Meeting Date: 21 October 2021

2021 DRY YEAR EVENT REVIEW

SECURITY AND RELIABILITY COUNCIL

This paper provides the two major components of the 2021 Dry Year Event review. In addition to the SRCs comments on the two reports, we also seek the SRCs views on the event and any additional advice the SRC can give the Authority.

Note: This paper has been prepared for the purpose of the Security and Reliability Council. Content should not be interpreted as representing the views or policy of the Electricity Authority.

1 The 2021 Dry Year event

- 1.1.1 The Security and Reliability Council's (SRC) functions under the Electricity Industry Act 2010 include providing advice to the Electricity Authority (Authority) on:
 - a) the performance of the electricity system and the system operator
 - b) reliability of supply issues.
- 1.1.2 At its 4 August meeting, the SRC reviewed the draft scope for the review, and provided advice to the Authority. The review was proposed to contain several parts:
 - an independent external review of the performance of the Authority, system operator and the security of supply policy regime
 - a media sentiment report
 - detail policy setting reviews of the stress test and dry year management policies
- 1.1.3 The purpose of this paper is to:
 - enable the SRC to review drafts of the first two components and provide comments and feedback
 - enable the SRC as a group to provide advice to the Authority on any aspect of the 2021 Dry year event

2 Next steps for the review

- 2.1.1 MartinJenkins staff will take any comments that need to be incorporated into the final report, an include those in the next draft.
- 2.1.2 The report will be sent to the Authority Board for its comment and completed by MartinJenkins as the draft for publication.
- 2.1.3 The Authority will publish the draft report for industry consultation, giving industry and the wider public an opportunity to give their views.
- 2.1.4 The report will be presented to the Authority Board to finalise and decide on any actions.

3 Questions for the SRC to consider

- 3.1.1 The SRC may wish to consider the following questions.
- Q1 What advice would the SRC like to give the Authority on the 2021 Dry Year event?
- Q2 What advice would the SRC like to give the Authority on the independent external reviewer's report?
- Q3 What further information, if any, does the SRC wish to have provided to it by the secretariat?

4 Attachments

4.1.1 The following items are included as attachments to this paper:

- a) Draft report "Electricity Authority Dry Year Review 2021" by MartinJenkins
- b) Media insights report "Dry Year Event" by mediamine

Appendix A Draft report "Electricity Authority Dry Year Review 2021"

Appendix B Media insights report "Dry Year Event"

2021 DRY YEAR EVENT

Draft Report

An independent review commissioned by the Electricity Authority

14 October 2021



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PREFACE

This report has been prepared for Electricity Authority by Daniel Miles, Bryan Field and Sargam Shah from MartinJenkins (Martin, Jenkins & Associates Limited).

MartinJenkins advises clients in the public, private and not-for-profit sectors. Our work in the public sector spans a wide range of central and local government agencies. We provide advice and support to clients in the following areas:

- public policy
- evaluation and research
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Our aim is to provide an integrated and comprehensive response to client needs – connecting our skill sets and applying fresh thinking to lift performance.

MartinJenkins is a privately owned New Zealand limited liability company. We have offices in Wellington and Auckland. The company was established in 1993 and is governed by a Board made up of executive directors Kevin Jenkins, Michael Mills, Nick Davis, Allana Coulon, Richard Tait and Sarah Baddeley, plus independent director Sophia Gunn and chair David Prentice.



14 October 2021 9.06 am Commercial In Confidence

EXECUTIVE SUMMARY

Context

In the late parts of 2020, a level of nervousness began to emerge amongst key players in New Zealand's electricity industry as to the security of energy supply. Sure enough, in early 2021 hydro lake levels continued to trend downwards, toward the official risk lines published by Transpower in their capacity as the system operator.

In March/April, perceived risk had reached the level that a number of deals were struck by generators to ensure security of electricity supply, including the diversion of natural gas from industrial uses towards power generation. Noticeable media and political attention turned to security of electricity supply over this period.

In May the rain came, boosting lake levels well out of any danger zone – and ultimately above where they would normally be expected to be by the latter part of 2021.

The Electricity Authority, in its role as the system's regulator, has commissioned MartinJenkins to conduct an independent review of the dry year event to surface opportunities for system improvement. Our scope included:

- The Authority's actual and perceived performance during the 2021 dry year event
- The system operator's actual and perceived performance during the 2021 dry year event
- The dry year risk regime and incentives
- The preparedness of the industry (including the Authority)

Our scope did not include overarching suitability of market structure or trends within wholesale prices, except in the context of the acute impact of wholesale pricing on securing the outcomes sought by the regime. While the report comments on the political environment in as much as that had an impact on the issues within scope, it does not seek to form judgement on the appropriateness of those political settings – merely their impacts on the issues within scope.

Our scope also did not include the regime's overarching policy purpose. This means that, while industrials did choose to shutter production in order to reduce electricity demand and conserve generation capacity, this is not a system failure and in fact was the system working as intended. Whether the system **should** incentivise conservation to that degree at the levels of risk we saw is another question altogether and speaks to the risk appetite of the Electricity Authority and broader political system as to security of supply.



Findings

The system worked as intended. The 2021 dry year demonstrated the resilience of New Zealand's electricity market mechanisms, even under the added stress of further environmental factors such as gas supply pressures. Water was preserved appropriately through use of alternative generation mechanisms, and the country was retained an appropriate hydro supply buffer to take forward to 2022.

However, no system is perfect. Markets thrive on certainty and transparency, and both could have been improved throughout the 2021 dry year event.

The core guiding policies underpinning the regime effectively gave certainty to market participants, and the system operator executed their duties appropriately under those policies. However, subjective elements in policies have detracted from certainty, as has the perceived potential for political intervention overriding the market regime.

The publicly available risk modelling produced by the system operator provided certainty and transparency around the level of risk that the market was experiencing. However, that certainty was undermined with increasing doubts as to the quality of assumptions around the gas market, two sets of risk curves, and overlapping roles and responsibilities in communicating this information to the Minister. The mandatory information requests issued by the Authority brought some needed confidence as a response, although at the cost of strained relationships with the system operator.

Communications from Transpower adequately followed the policies set out by the Authority, in maintaining transparency of the hydro-shortage risk levels and exercising their duty to produce daily reporting of risk modelling as the risks increased. Political certainty and corresponding public certainty were weaker, partially as a result of unclear roles and responsibilities, and there was an opportunity to do more to explain the impact of market mechanisms to consumers.

Overall, larger market participants were prepared for a dry year and had plans in place to manage the risk. Certainty in market behaviour was undermined by the lack of standing arrangements with gas competitors to reallocate gas to electricity generation in specified situations. The political uncertainty experienced by participants, while ultimately unhelpful for confidence within the market system, was likely a necessary part of ensuring gas could be reallocated from Methanex, and without transparent arrangements to ensure thermal fuels will be made available in times of high risk, political uncertainty will remain a part of the system.

Both Transpower and the Authority were also prepared for a dry year, but again, with opportunities to improve. Enhancement of policies to remove subjectivity, and to avoid the need for reactive information requests in favour of proactive disclosure in some situations, combined with regular testing of those policies in trial runs would further add to certainty and transparency within the regime.

The general consensus was that the Authority and Transpower were adequately prepared for the dry year, with some opportunities for improvement around subjectivity in policies, communications, and a proactive disclosure regime.



FULL REPORT

Our approach

As part of the services, our report is informed by a document review of the risk regime, incentives and timelines of the events that occurred over the dry year period, and feedback from interviewees with the electricity industry, including but not limited to: MBIE, Transpower, and the Authority.

We have incorporated timelines into our report to understand the full picture of how events have played out over the dry year period along with a recollection of events from the retailer, generator, system operator and Regulator's view.

The process of our review included 24 interviews covering most of the electricity industry to get their perspective on gaps in the dry year risk regime and the preparedness of the Authority and the system operator, while carefully considering the media responses and how justified they were in proportion to the events. The extended interview list is included in Appendix 1.

Findings

New Zealand's electricity sector is, at its core, a regulated free market, relying on market incentives to direct participants towards achieving an efficient and effective market operating in the interests of consumers of electricity. Markets thrive on certainty, which offers participants the confidence to make decisions without needing to include a significant risk premium in their prices.

The 2021 dry year event offers several lessons in the power of certainty in achieving efficient market outcomes. Between January and June 2021 several examples became clear as to how the regime can create the certainty required for participants to act in ensuring security of electricity supply – as well as examples where action or inaction created uncertainty and detracted from the ability of participants to confidently make the choices needed to deliver the outcomes sought by the policy regime surrounding the market.

Environmental Factors

Dry years occur periodically in New Zealand and they always come with some degree of severity given the nation's heavy reliance on hydroelectric power and low levels of hydro storage (compared with other countries). What made this dry year event unlike many in the past was not, in fact, the dryness of the year. Rather, participants saw this dry year event as the perfect storm of several factors, all of which detracted from market certainty:

A mild la niña weather system

Traditionally, New Zealand's hydro storage is at its lowest levels around October of each year, before recovering through to around May/June. This pattern began to play out per usual in 2020, but after lake levels recovered sharply from their low by November, they then more or less plateaued through to the end of January without increasing further, meaning we began the year



with a lower-than-expected supply of water in lakes - as shown in Figure 1. This sequence was apparent by November/December, at which point most market participants began to respond.

