Pipes & Wires

Thought leadership of critical energy & infrastructure matters
Issue 235 – December 2025

From the editor's desk…

Welcome to Pipes & Wires #235 …. this issue has a lot of NZ content, starting with a new owner for Clarus and then followed by a review of the electricity market performance, and then approving the Huntly Firming Option to mitigate dry year risk.

We then look at a couple of regulatory decision including Aurora's transition back to the DPP, further progress on the Gas DPP4, and Transpower's regulatory proposal for the new HVDC cables. We then look at transmission grid extensions in South Africa, and close with a forward look to the DPP5 electricity revenue control

I like to wish you and yours a Merry Christmas and Happy New Year, and see you back in February 2026…

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Recent client projects

Recent client projects include…

Transaction advisory ($12b and counting)

- Forecasting AugEx, RepEx and OpEx, advising on likely revenue cap implications.
- Identifying strategic, commercial and regulatory red-flags.
- Translating demand forecasts into AugEx.
- Reviewing procurement models and processes.

Climate governance and resilience

- Identifying the governance, strategy and risk programs required to align with TCFD.
- Compiling a client resilience framework for an electric distribution company.

Asset strategy and asset management practices

- Assessing the strength of an EDB's organizational culture, work process and asset management practices.
- Compiling a road map to guide an EDB on its asset management improvement journey.
- Identifying a range of structural and service delivery

Decarbonisation and energy transition

- Estimating the costs of DERMS (distributed energy resource management system) penetration for distribution feeders for a large US electric company.
- Identifying leading practices in behind-the-meter activities (eg. batteries, solar, smart data, VPP's etc) for a large US electric company.
- Identifying best Australian practices in EV charging for a large US electric company.
- Identifying key features of demand management in the Australian NEM for a large US electric company.
- Identifying best practices in grid-scale and community-scale batteries for an Australian distributor.
- Identifying best practices in EV charging on behalf of an Australian distributor.

Global trend and pattern analysis

- Identifying the global and regional trends facing transmission grid operators for a US client.

models for an electric company.

- Identifying best customer engagement practices on behalf of an Australian distributor.
- Providing an independent assessment of network condition and spend adequacy.
- Providing an independent review of asset condition and spend forecasts for a distribution company investor.

Regulatory analysis

- Reviewing the AER's recent treatment of network transformation expenditure.
- Advising on the regulatory implications of an aging timber transmission pole fleet.
- Identifying the learnings from the RIIO – ED1 reset on behalf of an Australian distributor.

Cool multimedia stuff

Awesome music video – Late Day Sun

This issue's cool multimedia stuff takes a break from electrical stuff to showcase my beautiful daughter's latest song Late Day Sun.

Industry reshuffling and capital allocation

NZ – Igneo sells Clarus

Introduction

News emerged recently that Igneo Investment Partners has agreed to sell the majority of its New Zealand business Clarus in a joint sale of the gas businesses to Brookfield Asset Management and the electricity distribution business to Powerco (whilst retaining its shareholding in the Tauhei Solar Farm). This article examines the parties involved and the deal.

A bit about Clarus

Clarus' businesses include…

- Firstgas, which supplies 300,000 gas customers through 2,500km of transmission pipelines and 4,800km of distribution pipelines.
- Rockgas, a bottled LPG supplier.
- Flexgas, which owns and operates the Ahuroa gas storage facility.
- Firstlight Network which supplies 26,355 electricity customers in the Gisborne and Wairoa districts.
- FirstRenewables, a renewable gas and solar developer.

Long-term readers might remember that Clarus was formed from the sale of some of Vector's gas pipelines in 2015.

A bit about Powerco and Brookfield

The joint buyers are…

- Gas businesses – Brookfield, a global investment firm with over $1t of funds under management
- Electricity distribution business – Powerco, New Zealand's second largest electricity lines and gas pipes company, which is 51% owned by Dexus and 49% owned by the Australian Retirement Trust (managed by QIC).

The deal and its underlying strategy

The deal price has not been disclosed, but is estimated to be about $2b. The underlying strategy includes consolidation of electricity distribution (which is very timely in light of the recommendations in Chapter 8.5 of the recent Frontier Economics Report).

