

Top Energy Ltd application for an exemption from corporate separation and arm's-length rules

Decision Paper

14 October 2020



Executive summary

Decision No. EA005

Applicant

Top Energy Limited (Top Energy)

Background

Top Energy is the electricity distributor in the Far North of Northland. To support reliability on its network, Top Energy is installing (or has installed) diesel generators at Taipā, Bonnetts Road, Kaitāia Depot, Ōmanaia and Pukenui. Top Energy also intends to use the generators intermittently when electricity prices are high, to reduce costs to the network. Because of existing generation capacity owned by Top Energy at Ngāwhā, the diesel generation causes Top Energy to exceed a 50 MW threshold on connected generation. In exceeding this threshold Top Energy is a 'connected generator' and must satisfy corporate separation and arm's-length requirements under section 76 of the Act. The arm's-length requirements are laid out in Schedule 3 of the Act.

Summary of application:

The application requests the Authority to exempt Top Energy from corporate separation and arm's-length rules required by section 76 of the Act in respect of 17.87 MW of diesel/bio-diesel generators. Top Energy requests that the exemption be made in accordance with the powers that the Authority has under section 90(1) of the Act.

Summary of decision:

The Authority grants the application for an exemption under section 90(4) of the Act, subject to the conditions (a) – (e) outlined below. During the exemption period specified in (b), Top Energy will not be required to vest the diesel generation in a separate company, and the arm's-length rules of schedule 3 will not apply to that generation.

- (a) The exemption only applies to 17.87 MW of diesel/bio-diesel located as described in the exemption application.
- (b) The exemption will be granted for 365 days from the Gazette notification.
- (c) Within the 365 day exemption period Top Energy must conduct a registration of interest and, if any interest is registered, tender for network support.

The registration of interest and tender should be technologically neutral and should provide greater transparency about the network support offered by competing providers. At the end of the exemption period,

the Authority may consider revoking, varying or extending the exemption. Depending on the circumstance at the end of the exemption period, the Authority may or may not seek additional public feedback.

- (d) the Top Energy board must consider all proposals and report their deliberations to the Authority before applying for an extension to the exemption or any new application of a similar nature.

Date of decision:

7 October 2020.

Date of amendment:

The exemption will take effect the day after the date notified in the New Zealand Gazette.

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1 Introduction

- 1.1 This paper outlines an application by Top Energy for an exemption from certain requirements of Part 3 of the Electricity Industry Act (Act) and the Authority's decision on that application. The paper briefly summarises the application, the legislative framework and the responsibilities of the Electricity Authority, and then provides the rationale underpinning the decision.

2 Exemption application in brief

- 2.1 Top Energy is an electricity distribution business (a distributor) responsible for the supply of electricity in the Far North. It is owned by the Top Energy Consumer Trust on behalf of approximately 32,000 consumers.
- 2.2 In December 2019 Top Energy proposed connecting diesel/bio-diesel electricity generators to various parts of its network, primarily to support electricity supply to consumers during planned and unplanned outages. Some of the diesel generators are an alternative to back-up distribution lines that would provide network redundancy and security of supply, and will be used to defer capital expenditure on new and upgraded lines. Some of the diesel generators would also be run when electricity prices are high, to offset the costs of the generators, thereby reducing costs for Top Energy's owners (the consumer trust and hence consumers).
- 2.3 Top Energy has applied for an exemption from sections 76(1) and 76(2) of the Act in relation to the distributed generation described above. These sections are contained in Part 3 of the Act. Section 76(1) requires a connected generator (as defined in section 76(3)) to be carried on in a different company to that of the distribution business. Section 76(2) requires that every person involved in either or both businesses must comply with the arm's-length obligations laid out in Schedule 3 of the Act, and must ensure that the businesses also comply with these arm's-length rules.
- 2.4 Top Energy's application is reproduced in full in Appendix A. Sections 74 and 76 of the Act are reproduced in Appendix B. Appendix C contains Schedule 3 of the Act.

3 Part 3 of the Act promotes competition

- 3.1 The purpose of Part 3 of the Act is to promote competition. This purpose is promoted by ensuring that persons involved in a distributor cannot also be involved in a retailer or generator, as such involvement may create incentives or opportunities to inhibit competition in the electricity industry. 'Involvement' is formally defined in section 74 of the Act. The purpose is also promoted by restricting relationships between a distributor and a retailer or generator, where such relationships might not be conducted at arm's length.
- 3.2 This purpose implicitly considers that relationships between distributors and retailers or generators may inhibit competition in the electricity industry. To alleviate this concern, Part 3 of the Act and Schedule 3 impose obligations on distributors and persons involved in distribution, once certain generation and retailing thresholds have been reached. These obligations aim to ensure that retailers and generators have access to distribution networks on the same contractual terms as a distributor might grant a 'connected' retailer or generator (a related party). Obligations include ownership separation, corporate separation, the implementation of other safeguards such as arm's-length rules, and requirements relating to use-of-system agreements. Given the context of Top

Energy's exemption application, we primarily concentrate on electricity generation in the rest of the discussion and do not discuss retailing.