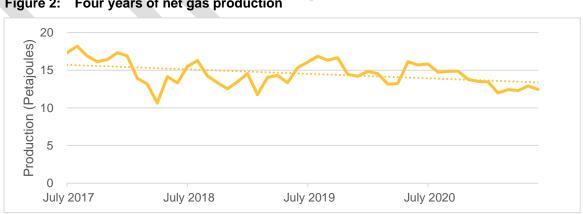
5,000 4,000 Storage (GWh) 3,000 2,000 1,000 0 June 2017 June 2018 June 2019 June 2020 June 2021

Figure 1: Four Years of Hydro Storage

Source: Electricity Authority

Shortages in gas supply 2

Since 2018, production from the Pohokura gas field has been steadily reducing, which added to a level of uncertainty around the availability of gas - particularly for electricity production, where generators must compete with the industrial sector for supply of gas. While gas makes up a relatively low portion (13.8% in 2020) of New Zealand electricity generation¹, it plays a critical role in dealing with demand peaks and providing alternatives when attempting to preserve water for future hydro generation needs. Net monthly gas production in New Zealand is depicted in Figure 2.



Four years of net gas production

Source: MBIE

¹ MBIE, 2021. Electricity webtables. https://www.mbie.govt.nz/assets/Data-Files/Energy/nz-energy-guarterly-and-energy-in-nz/electricity.xlsx

- A political environment generating uncertainty around investment in gas production

 Government had expressed a clear desire to transition New Zealand to 100% renewable energy, including ending exploration of offshore gas. The uncertain pace of this transition limited the confidence of the market to invest in development and maintenance of existing infrastructure.
- 4 An increased cost of carbon

This was the first dry year event where carbon pricing had an impact. Increasing reliance on thermal generation fuels such as gas and coal now carried an additional premium over prior dry years, with NZ units trading at up to \$40 per tonne of carbon dioxide equivalent (tCO₂e) for most of the period – compared with \$20-30 per tCO₂e only a year before.

While all these factors added uncertainty into the electricity sector, none of them were surprises by early 2021. In our view, the industry was as well prepared as could reasonably be expected. It is easy to say in retrospect that the industry should have contracted for greater supply of thermal fuels – but the reality is that those measures to further de-risk a system carry a very real economic cost which would ultimately be borne by consumers.

No system will ever be resilient to any possible circumstance, and the incentive regime and regulatory environment created by the Authority sets a low appetite for risk around security of supply – as can be seen in generators acting to manage risk, preserve water, and negotiate for greater gas availability prior to even reaching a 1% chance of future shortage. Far from demonstrating a fragile system, the 2021 dry year event highlighted a well-functioning market which responded as expected to even minimal levels of risk.

Policies underpinning the regime

Critical to confidence in a regulated market system is a clear set of policies providing an environment in which market participants clearly understand the rules, accountabilities, and consequences of the system.

The primary policy underpinning the supply security is the SOSFIP (Security of Supply Forecasting and Information Policy). In crisis situations, this is supported by the EMP (Emergency Management Policy) and SOROP (System Operator Rolling Outage Plan). In the instance of this dry year event, no participant appears to have ever reached the level of concern that would have seen them considering the impact of rolling outages on their business, so SOROP was largely not considered.

We found that the SOSFIP and EMP was well understood amongst market participants, and supplied a clear, rules-based regime in which participants were able to make choices. It set clear metrics that acted as trigger points for various system actions – such as a switch to daily reporting from the system operator, resource consent triggers for release of water from contingent storage, and commencement of an official conservation campaign. This well-understood regime offered an environment of certainty to the market.

The potential need for an official conservation campaign provided the correct market incentive, with most participants highly conscious of the payment to consumers it would require. This clear financial imperative provided an appropriate incentive on the integrated generation and retail businesses, though this was much more keenly felt by the smaller independent retailers in the market.



This clearly set out policy regime was highly valued by market participants, whose confidence was threatened in the later stages of the dry year event by building media and political pressure. This pressure led several participants to perceive a likelihood of coming political intervention in the market – with one interviewee even raising a perceived risk of price caps being implemented.

The irony of this was that we perceived one of the largest incentives driving the actions of market participants (more than any incentive written into policy) was the preservation of the certainty that rules-based regime provided. If the rules were to be rewritten on the fly, market certainty would have been shattered – and as a result, it seems participants acted earlier and more forcefully than they might have otherwise in order to avoid this risk and ensure that the rules-based regime endured.

There were some features of the EMP which did detract from its otherwise effective provision of market confidence. As an example, the EMP specifies that, should the system operator believe that lake levels are likely to reach the 1% risk curve (the risk curves are discussed further later in this report), then they must begin to provide daily reporting on risk. The clear trigger point of the curve is somewhat undermined by the subjective requirement placed on the system operator to estimate when the event might happen.

This places the system operator in an awkward position – if they make the decision to begin reporting and then the trigger point is not reached, they have sent a signal to the market which ultimately proved unwarranted. If they do not begin reporting, and the risk curve is reached, then they have failed in their duty to preempt that event. In this case, they began daily reporting on the 12th of April, only to have rain begin within days and the "watch" curve was never reached.

Our discussions with Transpower made it clear that they took this duty very seriously, and it appears their consideration of when to begin daily reporting was made with an appropriate degree of diligence. The system operator's role is to execute on the risk appetite of the Authority, as agreed through the EMP, not to determine their own appetite for risk. Making probability-based choices is quite the opposite and requires their own risk appetite to be applied.

While little to no damage was done from the market signal sent in this instance – and in fact, market participants broadly praised Transpower for proactively providing more information – it would be worth considering how much value is gained through these types of discretionary provisions within the EMP to further enhance confidence and clarity of policy within the market – and to remove the onus on the system operator to make probability-based choices which are only ever judged with the benefit of hindsight.

Transpower appeared to recognise the need for the Authority to be the one setting risk appetites and checked their choice with the Authority. There appears to have been a breakdown in communication over this though, with the accounts of the Authority and Transpower as to how this decision was approved not reconciling with each other. Therefore, to remove the factor of subjectivity, the Authority should determine their risk appetite and come to an agreement of an absolute value at which point Transpower provides daily reporting instead of transferring that responsibility onto them. If subjective elements remain in the EMP, a more formal consultation process would be appropriate, as 2021 illustrated that an informal process could not be relied on.



Transparency of information

A key feature of the security of supply regime are the risk curves, published by Transpower in their role as the system operator. For over a decade, percentage-based risk curves have been produced. They set out at what level of available hydro storage there would be a certain percentage probability of lakes running out of storage. Percentage risk curves are published at 1%, 2%, 4%, 6%, 8%, and 10% likelihood levels.

As an example, on the 10th of April 2021 (the day on which New Zealand was closest to a risk curve during the 2021 dry year event), slightly over 2,200 gigawatt hours (GWh) of hydro-generation capacity was stored within lakes. On this day, the 1% risk curve was at 2,137 GWh – meaning the probability of future shortage was still under 1%. By way of comparison, the 10% risk curve was set at 984 gigawatt hours – less than half the storage available at the time. These curves are shown in Figure 3.



Figure 3: Hydro Storage against 1% and 10% risk curves

Source: Electricity Authority

We found the percentage risk curves to be broadly accepted and understood in the industry, particularly by the smaller industry participants who were less able to resort to in-house modelling expertise. For the larger generators, they remained important (even if only due to their role in providing trigger points for various responses under the SOSFIP) – but tended to be treated as one of many data points which were considered in planning.

Within the Minister's office, the percentage risk curves were highly relied upon to provide certainty over the security of supply situation, and these curves were also mentioned several times by media during the dry year event.



Following a consultation process, in late 2018 Transpower added an additional step to their modelling, designed to better reflect the availability of thermal fuels such as gas and coal. Additionally, new curves were then produced that added further complexity to the model, which attempted to portray the risk more accurately at any given point in time. These three additional curves were labelled "watch", which corresponded roughly to the 4% risk curve, "alert" (roughly 6%), and "emergency" (virtually identical to 10%). To illustrate, Figure 4 shows the 4% risk curve plotted against the "watch" status curve.



Figure 4: Comparison of Percentage Curve (4%) to "Watch" status curve

Source: Electricity Authority

Stakeholders considered Transpower's modelling of risk as robust – but as with all predictive models, the devil is in the details. While there was a broad consensus from our interviewees that the modelling was robust, questions were raised about the appropriateness of assumptions that were fed into the modelling, particularly with regards to thermal fuel availability. The core of disagreement was the distinction between what the industry "could" do, as compared to what the industry "would" do.

Factors undermining confidence in risk curves

The curves in their current form indicate what the industry "could" do and assume that – given a constraint of supply – market dynamics should ensure that thermal fuels are allocated where the market return is the highest, incentivising industrial players to reduce usage in order to profit from onselling their allocation to generators.