The deal is still subject to approval by the Overseas Investment Office, with settlement expected in the first half of 2026.

Energy mix and grid security

NZ – review of the electricity market performance

Introduction

In early 2025 the Minister for Energy and the Minister for Resources initiated a review of the performance of electricity markets. This article examines the terms of reference, the structure of the review and the Government actions.

Terms of reference

The terms of reference of the review is to advise on the impact of market structure, market design and market rules (as set out in the Electricity Participation Code 2010) on electricity market performance, and on options to improve market performance in terms of the Government's objectives. Particular matters to be addressed include…

- Investment and access to capital.
- Hedging.
- Market rules and competition.
- Managing risk.
- Market institutions.
- Market performance monitoring.

Structure of the review

The structure of the review involves…

- The lead reviewer (Frontier Economics).
- Several peer reviewers (NERA, and a panel of experts).
- A NZ expert (Concept Consulting).

Key conclusions of the Frontier Economics review

The key conclusions of the Frontier Economics review include…

- Electricity has a vital role in NZ's economic success.
- Substantial reform is needed to deliver lasting benefits.
- Overcoming policy uncertainty and dry year risk.
- Government ownership needs to be better targeted.
- Fragmented ownership of distribution is stifling innovation, raising costs and threatening reliability.
- Forming a new Energy Authority to regulate both electricity and gas.

Government actions

The package of actions announced by Government include…

- Launching a formal procurement process for a Liquefied Natural Gas (LNG) import facility. The Government will first be seeking registrations of interest from potential providers and proposals for accelerated delivery of this facility.
- Increasing generation through supporting commercial investments by the Crown's mixed ownership model companies.
- Leveraging government energy demand to boost investment in new energy supply.

- Strengthening the Electricity Authority.
- Improving gas market transparency.
- Introducing new rules for market participants and more sophisticated security of supply assessments from Transpower to ensure the lack of dry year back-up supply can't re-emerge.
- Delivering improvements in electricity distribution business (EDB) efficiency and increasing thresholds for EDB investment in generation.

NZ – approving the Huntly Firming Option

Introduction

The Commerce Commission recently approved the Strategic Energy Reserve Huntly Firming Option, which provides Contact Energy, Meridian Energy and Mercury with access to specified generation from Genesis Energy's Huntly Power Station. This article examines NZ's dry-year risk, the HFO, and the regulatory framework and approval.

Dry year risk

Most readers will (probably) appreciate that NZ's electricity system includes a lot of hydro stations … some big, some very big and some very small … which generate about 60% of NZ's 44,000 GWh annual generation. What is perhaps less well known is that many of these stations have very limited hydro storage, and are therefore very dependent on either recurring rain or snow melt to refill their respective lakes. Hence a year with low rainfall (or low snowfall the previous year) reduces the available hydro storage and hence generation, requiring the shortfall to be made up by thermal generation … hence the term "dry year risk".

Dry year risk actually goes back to the mid-1950's (possibly even a bit earlier) as the fantastic hydro build-out of the 1940's and early 1950's displaced early municipal thermal generation, which in turn required recurring rain and snow. This emergent dry year risk prompted the construction of the coal-fired Meremere power station in the mid-1950's.

The Huntly Firming Option

The 1,000 MW coal and gas-fired steam turbine station at Huntly has and still does provide important dry year support for the grid. As Pipes & Wires has previously observed there is often a disconnect between the obvious need for dry year generation, and the willingness to pay for it.

In short, the Strategic Energy Reserve Huntly Firming Option provides Huntly's owner (Genesis Energy) with a commercial incentive to maintain 720 MW of coal or gas-fired generation via agreements with Contact Energy, Meridian Energy and Mercury. The HFO includes keeping Unit 2, a 720 MW thermal generation unit, in the market until 31st December 2035, along with 600,000 tons of coal at Huntly. Without the HFO, Unit 2 would be decommissioned in early 2026.

Genesis notes that some of the steam turbine capacity has not been allocated, and that it intends to use that unallocated capacity to design hedge products for other market participants.