- 3.3 As noted in sections 72 and 76 of the Act, corporate separation and arm's-length rules come into force when a 'connected generator' has the capacity to generate more than 50 MW of electricity. Connected in this context means that the generator is connected to the distributor's network and there is some 'involvement' between the generator and the distributor, or any person involved in the distributor.
- 3.4 Part 3 of the Act nevertheless allows that some relationships between distributors and retailers or generators may not degrade competition. For example, some relationships are too small to have negative implications for competition and are disregarded; see Schedule 2 of the Act.
- 3.5 In recognition that some involvements between distributors and generators (or retailers) may be benign, section 90 of the Act enables the Authority to grant exemptions from obligations imposed by Part 3 of the Act. An exemption may be granted only if the Authority is satisfied that the exemption will promote, or not inhibit, competition, and will not create incentives and opportunities to inhibit competition in the electricity industry; see section 90(2).¹
- 3.6 Under section 90(4), the Authority may also impose terms or conditions that it considers necessary to promote competition, in accordance with the purpose of Part 3 of the Act.

4 Additional background to the application

Top Energy has an existing exemption under section 90(1)(b) of the Act

- 4.1 Top Energy owns Ngawha Generation Limited (NGL), which owns and operates a geothermal plant located in Ngāwhā (Ngawha Springs). NGL is corporately separated from Top Energy Limited. In 2017 managers and directors involved jointly in these two companies were granted an exemption under section 90(1)(b) of the Act from managerial separation and director/manager 'obligation' requirements that are part of the arm's-length requirements of Schedule 3 of the Act.²
- 4.2 As the exemption was granted under section 90(1)(b) of the Act, the generation from NGL needs to be taken into account for the purpose of thresholds when considering other generation by Top Energy.³ Top Energy and NGL were granted an exemption in relation to 75 MW of electricity generation from Ngāwhā. Any additional generation is well in excess of the 50 MW threshold once NGL's generation capacity is taken into consideration.
- 4.3 Corporate and management separation obligations come into play when generation exceeds this 50 MW threshold. If Top Energy and its managers and directors were not

¹ Appendix C of a previous decision paper provides a more in-depth discussion of the statutory criteria. See <https://www.ea.govt.nz/dmsdocument/22670-final-decision-application-for-exemption-from-top-energy-limited-ngawha>.

² See <https://www.ea.govt.nz/dmsdocument/26054-final-decision-paper-application-for-amendment-to-exemption-from-arms-length-rules-top-energy-limited> for the Authority's final decision on this exemption.

³ See Paragraphs 38-42 of the guidelines for an explanation of this point: <https://www.ea.govt.nz/dmsdocument/9541-guidelines-on-part-3-of-the-electricity-industry-act-2010>.

involved in NGL then the thresholds would not be a binding constraint for the diesel generation (again, see section 74 of the Act for the formal definition of involvement).

The location and magnitude of the diesel/bio-diesel generation

- 4.4 Top Energy currently has 3.65 MW of diesel generation located at Taipā. It is proceeding to install (or has installed) 14.22 MW of additional generation at various locations, as outlined in Table 1.

Table 1 Planned additions to diesel generation

Location	Nameplate capacity (MW)
Taipā	3.65
Bonnetts Road, Kaitaia	8.16
Kaitāia Depot	3.06
Ōmanaia	2.0
Pukenui	1.0
TOTAL	17.87

Top Energy's rationale for connected generation and the exemption

- 4.5 The generators in Kaitāia are intended to provide network support until a second 110kV line to the Pamapurua (Kaitāia) substation is built and the existing Kaikohe-Kaitāia line is refurbished. The construction of the additional 110kV line has been delayed as landowners have judicially appealed the resource consents for the network line. The generation at Ōmanaia is intended to provide security of supply while a 33kV line is rebuilt, but the exemption application notes the generation would remain at Ōmanaia for the lifetime of the generation asset. The generators at other locations are also intended to be in situ for their lifetime (see pp. 3-4 in Top Energy's exemption application).
- 4.6 Top Energy intends to use the diesel generation primarily for network support purposes. It considers (p. 3)⁴ that "strategically installed diesel or bio diesel generators to maintain supply when planned or unplanned outages have interrupted supply, has become the standard tool for use by network companies for restoring supply" as it is more effective and economically efficient than constructing more lines. Where feasible, the diesel generators will also be deployed when electricity prices are high.⁵ Running the generators on these occasions generates income for the consumer trust offsetting the costs of the generators.
- 4.7 Top Energy considers (p. 3) that there is little practical or economic sense to corporately separate the generation from the network and suggests that arm's-length operation also

⁴ Unless otherwise indicated, page references refer to Top Energy's exemption application.

