observation 2 summarises this.
A fit for purpose assessment of the current arrangement	The key finding summarises this, with Appendix 1 setting out the full assessment.
A focused set of practical recommendations for improvement (if any), prioritised by impact and feasibility.	5 suggestions are made. As these do not include specific actions, we have not prioritised them.

Scope

The following was out of scope:

- Connections relating to load (only generation connections were in scope).
- The System Operator function for connection commissioning was not reviewed as part of this report.

Methodology

Our approach to this report comprised:

- A desktop review of information provided by Transpower
- Interviews with four customers that captures both generator-retailers and developers.
- Discussions with Transpower.
- A fit for purpose assessment of the process against assessment criteria.

Caveats and limitations:

- The scope of this review is high level. We have not undertaken a detailed assessment of the features of the process.
- We have relied on the accuracy of the information provided to us, including information from Transpower and the BCG and Deloitte reports.
- KPI data is limited. In particular, while customers identified that the investigation stage is the key pain point, Transpower was unable to provide performance data on this stage. We understand this is due to data collection challenges and sample size.
- We have interviewed 4 customers to obtain customer feedback.
- The process has been subject to continual improvement over time, with several changes made in recent weeks and months. This assessment captures customer feedback based on their recent project experience, which may relate to aspects of the process that have since changed/improved.





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