Regulatory framework and approval

Ordinarily, such an agreement between competing suppliers would be prohibited under s27 of the Commerce Act 1986, which prohibits contracts or arrangements that would substantially lessen competition. After an application process and analysis by the Commerce Commission, the Commission concluded…

- That the public interest of the proposed arrangement would likely outweigh any potential lessening of competition.
- That wholesale prices in general are likely to be lower under the arrangement when compared to the counter-factual of withdrawing Huntly Unit 2 from the market.

Network regulatory decisions

NZ – Aurora's transition back to the DPP

Introduction

Aurora Energy is currently subject to a Customised Price-Quality Path (CPP). This lengthy article examines Aurora, its CPP and the Commerce Commission's final decision on the transition back to the Default Price-Quality Path.

A bit about Aurora

Aurora Energy is wholly-owned by Dunedin City Holdings, and has its roots in the Dunedin City Council Electricity Department and the Otago Central Electric Power Board respectively. It currently supplies about 95,600 electricity line customers in Dunedin, Queenstown, Wanaka and Central Otago through a network of 54,000 poles and 7,400 transformers.

Regulatory framework

The regulatory framework for electricity lines businesses such as Aurora is set out in Part 4 of the Commerce Act 1986, specifically…

- Subpart 3 sets out the Input Methodologies, which specifies methods and approaches that the Commerce Commission must follow to *inter alia* provide investor certainty.
- Subpart 6 sets out the Default Price-Quality Path (DPP) framework, which applies to all non-exempt supplies of regulated goods or services. The DPP's are compiled by the Commerce Commission using a range of information available from regulated suppliers (such as asset management plans and annual information disclosures) along with other analysis such as industry cost trends and productivity studies. This approach is therefore slightly different to the propose – respond approach used in other jurisdictions where the regulated supplier submits a single rate case to the regulator.
- Subpart 6 also sets out the Customised Price-Quality Path (CPP), for which a supplier subject to a DPP may apply if that supplier considers that it cannot adequately fund its business under a DPP.

Aurora's CPP

Aurora applied for its CPP on 12th June 2020 to address a decline in network safety and reliability resulting from historical underspending. That CPP proposed to spend $609m over the 5 year CPP period, or about $177m more than Aurora would have been able to recover from its electricity line customers under the DPP that began on 1st April 2020. Key features are summarised in the following table…

Parameter	Aurora's proposal	Commission's decision
CPP period	3 years	5 years
CapEx	$356.3m	$327.4m
OpEx	$252.9m	$236.0m

The transition back to the DPP

Aurora's CPP began on 1st April 2021 and will therefore expire on 31st March 2026, after which Aurora will transition back to a DPP for the period 1st April 2026 to 31st March 2030 (readers should note the DPP4 for all other non-exempt electricity distribution businesses began on 1st April 2025, so Aurora will be subject to the last 4 years of the DPP4). Key features of the draft decision and the final decision include…

Parameter	Draft decision	Final decision
Price roll-over	Not to allow price roll-over, notifying that different starting prices calculated from the DPP4 BBAR will apply.	Confirms that price roll-over will not be allowed, and that starting prices will calculated using the DPP4 BBAR method.
Nett allowable revenue	$663.7m.	$680.8m
P0.	About $10 per month.	About $15 per month.
X.	About $3 per month.	About $3 per month.
CapEx nett of capital contributions	$441.8m ($23.8m less than the AMP forecast).	$448.6m ($17.0m less than the AMP forecast).
OpEx	$218.4m ($29.4m less than the AMP forecast).	$243.7m ($4.2m less than the AMP).

As always, interested parties should read the full final decision.

NZ – further progress on the Gas DPP4

Introduction

Pipes & Wires has been following the Commerce Commission's compilation of the Gas DPP4 revenue control that will apply from 1st October 2026, and most recently noted the Draft Decision to adopt a 5 year period for the DPP4. This article re-caps previous articles and notes the further features of the Draft Decision to set further context for the Final Decision around Q2 of 2026.

Regulatory framework

The regulatory framework for the DPP reset is set out in the Commerce Act 1986 as follows…

- Subpart 6 of Part 4 specifies what a DPP must contain (s53O) and how starting prices, rates of change and quality standards must be set (s53P).
- Subpart 10 of Part 4 which sets out a wider range of requirements specific to gas pipelines.