In reality, there was scepticism about whether that was realistic. Just as suppliers of gas have forward commitments to supply that gas, consumers of gas also have forward commitments to supply the products resulting from gas consumption – so it was possible that while gas might exist within the system, at no realistic price would it be made available for electricity generation. Questions around

these assumptions were actively raised by a number of players over the course of the dry year event, which undermined confidence in the risk curves – particularly among Ministers.

Transparency of information is critically important for market confidence, and the risk curves are one of the primary ways by which transparency of information is achieved in a dry year event. For that reason, it is worth considering what actions are appropriate in order to enhance confidence in the use of those curves.

Introduction of the new curves created confusion

While Transpower and the Authority were clear on exactly the difference was between the percentage-based risk curves and the new risk curves, we found that none of the generators were. Some interviewees expressed that they ignored the new curves, as they understood the percentages and did not see any need to change.

There would be value in rationalising the different curves published and focussing effort from the system operator and the Authority on clearly communicating a single set of curves to ensure there is consistency. In the case of the Minister, different stakeholders would refer to different curves at different times, giving an impression of sector confusion when in fact there was none.

Ownership of the curves was unclear

While there was a clear role and responsibility for creation of the curves, resting with the system operator, there were mixed roles and responsibilities in communicating the curves – particularly to the Minister. This saw MBIE, the Authority, and Transpower all independently at times briefing the Minister on how to understand the different curves, using different language.

There would be value in agreeing a clear lead for informational resources, particularly for the Minister, to ensure consistency in language and messaging around the risk curves.

Sudden curve movements undermined confidence

We found that these curve movements were not well understood in the industry, and the sudden shifts in the curves which accompanied updating assumptions gave the impression that the curves were regularly wrong and needing correction – despite the fact vertical movements have been a common occurrence as new information was provided to the system operator.

There are options for how curves might be stabilised. At the most extreme end, assumptions could be crystallised and never updated. This would rapidly undermine the value of the curves though as they became increasingly out of touch with reality. A better solution would be to recase the entire curve every time an assumption is updated, moving the whole curve up and down as required and keeping copies of old curves in order to have records of what was known at any given point in time.

If neither option is palatable, then more proactive communication of the assumption changes alongside the presentation of the curves would be valuable.

• Gas assumptions

Many of the key assumptions around thermal fuel availability within the risk curves are not public, due to them being based on information provided commercially in confidence by industry participants to Transpower. This non-transparent process allows Transpower to improve the



quality of the modelling, at the lowered transparency around process. The majority of industry participants interviewed took the view that Transpower did as good a job as could be expected with their work on the curves, which leads us to the view that, in the eyes of the market, this trade-off is justified.

It could be mitigated through improved public availability of data on the gas market, which would remove the need for opaque assumptions. However, not all those interviewed agreed there was a shortage of gas information available, with some arguing that it was available, just difficult to find and/or interpret. We lack the specific expertise on gas industry data to confirm or refute either point of view.

Further to that, this must be read with the proviso that, as part of preparing this review, the Gas Industry Company (GIC) were not interviewed. Regardless, transparency of gas supply data has been well canvassed in fora outside this report, with new legislation and corresponding regulation set to take effect which may resolve this issue in the case of gas, though not necessarily for other thermal fuels such as coal or diesel.

Section 46 notices

As political, public, and industry nervousness increased, the Authority took the unusual step of issuing formal information requests to a number of market participants. These requests are empowered by section 46(2)(a) of the Electricity Industry Act 2010, which allows the Authority to require market participants to provide a wide array of information for a broad set of purposes.

The generators we spoke with took these requests in stride. They were seen as something of a distraction, but part of the cost of doing business. The request to Transpower was, however, slightly more unusual. As the regulator and its contracted system operator, the Authority and Transpower should be in lockstep – particularly so during times of perceived near-crisis. In this instance, sending the Section 46 request to Transpower strained the relationship—undermining Transpower's professional reputation and sending a signal to the market and politically that the regulator and system operator were not on the same page.

However, the Authority appears to have understood the risk taken by issuing the request, and appropriately balanced risks in doing so. From the Authority's perspective, the notices were an attempt to rebuild political confidence – particularly in the risk curves – through radical transparency of information. In doing so, the Authority prioritised political confidence over their relationship with the system operator – possibly a defensible choice given the serious consequences which would accompany a political loss of faith, but one that would be better to avoid in future.

For that reason, there would be value in the Authority and Transpower considering the implementation of an enhanced reporting regime for times of potential crisis. Similarly to how the EMP specifies an enhanced regularity of reporting should risk levels increase, agreement could be reached around increased **depth** of reporting in advance, in order to avoid the need to issue Section 46 requests in future situations.



Communications

In times of increased market risk, the need for communications to be polished and clear is significantly magnified, as this contributes to maintaining confidence in the market.

As lake levels descended towards the risk curves, a moderate amount of media attention began to focus on scarcity of electricity supply in April and May of 2021, with a particular bent towards the high wholesale prices. As the media and the public began to pay more attention, there was an opportunity for the regulatory system to take a stronger voice in reassuring people that both the market was working exactly as intended to preserve resources and ensure security of supply – and that the impact of high wholesale pricing was unlikely to be felt by them.²

Roles and responsibilities for communications are set out in a policy agreed between the Authority and Transpower. This policy gives Transpower the lead role in most communications, except for communications to the Minister's office and for spot pricing; most media queries to the Authority are referred on to Transpower.

While Transpower are indeed the experts on technical detail within the system, in our view there is a missing role for more proactive communications on system policy intent and the impact on consumers. A stronger public position could have been taken in the early parts of the year (January – March) to explain to media the emerging dry year situation, and the intended function of the market that people could expect to see (specifically, rising wholesale prices to encourage the conservation of water, and how it would not impact the retail consumer's bills, and that the market was designed to avert the need for conservation campaigns or reduction in home power consumption). We believe this role should likely be filled by the Authority rather than Transpower, as it is both closer to the political sphere and more able to engage in policy discussion, and further distant from market participation.

Overall readiness

Our final comments are on the overarching preparedness of the Authority, Transpower, and the market.

Market participants

The generators were reasonably well-prepared. They saw the event coming in the later parts of 2020, and managed their hedge positions deliberately by making minor adjustments and were mainly comfortable that their risk management strategies had allowed for situations such as what we experienced in 2021.

While it would have been pre-emptive for generators to go into every year with a greater precommitment to thermal fuel purchase, there are alternative ways to hedge against the risk of needing thermal fuels without pre-committing to their purchase. We see a potential weakness in the lack of established contractual frameworks to reallocate resources within the gas market. While there were clear agreements in place for demand reduction downstream of the generators, there are not



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We note that this was the first dry year event where there was an appreciable number of New Zealanders with exposure to the spot market, through the rise of new retailers which offered half hourly pricing – eg, Flick Electric. This may have played into the media attention in a way not seen before.

equivalent relationships upstream with competitors for gas. This means that in dry year situations, agreements must be negotiated ad-hoc and there are no standard procedures in place.

This may not be realistic, as companies such as Methanex are ultimately in the business of methanol production, not the business of gas arbitrage and therefore, may be unwilling to enter into such agreements. However, in the absence of agreements such as these, there will remain uncertainty of when the industry will be able to reach agreements on an ad-hoc basis. This adds greater uncertainty to the risk curves and forces individual generators to make risky business agreements under significant pressure (as Genesis did in this instance).

Transparent standing arrangements to reallocate thermal fuels, similar to those which exist for reducing demand, would also remove the current need for political uncertainty in the system (which currently acts as a hedge against the market not responding to reallocation). This would no longer be necessary if clear criteria and contractual arrangements existed to ensure this happened without the threat of political interference.

Our scope did not include consideration of the preparedness of market participants beyond generation. That said, most interviewees we spoke with speculated on the health of hedge positions held by major consumers of electricity, and their subsequent preparedness for dry year events.

System Operator

Transpower were prepared, and by and large seen as a stable pair of hands, competent in executing their role as the system operator. The primary criticisms levelled against them have been discussed elsewhere in this report, but do not revolve around preparedness. They understood the obligations on them according to the SOSFIP and EMP, and were ready to execute on these obligations.

Electricity Authority

The Authority was sufficiently prepared, but with room for improvement. As the owner of the contract with the system operator, any lack of precision within the EMP is ultimately responsibility of the Authority to resolve. Not having a proactive media strategy nor a proactive regime for expanded information disclosure (were the sector to approach crisis) also meant they were left playing catchup with Section 46 notices to attempt to shore up confidence.

The Authority's communication extends to talking about the price environment to the wider industry. Although this role was executed, we think it wasn't executed quickly enough. Our interviewees were concerned about the dry year risk in December, and the stress-tests went out in February. This information could have been especially useful for Industrials who did not have robust risk management practices in place, and would have allowed the Authority to gather insight on stress test results sooner in order to proactively manage risk.

The Authority could further enhance system preparedness through trial runs, similarly to those which the system operator already runs for more acute situations. One interviewee referred to the Authority as "dusting off plans" once the dry year became apparent, and how this detracted from confidence in those plans. Regular testing of plans would help ensure that they remain fit for purpose and policy and market structures evolve, as well as ensuring all involved are clear on their roles in executing the plan.