Applicable pipeline businesses

The DPP4 will apply to the following gas pipeline businesses…

- GasNet.
- Powerco.
- Vector.
- FirstGas (distribution and transmission).

Comparison of the DPP3 and DPP4

The following table quickly compares the features of DPP3 and the Draft DPP4…

Parameter	Final DPP3	Draft DPP4	Final DPP4
Control period duration	4 years	5 years	
Accelerated depreciation	Yes	Yes	
WACC	6.14%	6.59%	
Total revenue - GasNet	$22.12m	$33.9m	
Total revenue - Powerco	$267.63m	$405.4m	
Total revenue - Vector	$249.63m	$399.8m	
Total revenue – First Gas (distribution)	$140.41m	$222.4m	
Total revenue – First Gas (transmission)	$691.87m	$1,118.08m	

The Commission will receive submissions on the Draft until 5pm Thursday 22nd January 2026.

Further reading

Readers may be interested in the following further reading…

- Pipes & Wires #233 – resetting the gas pipeline price-quality path.
- Pipes & Wires #231 – resetting the gas pipeline price-quality path
- Pipes & Wires #229 – NZ gas under pressure.
- Pipes & Wires #229 – Aus the Jemena gas distribution revenue reset.
- Pipes & Wires #226 – NZ upholding the accelerated depreciation decision.
- Pipes & Wires #225 – NZ appealing the gas pipeline WACC.
- Pipes & Wires #224 – Aus gas under pressure in the West.

NZ - Transpower submits regulatory proposal for new HVDC cables

Introduction

Transpower recently submitted a Major CapEx proposal to the Commerce Commission for the first stage of renewing the HVDC cables. This article looks at the planned cable placement and examines the key features of the proposal.

A bit about the planned HVDC cable replacement

The link currently includes 3 single-core copper cables rated at 1430A and 350kV that were installed in 1991 to replace the original cables (installed in 1964). These 3 existing cables will reach their expected life of 40 years around 2031, when the replacement is scheduled for.

After considering a long-list of options that included non-transmission solutions, doing nothing, cable replacements and constructing a new inter-island link (either DC or AC), Transpower identified the following 3 options for detailed analysis…

- Option 1 No investment – no component upgrades, progressive decommissioning as components fail.
- Option 2 Like-for-like replacement – replacement of the 3 existing cables with new cables of similar capacity.
- Option 3 Increased capacity – replacement of the 3 existing cables with 4 new cables giving an increased capacity of 1,400MW.

Option 3 yielded the highest positive nett market benefits, and was therefore chosen as the preferred option.

Regulatory framework

The regulatory framework for Major CapEx proposals is set out in the Transpower Input Methodologies Determination, which are made pursuant to s54S of the Commerce Act 1986.

Key features of Transpower's proposal

Key features of Transpower's proposal to provide context for the draft and final decisions are…

Parameter	Proposal	Draft decision	Final decision
Replacement	Replace 3 aging submarine cables.		
Expansion	Add a 4th cable to increase capacity from 1,200MW to 1,400MW.		
Renewals and enhancements	Replace cable termination stations on both sides of Cook Strait, spare cable storage facility, overload capacity for Pole 2.		
Expected cost (real 2025 $)	$978.1m.		
Major CapEx Allowance	$1,138,6m.		
Timing	Cable manufacture begins mid-to-late 2029, installation and commissioning in early 2030's.		

Pipes & Wires will comment further as the Draft and Final Decisions emerge.

Further reading

Readers might find the following reading interesting…

- Transpower link upgrade program.
- Pipes & Wires #231 – Transpower plans replacement HVDC cables.
- White Diamonds North by Peter Taylor (1990).
- Connecting The Country by Helen Reilly (2008) – chapter 8.
- Cook Strait HVDC Submarine Cable Replacement and Enhancement – Project Information and Consultation.
- HVDC Inter-Island (Wikipedia).
- High Voltage Direct Current: A History Of Innovation.
- The history of high voltage direct current transmission.
- HVDC history in New Zealand (Hitachi).