Finally, some interviewees suggested that a high degree of turnover on the Authority board and leadership team since the last dry year damaged its preparedness. While this was a theme from the interviews, we do not see any obvious lack of preparedness, noting that many of these leaders were fresh to their roles but not to the industry.





APPENDIX 1: INTERVIEW LIST

Interviewee	Role	Organisation	Date
Grant Benvenuti	Principal Advisor	Electricity Authority	20/09/21
Heather Roy	SRC Chair	Independent Director	23/09/21
Callum McLean	Senior Advisor	Electricity Authority	23/09/21
Stephen Jay	GM Operations	Transpower	23/09/21
Peter Calderwood	GM Strategy and Growth	Trustpower	23/09/21
David Katz	Market and Security of Supply Manager	Transpower	23/09/21
Daniel Crawshay	Operations Technology and Process Improvement Manager	Transpower	23/09/21
Steve Torrens	Senior Analyst	Transpower	23/09/21
Phil Bishop	Manager Market Analytics	Electricity Authority	24/09/21
Alistair Dixon	Principal Advisor	Electricity Authority	27/09/21
Fraser Jonker	Chief Executive	Pioneer Energy	28/09/21
James Stevenson-Wallace	Chief Executive	Electricity Authority	29/09/21
Charles Teichert	GM Commercial and Strategy	Nova Energy	29/09/21
Matthew Kier	Senior Analyst, Market Analytics	Electricity Authority	29/09/21
Phil Gibson	GM Portfolio	Mercury Energy	30/09/21
Andy Hume	Policy Director	MBIE	06/10/21
Jacqui Nelson	Chief Generation Officer	Contact Energy	30/09/21
Nigel Clark	Chief Operations Officer	Genesis Energy	08/10/21
Chris Ewers	GM Wholesale	Meridian Energy	28/09/21
David Darby	Former Private Secretary to the Minister of Energy & Resources	MBIE	06/10/21



Electricity Authority

Media Insights Report

'Dry Year Event'

October 2021







Report Criteria and Methodology

Topic: Dry Year Event

Date Range: 1st January 2021 – 30th June 2021

Keywords including but not limited to:

Dry year, Electricity Authority, Transpower, gas shortage, thermal generation, lake levels, low inflows

Brief:

Assess media perception of the performance of the broader electricity industry, system operator (Transpower) and Electricity Authority in managing the 2021 dry year event

Methodology:

All coverage is analysed and coded by a human analyst.

Media items were grouped by 'primary organisation' which is the most prominent organisation referenced in the item. For the sake of this media insights report, broader electricity industry is considered an 'organisation'. The three organisations analysed were the Broader Electricity Industry, Transpower and Electricity Authority.

Sentiment is coded on a neutral observer basis i.e. if the analyst had never seen the item before, how does it leave their perception of the organisation being coded.

The most quoted spokesperson within a media item was identified as the primary spokesperson for that item and spokesperson tone is their tone towards their primary referenced organisation.

Report submitted: 11th October 2021



SUMMARY DASHBOARD

Published Date

1/1/2021 6/23/2021



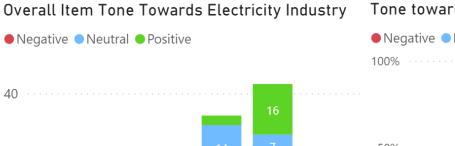
MEDIA INSIGHTS by [mediamine]



24
Overall Positive Items

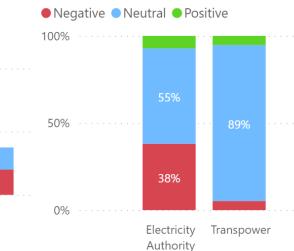
48

Overall Negative Items

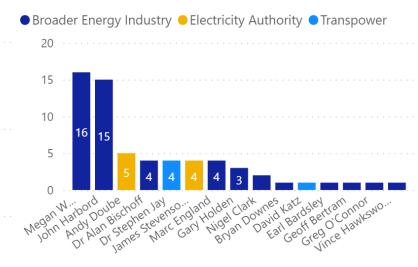


16





Spokesperson by Primary Organisation Referenced



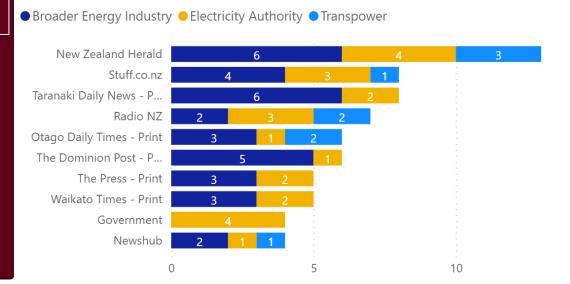
Primary Organisation of Item

42
Electricity Authority

Transpower

52 Broader Electricity ...





Commentary:

Overall media tone towards the 'Dry Year' event was prodominently neutral until March when negative items (3) became proportionally more prominent. In April, 49% (16) of items were negative followed by 47% (20) in May and 53% (8) in June.

When compared with Transpower, the Electricity Authority received the highest amount of negative coverage (16 items), which represented 33% of the overall negative items.

The most prominent spokesperson across all related items was Megan Woods, Minister of Energy & Resources, who was quoted in 16 items followed by John Harbord, Major Electricity Users' Group – Chair, who was quoted in 15 items.

The New Zealand Herald published the highest number of items related to the 'Dry Year', followed by stuff.co.nz and Taranaki Daily News.

The New Zealand Herald published the highest number of items that primarily mentioned the Electricity Authority or Transpower. Remaining items were coded as Broader Electricity Industry.

Electricity Authority Insights

42 Total Items

3 Positive Items

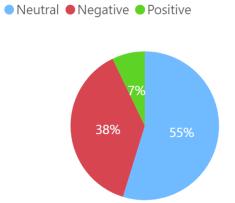
16 Negative Items



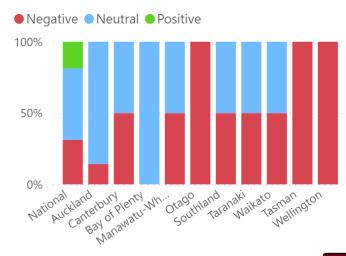
AUTHORITY TE MANA HIKO

MEDIA INSIGHTS by [Mediamine]

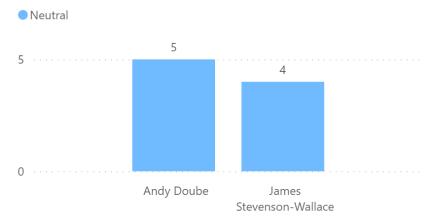
Items' Tone Towards the Electricity Authority



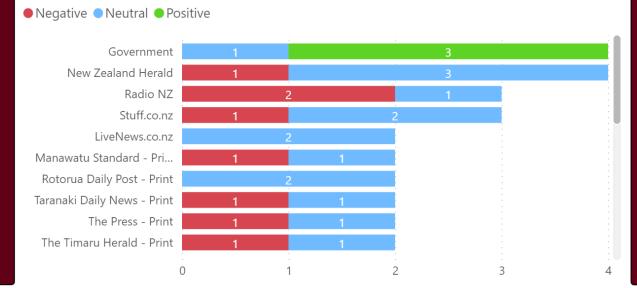
Item Tone by Region



Primary Spokesperson's Tone Towards The Organisation



Top 10 Publications by Volume and Tone



Commentary:

Items in which the Electricity Authority was the primary organisation were predominantly neutral (23); 16 negative items represent 38% of its total coverage it was the and 3 positive 7%. All three positive items were published on beehive.govt.nz.

Looking at coverage across New Zealand, the Electricity Authority received negative coverage in least 50% of items published in most regions, exceptions being Auckland and Bay of Plenty. Nationally distributed media including beehive.govt.nz was more favourable with 50% neutral, 31% negative and 19% positive items.

The beehive.co.nz and the New Zealand Herald published the most items (4) in which the Electricity Authority was the primary organisation. Radio New Zealand was third and also reported the largest number of negative items of any outlet.

The only quoted spokespeople in items in which the Electricity Authority was the primary organisation were Andy Doube (5) and James Stevenson-Wallace (4), all were neutral.

Transpower Insights





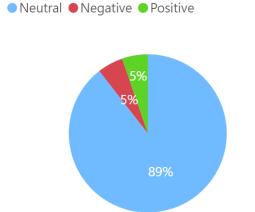
MEDIA INSIGHTS by [mediamine]

19 Total Items

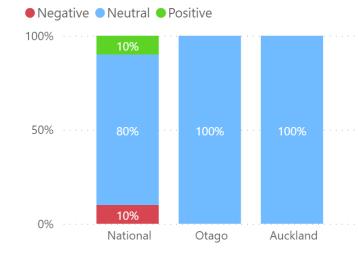
Positive Items

Negative Items

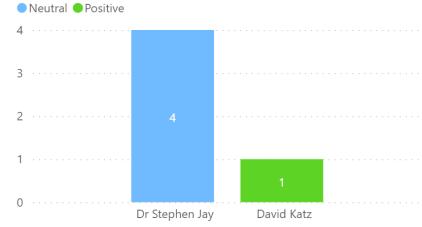




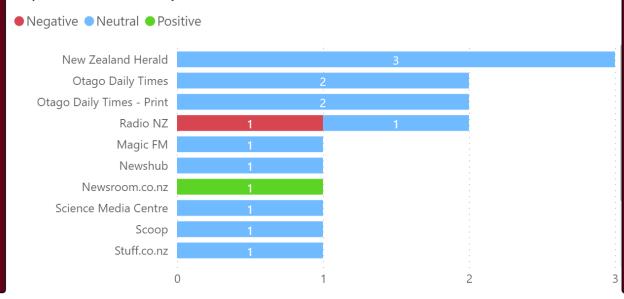
Item Tone by Region



Primary Spokesperson's Tone Towards The Organisation



Top 10 Publications by Volume and Tone



Commentary:

The majority of items in which Transpower was the primary organisation were neutral (17) towards it with one positive item, and one negative item.

Across national news sources, Transpower received 80% neutral coverage, 10% positive and 10% negative. The only regional publications to publish items in which Transpower was the primary organisation were the Otago Daily Times (2) and the New Zealand Herald (3). All were neutral. Most items published by media outlets, in which Transpower was the primary organisation, were neutral (17). Two outlets, Radio New Zealand and Newsroom.co.nz, published 1 negative item and 1 positive item respectively.

The most prominent spokesperson was Dr Stephen Jay who was quoted in 4 items, all with neutral tone towards Transpower. David Katz was quoted once with a positive tone towards Transpower.

Broader Industry Insights

52 Total Items

16 Positive Items

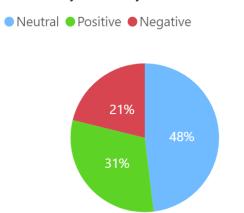
11 Negative Items



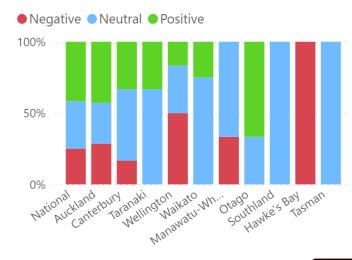
AUTHORITY TE MANA HIKO

MEDIA INSIGHTS by [Mediamine]

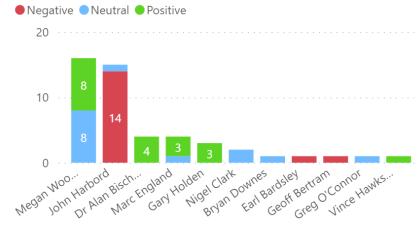
Items' Tone Towards the Broader Electricity Industry



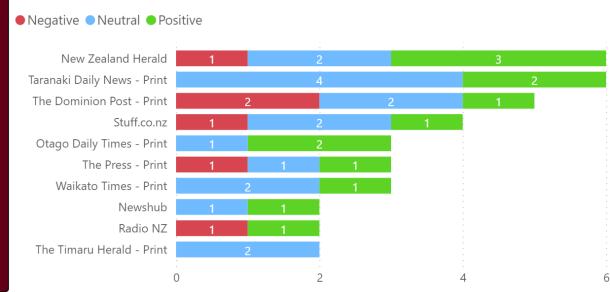
Item Tone by Region



Primary Spokesperson's Tone Towards The Organisation



Top 10 Publications by Volume and Tone



Commentary:

Items in which the Broader Electricity Industry was the primary focus were predominantly neutral (25); 16 positive items representing 31% of the total coverage and 11 negative items (21%).

In items published nationally, the Broader Electricity Industry received predominantly positive (42%) or neutral (33%) coverage with 25% negative items. Of the regional publications, Auckland received the greatest number of items (7). Proportionally, the Otago region received the most positive items (67% / 2 items), and Hawkes Bay the most negative (100% / 1 item).

The Dominion Post published the highest number of negative items (5) in which the Broader Electricity Industry was the primary focus. When the Broader Electricity Industry was the primary organisation, Megan Woods was the most prominent spokesperson and the tone of her comments was either positive or neutral. John Harbord was the second most quoted spokesperson with majority of his comments negative (14) toward the Broader Electricity Industry.





0800 775 742



info@mediamine.co.nz



www.mediamine.co.nz



L2, 276 Cuba Street, Wellington

Report compiled by





ONLINE MEDIA REPORT compiled by [mediamine]

05 October 2021

News Items Summary

Category No. of items

<u>Uncategorised</u> 113

View this report in Newsroom

Uncategorised

Back to the top

Businesses face six figure power bill increases due to haovc in market

Source: Newstalk ZB Date Published: 23/06/2021

Matched on: Electricity Authority AND gas shortage, Electricity Authority AND lake levels, electricity market AND gas shortage,

Businesses face six figure power bill increases due to haovc in market

Businesses facing six figure power bill increases

Source: Newshub - Latest News Date Published: 23/06/2021

Matched on: Electricity Authority AND gas shortage, Electricity Authority AND lake levels, electricity market AND gas shortage,

Businesses facing six figure power bill increases

Businesses face six figure power bill increases

Source: Star News

Date Published: 23/06/2021

Matched on: Electricity Authority AND gas shortage, Electricity Authority AND lake levels, electricity market AND gas shortage,

Photo: Getty / File Some Christchurch businesses are being hit by massive rises to their power bills as dry weather and a natural gas shortage wreak havoc in the electricity market.

Businesses hit by six figure power bill increases; customers 'will end up paying'

Source: New Zealand Herald - Business

Date Published: 23/06/2021

Matched on: electricity market AND gas shortage, electricity market AND lake levels

By Nicholas Pointon of RNZ Businesses are being hit by massive rises to their power bills as dry weather and a natural gas shortage wreak havoc in the electricity market. Hundreds of thousands of dollars in extra costs are hitting

Businesses face six figure power bill increases

Source: Radio New Zealand Business Headlines

Date Published: 23/06/2021

Matched on: Electricity Authority AND gas shortage, Electricity Authority AND lake levels, electricity market AND gas shortage,

Businesses are being hit by massive rises to their power bills as dry weather and a natural gas shortage wreak havoc in the electricity market.

Peter Williams: Why you should be sceptical about the Climate Change Commission report

Source: Magic Mornings Date Published: 10/06/2021

Matched on: Transpower AND dry year

Peter Williams: Why you should be sceptical about the Climate Change Commission report

Government was advised to consider power conservation campaign

Source: Stuff.co.nz - Business Date Published: 08/06/2021

Matched on: electricity market AND lake levels

Ministry warns high wholesale electricity prices could stick around for two years and feed through into consumers' bills.

Lake Onslow Pumped-hydro Energy Storage Proposal Fatally Flawed

Source: Community Scoop Date Published: 07/06/2021

Matched on: electricity market AND dry year

Press Release – Sustainable Energy Forum The Governments proposed flagship Lake Onslow pumped-hydro energy storage project is fatally flawed according to the Sustainable Energy Forum. The latest edition of the forums newsletter EnergyWatch suggests that changes to the electricity ... "The Government...

Lake Taupo possible 'battery' for power production

Source: Southland Times Date Published: 05/06/2021

Matched on: electricity market AND dry year Lake could be drawn down for back-up in dry years.

6/3/2021: Business: Contact rated worst power company

Source: Waikato Times - Print Date Published: 03/06/2021

Matched on: electricity market AND lake levels

Contact Energy has been rated as the worst performer in Consumer NZ's latest electricity satisfaction survey. While its website claims the company makes "electricity easy and efficient, with competitive rates, friendly local service and flexible

6/3/2021: Business: Contact rated worst power company

Source: Taranaki Daily News - Print

Date Published: 03/06/2021

Matched on: electricity market AND lake levels

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6/3/2021: Business: Contact rated worst power company

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Contact Energy has been rated as the worst performer in Consumer NZ's latest electricity satisfaction survey. While its website claims the company makes "electricity easy and efficient, with competitive rates, friendly local service and flexible

Contact Energy rated worst power company in Consumer NZ survey

Source: Stuff.co.nz - Business Date Published: 03/06/2021

Matched on: electricity market AND lake levels

The electricity provider's satisfaction score was its lowest in four years.

5/29/2021: News: Methanex cuts production to help keep lights on

Source: Taranaki Daily News - Print Date Published: 30/05/2021

Matched on: electricity market AND lake levels

Methanol producer Methanex is to temporarily cut production at its Taranaki site to free up natural gas supply for electricity generation over winter. The company has agreed to a shortterm gas supply of between 3.4 to 4.4PJ (petrajoules) to Genesis

5/29/2021: Opinion: Collaboration key part of energy future

Source: Taranaki Daily News - Print

Date Published: 30/05/2021

Matched on: energy market AND lake levels

Radical opinions in favour of renewables or fossil fuels as sources of energy will not reach a workable solution. They are not mutually exclusive. Collaboration is the key. To make way for the new, the old and new must walk hand in hand for a while,

A pragmatic approach needed to find answer to energy shortage

Source: Stuff.co.nz - Manawatu Business

Date Published: 29/05/2021

Matched on: energy market AND lake levels

OPINION: Radical opinions in favour of renewables or fossil fuels as sources of energy will not reach a workable solution.