Engineering & technology

South Africa – extending the transmission grid

Introduction

Electric transmission companies are (usually) always extending their grids, so why would Pipes & Wires write about a grid extension program ? Interest was piqued, however, when South Africa's previously announced Independent Transmission Project's plans to build 14,000km of new transmission lines at an estimated cost of R440b (US$25b) featured a bit more prominently in the news. This brief article examines some mind-boggling numbers, looks at reasons for extending the grid, and considers some possible delivery models.

The numbers

There are some pretty big grid extension projects in progress … just by way of example, Project Energy Connect in Australia includes about 900km of lines at 330kV and 500kV.

However 14,000km is noteworthy ... even a single-circuit line with duplex conductors would require about 84,000km of conductor and about 30,000 towers !!! That 14,000km represents about 42% of Eskom's existing transmission line length, equivalent to building 10 lines from Cape Town to Johannesburg.

Reasons for extending the grid

Reasons for extending the grid include…

- Connecting currently unsupplied remote rural areas to the grid.
- Connecting new nuclear capacity, such as the recently approved 5,200MW station at Duynfontein. Further comment indicates that additional nuclear sites are under review.
- Connecting new solar and wind generation, forecast to be 29,000MW.
- Strengthening existing transmission paths with additional circuits.

The regulatory context

The regulatory context for the ITP is the Ministerial Determination of March 2025, made under s34(1)(b) of the Electricity Regulation Act 2006. Key feature include…

- Defining a pilot project of 1,164km of 400kV lines in the Northern Cape, the North-West and Gauteng. This is consistent with the Integrated Resources Plan and the Transmission Development Plan.
- The procurer will be the Department of Electricity and Energy.
- The buyer will be the National Transmission Company of South Africa SOC Ltd (a wholly-owned subsidiary of Eskom).
- The procurement process will involve competitive tendering by independent transmission providers for construction and subsequent operation for a concessionary period, after which ownership will transfer to the National Transmission Company.

Regulatory policy

NZ – looking forward to the DPP5

Introduction

Non-exempt electricity distribution businesses (EDB's) are subject to the Default Price-Quality Path regime*, which is currently the fourth DPP (DPP4) covering the period 1st April 2025 to 31st March 2030. This article examines the Commerce Commission's recently announced early thoughts for the fifth DPP (DPP5) which will run from 1st April 2030 to 31st March 2035.

* Except those EDB's that are subject to a Customised Price-Quality Part (CPP) eg. Aurora Energy.

Key themes identified by the Commission

The Commission has identified the following major themes…

- Possible acceleration of the currently observed change and uncertainty.
- Where and when network investment will be required, noting policy, demand and market evolution as key drivers.
- Increasing demand, offset by alternative methods and technologies for meeting demand.
- Changing expectations from consumers, government and the sector itself.

Issues that the Commission is considering

The Commission notes that the review of the DPP4 setting process and the review of the Input Methodologies provides an opportunity to ensure that the DPP framework remains fit for purpose. Issues being considered include…

- How best to promote efficient use of existing network capacity, including greater use of managing or encouraging load-shifting.
- Encourage least-cost services.
- Encourage improved asset management practices.
- Create the optimal frameworks for addressing uncertainties, including in-period adjustment mechanisms.

General stuff

Guide to NZ electricity laws

I've compiled a "wall chart" setting out the relationship between various past and present electricity Acts, Regulations, Codes etc in sort of a chronological progression. To request your free copy, pick here. It looks really cool printed in color as an A2 or A1 size.

A bit of light-hearted humor

What if price control had been around in the 1920's and 1930's ? A collection of classic historical photo's with humorous captions looks at some of the salient features of price control. Pick here to download.

Extending the above, a second collection of classic historical photo's with humorous captions looks at some topical issues of regulating emerging technologies. Pick here to download.

A potted history of electricity transmission

I've recently compiled a potted history of electricity transmission. Pick here to download.

Wanted – old electricity history books

Now that I seem to have scrounged pretty much every book on the history of electricity in New Zealand, I'm keen to obtain historical book, journals and pamphlets from other countries. So if anyone has any unwanted documents, please email me.

House-keeping stuff

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