They are not mutually exclusive. Collaboration is the key.

Methanol producer to cut production to help keep the lights on during winter

Source: Stuff.co.nz - Central North Island Headlines

Date Published: 28/05/2021

Matched on: electricity market AND lake levels

Methanol producer Methanex is to temporarily cut production at its Taranaki site to free up natural gas supply for electricity generation over winter.

Methanex agrees to idle another plant to free gas for electricity supply

Source: New Zealand Herald - Business

Date Published: 28/05/2021

Matched on: electricity market AND lake levels

Methanex will idle another of its methanol plants in Taranaki as part of a deal with Genesis to free up gas supply to ease strain on the country's electricity market. Wholesale electricity prices have surged in recent months, as

5/23/2021: Business: Jobs lost in rush to renewables

Source: The Sunday Star-Times - Print

Date Published: 23/05/2021

Matched on: Transpower AND dry year, Transpower AND lake levels

The proposed Onslow pumped hydro scheme shows how political slogans and the quest for silver bullets can obstruct sensible energy and climate policy. In 2019, the Interim Climate Change Committee recommended the Government investigate pumped hydro as a

John Carnegie: Back to gas to create a reliable energy future

Source: New Zealand Herald - Premium Opinion

Date Published: 22/05/2021

Matched on: energy industry AND dry year

Opinion: Our energy infrastructure is inadequate, and more investment is needed.

5/21/2021: News: Energy future may lie underground

Source: Taranaki Daily News - Print

Date Published: 21/05/2021

Matched on: electricity market AND dry year

The template already exists. It's called the Ahuroa Gas Storage Facility, and it's near Stratford in central Taranaki. It stores natural gas coming from offshore until it's needed by users. Its main feature is a natural gas reservoir that was

5/20/2021: In Depth: Energy future may lie underground

Source: The Press - Print Date Published: 20/05/2021

Matched on: electricity market AND dry year

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5/20/2021: In Depth: Energy future may lie underground

Source: Waikato Times - Print Date Published: 20/05/2021

Matched on: electricity market AND dry year

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5/20/2021: In Depth: Energy future may lie underground

Source: The Dominion Post - Print Date Published: 20/05/2021

Matched on: electricity market AND dry year

The template already exists. It's called the Ahuroa Gas Storage Facility, and it's near Stratford in central Taranaki. It stores natural gas coming from offshore until it's needed by users. Its main feature is a natural gas reservoir that was

Hydrogen storage may be key to zero carbon NZ

Source: The Press - News Date Published: 20/05/2021

Matched on: electricity market AND dry year

It will probably go underground, into depleted natural gas reservoirs.

5/20/2021: Opinion: Back to gas for a reliable future

Source: Hawkes Bay Today - Print Date Published: 20/05/2021

Matched on: energy industry AND dry year

It's a grim time for businesses and households impacted by soaring energy prices. Many companies are suffering and cutting production back. If it continues, there will undoubtedly be job losses and higher electricity bills. The problem is caused by

Wholesale power price hike the largest since 2018 due to low lake levels

Source: Stuff.co.nz - Dominion Post Headlines

Date Published: 19/05/2021

Matched on: electricity market AND gas shortage, electricity market AND lake levels

Major users say low lake levels can't be the full reason for high power prices.

Electricity and gas prices spiked in March quarter - Stats NZ

Source: Newshub - Latest News Date Published: 19/05/2021

Matched on: Transpower AND lake levels

Electricity and gas prices spiked in March quarter - Stats NZ

5/19/2021: Opinion: Back to gas for a reliable future

Source: Whanganui Chronicle - Print

Date Published: 19/05/2021

Matched on: energy industry AND dry year

It's a grim time for businesses and households impacted by soaring energy prices. Many companies are suffering and cutting production back. If it continues, there will undoubtedly be job losses and higher electricity bills. The problem is caused by

Small power company to stop trading after failing to keep up with wholesale market payments

Source: Auckland News latest headlines - Auckland News.net

Date Published: 19/05/2021

Matched on: Electricity Authority AND lake levels, electricity market AND lake levels

The Electricity Authority has told customers of ID Power that they need to find a new power supplier from the end of next week.

Speech to Contact Energy event at Parliament

Source: LiveNews

Date Published: 18/05/2021

Matched on: Electricity Authority AND dry year, Electricity Authority AND thermal generation, Transpower AND dry year,

Speech to Contact Energy event at Parliament

5/18/2021: Editorial: Back to gas for a reliable energy future

Source: The New Zealand Herald - Print

Date Published: 18/05/2021

Matched on: energy industry AND dry year

It's a grim time for businesses and households impacted by soaring energy prices. Many companies are suffering and cutting production back. If it continues, there will undoubtedly be job losses and higher electricity bills. The problem is caused by

5/15/2021: BUSINESS & MONEY: Plan would boost solar power production eightfold: firm

Source: Otago Daily Times - Print Date Published: 15/05/2021

Matched on: electricity market AND thermal generation

AUCKLAND: The country is to get its first significant solar power generation based in some of the North Island's sunniest centres. Auckland-based Lodestone Energy is planning five solar power stations in the upper North Island, generating enough power

Rain most in five months but not enough for Otago

Source: New Zealand Herald - National News

Date Published: 13/05/2021

Matched on: Transpower AND lake levels

Otago has recorded its first substantial rainfall in more than five months, but it is nowhere near enough to break the dry spell plaguing the region's farmers.MetService meteorologist Angus Hines said 18.2mm fell in Dunedin on Tuesday,

Rain most in five months but not enough for Otago

Source: The Country
Date Published: 13/05/2021

Matched on: Transpower AND lake levels

Otago has recorded its first substantial rainfall in more than five months, but it is nowhere near enough to break the dry spell plaguing the region's farmers.MetService meteorologist Angus Hines said 18.2mm fell in Dunedin on Tuesday,

5/13/2021: GENERAL: Rain most in five months but not enough

Source: Otago Daily Times - Print Date Published: 13/05/2021

Matched on: Transpower AND lake levels

OTAGO has recorded its first substantial rainfall in more than five months, but it is nowhere near enough to break the dry spell plaguing the region's farmers. MetService meteorologist Angus Hines said 18.2mm fell in Dunedin on Tuesday, and between

Rain most in five months but not enough

Source: Otago Daily Times: Dunedin

Date Published: 13/05/2021

Matched on: Transpower AND lake levels

Otago has recorded its first substantial rainfall in more than five months, but it is nowhere near enough to break the dry spell plaguing the region's farmers.

New Zealand Wind Energy Conference

Source: LiveNews

Date Published: 12/05/2021

Matched on: Electricity Authority AND dry year, Electricity Authority AND thermal generation, Transpower AND dry year,

New Zealand Wind Energy Conference

'Game changer': New solar power network announced for NZ's sunbelt

Source: Radio New Zealand News Headlines

Date Published: 12/05/2021

Matched on: electricity market AND thermal generation

The country is to get its first significant solar power generation based in some of the North Island's sunniest centres.

New Zealand Wind Energy Conference

Source: Latest speeches from beehive.govt.nz

Date Published: 12/05/2021

Matched on: Electricity Authority AND dry year, Electricity Authority AND thermal generation, Transpower AND dry year,

Tena koutou katoa Tena koutou i runga i te kaupapa o te Ra No reira, tena koutou, tena koutou, tena tatou katoa

Solar power: Planned network will increase generation eight-fold - company

Source: Newshub - Latest News Date Published: 12/05/2021

Matched on: electricity market AND thermal generation

Solar power: Planned network will increase generation eight-fold - company

Power to the people - How to solve our dry year woes

Source: Radio New Zealand - Nine To Noon

Date Published: 11/05/2021

Matched on:

New Zealand's electricity market is structured in such a way that generator retailers are incentivised to keep supply scarce rather than plentiful, two energy analysts say.

Power woes: 'We need a solution or we are going to wreck our economy'

Source: Stuff.co.nz - Business Date Published: 09/05/2021

Matched on: Transpower AND dry year, Transpower AND lake levels, electricity market AND dry year, electricity market AND lake

Hydrologist Earl Bardsley believes Lake Onslow may remain the only viable plan to cope with the threat of more 'dry year' power crises.

5/8/2021: Business: Smelter cuts production

Source: Taranaki Daily News - Print

Date Published: 08/05/2021

Matched on: Electricity Authority AND lake levels, electricity market AND lake levels

The Tiwai Point aluminium smelter has agreed to reduce its electricity usage by about 11 megawatts by cutting its production in return for compensation from Meridian, amid fresh warnings over the continuing power market squeeze. The cut comes on top

5/8/2021: Business: Smelter cuts production

Source: The Nelson Mail - Print Date Published: 08/05/2021

Matched on: Electricity Authority AND lake levels, electricity market AND lake levels

The Tiwai Point aluminium smelter has agreed to reduce its electricity usage by about 11 megawatts by cutting its production in return for compensation from Meridian, amid fresh warnings over the continuing power market squeeze. The cut comes on top

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5/8/2021: Business: Smelter cuts production

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The Tiwai Point aluminium smelter has agreed to reduce its electricity usage by about 11 megawatts by cutting its production in return for compensation from Meridian, amid fresh warnings over the continuing power market squeeze. The cut comes on top

5/8/2021: Front Page: Aluminium smelter cuts production

Source: The Southland Times - Print

Date Published: 08/05/2021

Matched on: Electricity Authority AND lake levels, electricity market AND lake levels

The Tiwai Point aluminium smelter has agreed to reduce its electricity usage by about 11 megawatts by cutting its production in return for compensation from Meridian, amid fresh warnings over the continuing power market squeeze. The cut comes on top

5/8/2021: Business: Smelter cuts production

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The Tiwai Point aluminium smelter has agreed to reduce its electricity usage by about 11 megawatts by cutting its production in return for compensation from Meridian, amid fresh warnings over the continuing power market squeeze. The cut comes on top

5/8/2021: Business: Smelter makes cuts amid power squeeze

Source: Manawatu Standard - Print

Date Published: 08/05/2021

Matched on: Electricity Authority AND lake levels, electricity market AND lake levels

The Tiwai Point aluminium smelter has agreed to reduce its electricity usage by about 11 megawatts by cutting its production in return for compensation from Meridian, amid fresh warnings over the continuing power market squeeze. The cut comes on top

Aluminium smelter cuts production amid fresh power warnings

Source: Stuff.co.nz - Stuff Date Published: 07/05/2021

Matched on: Electricity Authority AND lake levels, electricity market AND lake levels

Meridian data shows lake levels almost at point at which it could demand smelter makes a larger cut.

Energy Trusts of NZ Autumn Conference

Source: Latest speeches from beehive.govt.nz

Date Published: 06/05/2021

Matched on: Electricity Authority AND dry year, Transpower AND dry year, electricity industry AND dry year

It's a pleasure to be here today. Thank you Karen [Sherry] for the introduction and thanks to the Energy Trusts Executive for inviting me to speak at tonight's event.

What would a dry winter mean for the country? - Expert Reaction

Source: Science Media Centre Date Published: 05/05/2021

Matched on: Transpower AND dry year, electricity market AND dry year

New Zealand may be heading into a dry winter following a month of near record-breaking dry patches across the country. [...] The post appeared first on .

Running dry: NZ works to avert a winter energy crisis

Source: Newsroom.co.nz Date Published: 05/05/2021

Matched on: Transpower AND lake levels

Analysis: Low lake levels have raised alarm at Transpower, but promising signs indicate we may have veered away from a crisis, Marc Daalder reports New Zealand may have avoided the worst of an energy crisis, as the risk of blackouts this winter has dropped from concerning levels in recent weeks. However...

What Would A Dry Winter Mean For The Country? - Expert Reaction

Source: Community Scoop Date Published: 05/05/2021

Matched on: Transpower AND dry year, electricity market AND dry year

Press Release – Science Media Centre New Zealand may be heading into a dry winter following a month of near record-breaking dry patches across the country. So what are the flow-on effects if natures taps stay turned off over the cold season? The SMC asked experts to comment ... New Zealand...

Hydro power: More dry weather may mean blackouts, switch to coal-generated

Source: New Zealand Herald - National News

Date Published: 29/04/2021

Matched on: Transpower AND dry year, Transpower AND lake levels, electricity market AND dry year, electricity market AND lake

By Charlotte Cook of RNZ National grid operator Transpower says the hydro lake levels are at 67 per cent of where they would normally be at this time of year, but there is no cause for worry yet.New Zealand's biggest energy consumer,

4/29/2021: Business: Smelter could cut power use

Source: Manawatu Standard - Print

Date Published: 29/04/2021

Matched on: Electricity Authority AND lake levels

The Tiwai Point aluminium smelter and Meridian Energy have reached a deal that could see the smelter voluntarily cut back its electricity usage before a deeper power shortage forced a production cut. The agreement could see the smelter reduce the

Hydro lakes: More dry weather may mean blackouts, switch to coal-generated power

Source: Star News

Date Published: 29/04/2021

Matched on: Transpower AND dry year, Transpower AND lake levels, electricity market AND dry year, electricity market AND lake

The Tekapo B hydro power station on Lake Pukaki. Photo: File / Getty Images National grid operator Transpower says the hydro lake levels are at 67 per cent of where they would normally be at this time of year, but there is no cause for worry yet.

4/29/2021: Front Page: Tiwai deal to cut power use

Source: The Southland Times - Print

Date Published: 29/04/2021

Matched on: Electricity Authority AND lake levels, electricity market AND lake levels

The Tiwai Point aluminium smelter and Meridian Energy have reached a deal that could see the smelter voluntarily cut back its electricity usage before a deeper power shortage forced a production cut. The agreement could see the smelter reduce the

Transpower downplaying speculation about problems from low lake levels

Source: Radio New Zealand - Morning Report

Date Published: 29/04/2021

Matched on: Transpower AND lake levels

The national grid operator Transpower is downplaying speculation about low hydro lake levels and the potential for power shortages. The lakes are at their lowest levels in 25 years, and the Tiwai Point aluminium smelter, which uses 13 percent of the country's power, has agreed to cut back to help...

4/29/2021: Business: Smelter could cut power use

Source: Waikato Times - Print Date Published: 29/04/2021

Matched on: Electricity Authority AND lake levels

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Source: The Press - Print Date Published: 29/04/2021

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Hydro power: More dry weather may mean blackouts, switch to coal-generated

Source: Radio New Zealand News Headlines

Date Published: 28/04/2021

Matched on: Transpower AND dry year, Transpower AND lake levels, electricity market AND dry year, electricity market AND lake

National grid operator Transpower says the hydro lake levels are 67 percent of where they would normally be at this time of year, but there is no cause for worry yet.

Meridian reaches deal for possible voluntary cut to smelter production

Source: Stuff.co.nz - Sunday News Headlines

Date Published: 28/04/2021

Matched on: Electricity Authority AND lake levels

Deal could see smelter cut electricity usage by about 6% in return for 'compensation'.

Stock Takes: NZ Power prices hit record, Latitude debuts, Just Life invests

Source: New Zealand Herald - Premium Business

Date Published: 21/04/2021

Matched on: electricity market AND lake levels, electricity market AND low inflows

Wholesale power prices are at a record high. Latititude lists in Australia.

'No need to panic': Electricity sector takes first steps to avoid shortages

Source: New Zealand Herald - Premium Business

Date Published: 19/04/2021

Matched on: Electricity Authority AND dry year, Transpower AND dry year, electricity market AND dry year

Energy Minister plays down intervention talk amid early steps to prepare for conservation.

4/18/2021: Business: Energetic change

Source: The Sunday Star-Times - Print

Date Published: 18/04/2021

Matched on: electricity industry AND dry year, electricity industry AND lake levels

The energy sector is buzzing as New Zealand seeks to decarbonise by 2050. Projects are rolling out at pace and it's clear there will be not one, but many options. New Zealand has long had a head-start on clean energy, with 81 per cent of the

4/16/2021: Business: Woods cool on 'gentailer' split

Source: The Dominion Post - Print Date Published: 16/04/2021

Matched on: electricity industry AND dry year

Energy Minister Megan Woods has brushed off calls to consider overhauling the "Bradford" reforms of the electricity industry by structurally separating "gentailers" Meridian, Genesis and Mercury. But she said that while a reform of that nature was

4/16/2021: Business: Woods cool on 'gentailer' split

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Energy Minister Megan Woods not ready to give power firms the 'Telecom' treatment

Source: Stuff.co.nz - Business Date Published: 16/04/2021

Matched on: Electricity Authority AND dry year, electricity industry AND dry year, electricity market AND dry year

But Megan Woods says structural separation of gentailers will 'probably, maybe' be revisited down the track.

Soaring energy prices hit businesses

Source: Radio New Zealand - Nine To Noon

Date Published: 14/04/2021

Matched on: Electricity Authority AND lake levels

Low hydro lake levels and soaring wholesale electricity prices are causing some businesses to temporarily shut down operations, and more will follow, according to the Major Electricity Users' Group. Data from energy consultancy firm Energy Link shows wholesale power prices are nearly seven times...

4/14/2021: DUNEDIN: Hydro lake storage falling

Source: Otago Daily Times - Print Date Published: 14/04/2021

Matched on: Transpower AND lake levels

POWER generators hope forecast heavy rain in the South will replenish lakes approaching dangerously low levels. Transpower has been issuing daily updates of lake levels in recent times and power storage levels are well down on average for this time of

Hydro lake storage falling

Source: Otago Daily Times: Dunedin

Date Published: 14/04/2021

Matched on: Transpower AND lake levels

Power generators hope forecast heavy rain in the South will replenish lakes approaching dangerously low levels.

Young eco-warriors press for change - if they get what they demand, they should brace for a lower standard of living.

Source: Point of Order Date Published: 13/04/2021

Matched on: Electricity Authority AND lake levels

The latest cohort of school students took to the streets last week to demand climate change action. In Wellington, several thousand strikers marched to Parliament. Izzy Cook, one of the organisers, said they had their own list of demands. "Investing in a just transition to a sustainable...

Power struggle: Electricity prices put thousands of jobs at risk

Source: New Zealand Herald - Premium Business

Date Published: 12/04/2021

Matched on: Electricity Authority AND lake levels, Transpower AND lake levels, electricity market AND lake levels

Low lake levels and tight gas supplies mean industry is shutting due to power prices.

Covering Climate Now: How do we decarbonise New Zealand's energy sector?

Source: New Zealand Herald - National News

Date Published: 12/04/2021

Matched on: electricity industry AND dry year, electricity market AND dry year

As part of the global Covering Climate Now initiative, the Herald is dedicating a week of coverage to the issues surrounding the climate crisis. In the first of a series of in-depth interviews with leading experts on key policy areas,

4/10/2021: Business: Power struggle: Wholesale market causing pain

Source: Rotorua Daily Post - Print Date Published: 10/04/2021

Matched on: Electricity Authority AND lake levels, Transpower AND lake levels, electricity market AND lake levels

While household electricity bills in New Zealand have generally been stable in recent years, for those exposed to the wholesale energy markets there is extreme pain. In February, the Whakata⁻ ne paper mill said electricity prices were part of the

4/10/2021: Money: Woods: Are electricity prices too high?

Source: Rotorua Daily Post - Print Date Published: 10/04/2021

Matched on: Electricity Authority AND low inflows, electricity market AND low inflows, energy market AND low inflows

Energy Minister Megan Woods is seeking advice about whether wholesale electricity prices are too high, with analysts warning current pricing risks political intervention. At an event hosted by the Electricity Retailers Association of New Zealand in

4/10/2021: Business: Power struggle: Wholesale market causing pain

Source: Bay of Plenty Times - Print

Date Published: 10/04/2021

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wholesale energy markets there is extreme pain. In February, the Whakata ne paper mill said electricity prices were part of

4/10/2021: Business: POWER STRUGGLE

Source: Weekend Herald - Print Date Published: 10/04/2021

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'Are prices too high?' Energy Minister Megan Woods puts market on notice

Source: New Zealand Herald - Premium Business

Date Published: 10/04/2021

Matched on: Electricity Authority AND gas shortage, electricity market AND gas shortage, energy market AND gas shortage.

Megan Woods questions state of electricity prices amid hydro and gas shortage.

4/9/2021: GENERAL: Electricity price concern

Source: Otago Daily Times - Print Date Published: 09/04/2021

Matched on: electricity market AND low inflows

WELLINGTON: Energy Minister Megan Woods is seeking advice about whether wholesale electricity prices are too high, with analysts warning current pricing risks political intervention. At an event hosted by the Electricity Retailers Association of New

4/9/2021: News: Woods: Are electricity prices too high?

Source: The New Zealand Herald - Print

Date Published: 09/04/2021

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Energy Minister questions electricity prices

Source: New Zealand Herald - Premium Business

Date Published: 08/04/2021

Matched on: Electricity Authority AND gas shortage, electricity market AND gas shortage, energy market AND gas shortage

Energy Minister questions state of electricity prices amid hydro and gas shortage.

ERANZ speech April 2021

Source: Latest speeches from beehive.govt.nz

Date Published: 08/04/2021

Matched on: Electricity Authority AND dry year, Transpower AND dry year, electricity market AND dry year, energy market AND

It is a pleasure to be here tonight. Thank you Cameron for the introduction and thank you for ERANZ for also hosting this event.

NZ's coal imports highest in 14 years, but Energy Minister berates ACT's 'utterly false' suggestion why

Source: TVNZ - National Date Published: 15/03/2021

Matched on: electricity market AND dry year, electricity market AND thermal generation

NZ's coal imports highest in 14 years, but Energy Minister berates ACT's 'utterly false' suggestion why

Woods dismisses ACT's 'utterly false' claim oil and gas ban led to rise in coal imports

Source: Newshub - Latest News Date Published: 15/03/2021

Matched on: electricity market AND dry year, electricity market AND thermal generation Woods dismisses ACT's 'utterly false' claim oil and gas ban led to rise in coal imports

3/12/2021: BUSINESS&MONEY: Hefty bills faced over UTS spike

Source: Otago Daily Times - Print Date Published: 12/03/2021

Matched on: Electricity Authority AND thermal generation

WELLINGTON: Two major power companies face hefty bills and some consumers are in line for refunds after the electricity sector regulator drafted a financial settlement for a spike in wholesale prices in late 2019. The Electricity Authority last year

Meridian, Contact facing hefty bills, consumers to get refunds after 'undesirable trading situation'

Source: Radio New Zealand Business Headlines

Date Published: 11/03/2021

Matched on: Electricity Authority AND thermal generation, electricity market AND thermal generation

Meridian and Contact spilled excess water from South Island hydro dams causing a spike in wholesale prices which is estimated to have cost users about \$70m.

MPs are failing to hold electricity giants to account

Source: Stuff.co.nz - Opinion and Analysis

Date Published: 03/03/2021

Matched on: Electricity Authority AND dry year, electricity market AND dry year

OPINION: Select committees are supposed to show parliamentarians at their best; but not this time.

Electricity generator Mercury lowers its full-year profit forecast

Source: Stuff.co.nz - West Coast Headlines

Date Published: 23/02/2021

Matched on: electricity market AND low inflows

Mercury pulled back its full-year profit guidance as it expects dry weather to limit its ability to generate hydroelectricity, and wholesale prices to remain high.

As NZ gets serious about climate change, can electricity replace fossil fuels in time?

Source: SciBlogs.co.nz Date Published: 17/02/2021

Matched on: Transpower AND dry year, electricity industry AND dry year

Jen Purdie, University of Otago As fossil fuels are phased out over the coming decades, the Climate Change Commission (CCC) suggests electricity will take up much of the slack, powering our vehicle fleet and replacing coal and gas in industrial processes. But can the electricity system really provide...

Genesis to bring coal-fired unit out of mothballs as lake levels fall

Source: New Zealand Herald - Business

Date Published: 15/02/2021

Matched on: electricity market AND lake levels

Genesis Energy said it would bring its third coal-fired 240 megawatt Rankine unit at Huntly out of storage to provide backup generation if current dry conditions persist into the winter. The company said the combination of looming

Speech to Business Energy Council breakfast

Source: Latest speeches from beehive.govt.nz

Date Published: 11/02/2021

Matched on: Electricity Authority AND dry year, Electricity Authority AND thermal generation, Transpower AND dry year, Thank you very much for providing me the opportunity to speak at the Business New Zealand Energy Council breakfast meeting again.

2/5/2021: Economy: Pragmatic path to cutting carbon

Source: The New Zealand Herald - Print

Date Published: 05/02/2021

Matched on: Transpower AND dry year

If I had to choose one word to characterise the Climate Change Commission's draft road map to a decarbonised future, I would plump for "pragmatic". It is certainly more pragmatic on the electricity sector, for example, than the Government it is

2/3/2021: GENERAL 13: Clean Aotearoa CO2 optimism

Source: Otago Daily Times - Print Date Published: 03/02/2021

Matched on: electricity market AND dry year, energy industry AND dry year

GIVEN roughly 98% of our light vehicles run on fossil fuels, clearing New Zealand's highways of gas-guzzlers might appear an impossible feat right now. Yet the commission found it was entirely possible to nearly decarbonise our fleet — from small cars

Big Read: Five positive things we learned from major climate report

Source: New Zealand Herald - National News

Date Published: 01/02/2021

Matched on: electricity market AND dry year, energy industry AND dry year

The Climate Change Commission's just-released draft advice came with some fresh insights that should give New Zealand hope in meeting ambitious greenhouse gas targets. Science reporter Jamie Morton looked at five of them.

1/23/2021: Business: Stronger power market lifts Mercury outlook

Source: The Dominion Post - Print Date Published: 23/01/2021

Matched on: electricity market AND lake levels

Electricity generator Mercury has lifted its full-year profit forecast, pushed up by dry conditions and the deferred closure of Tiwai aluminium smelter. The company said yesterday it had upgraded its pre-tax earnings guidance to \$535 million, up from

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1/23/2021: Business: Trade Me data shows more jobs in regions than before Covid-19

Source: The Timaru Herald - Print Date Published: 23/01/2021

Matched on: electricity market AND lake levels

Jobs in the regions had the biggest yearly increase while the big cities were hit hardest after Covid-19, new Trade Me job figures show. After a year of uncertainty, the job market was looking considerably better than expected, Trade Me jobs spokesman

1/23/2021: Business: Stronger power market lifts Mercury outlook

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Source: The Nelson Mail - Print Date Published: 23/01/2021

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Mercury raises profit forecast as spot market, water levels improve

Source: Waikato Times Date Published: 22/01/2021

Matched on: electricity market AND lake levels, electricity market AND low inflows

Tiwai's reprieve and low lake levels are keeping wholesale power prices high.