⁵ The resource consents for generation at Taipā mean they can only be run for planned and unplanned outages.

makes little economic sense in those circumstances. Top Energy also suggests (p. 6, paragraph 36) that “since [the diesel/bio-diesel generators] use will be restricted to network support, it is not appropriate, sensible, or economically efficient to locate these assets away from the network business”. Furthermore, “[I]t is important that the management operating the network are also in charge of decisions relating to the need/desirability of running the diesel/bio diesel generation.”

Top Energy’s assessment of the competition effects of the proposed exemption

- 4.8 The competition effects of connected generation are a crucial consideration for the Authority when making decisions about exemptions under section 90 of the Act. Top Energy discusses the competition effects in relation to four markets (pp. 7-9 of the application):
- (a) the national electricity generation and wholesale market
 - (b) the local electricity retail market
 - (c) electricity distribution, and
 - (d) network support services market.
- 4.9 Top Energy notes that the contribution to generation will be small, leaving competition in the wholesale electricity market unaffected. Top Energy argues that the local retail market will benefit from improved reliability of supply, and that this may increase retailer confidence, promoting competition in the local market.
- 4.10 Top Energy notes that it effectively has a local monopoly on network distribution and suggests that an exemption would not affect the level of existing competition or scope for potential competition.
- 4.11 Top Energy contends that the network support services market does not exist in the Far North region (p. 7). Top Energy argues that no supplier is prepared to provide network support services to Top Energy.
- 4.12 Lastly, Top Energy considers incentives or opportunities for Top Energy to cross-subsidise a connected generator and opportunities for non-arm’s-length behaviour. It interprets both in relation to its ownership of Ngawha Generation Limited, not the distributed diesel generation. Top Energy concludes that neither cross-subsidisation nor non-arm’s-length behaviour is a problem in relation to NGL.

5 The decision and its rationale

The decision

- 5.1 The Authority has three options in response to an exemption application:
- 1. reject the application for exemption;
 - 2. approve the application outright; or
 - 3. approve the application but impose conditions to support the competition purpose of Part 3 of the Act.
- 5.2 The Authority’s decision is to approve the application but impose conditions on Top Energy to give effect to the purpose of Part 3 of the Act, as per section 90(4) of the Act.

The conditions are intended to resolve concerns that the Authority has about the competition and consequent efficiency implications of the exemption application.

- 5.3 The Authority has decided to grant Top Energy an exemption to generate electricity without corporate and management separation for a period of 365 days in relation to the diesel/bio-diesel generation described in Table 1. Within that 365 day period, Top Energy is required to conduct a registration of interest and tender for network support services. A transparent tendering process will a) highlight to network support companies where network support is required on Top Energy's network; and ii) ensure that the management and board of Top Energy have identified all possible alternatives, in a technology-neutral fashion, enabling them to identify the most efficient alternatives at different locations. If no interest is shown in providing network services, that would support Top Energy's contention that there is no effect on competition. The tendering process should be technologically neutral and consider alternatives to diesel/bio-diesel generators that would nevertheless meet reliability objectives.
- 5.4 At the end of the exemption period Top Energy may apply to the Authority to extend or vary the exemption, as per section 90(5) of the Act. The Authority may also revoke the exemption at any time or allow it to lapse. If Top Energy successfully meets the conditions and demonstrates to the satisfaction of the Authority that ownership of the diesel/bio-diesel generation is the most efficient mechanism for ensuring network reliability, the Authority may extend the exemption (e.g. for the lifetime of the diesel/bio-diesel assets or some shorter period as it considers appropriate). If Top Energy's tendering process indicated that other alternatives were superior the Authority may instead revoke the exemption. If Top Energy failed to meet the conditions, then the exemption may lapse.

Factors considered by the Authority in reaching its decision

- 5.5 The Authority assessed the exemption application against the criteria in the Act and considered other relevant matters from the Guidelines and application template. In particular, the Authority considered the following:
- what are the relevant markets in the electricity industry?
 - what are the implications for competition in those markets?
 - what are the implications for arm's-length behaviour?
- 5.6 Appendix D, Tables 2-3, provides a summary assessment of the baseline decision – the exemption with conditions – against two counterfactuals. The counterfactuals are (i) an exemption with no conditions and (ii) a rejection of the application, which would then require corporate separation and the imposition of arm's-length obligations if Top Energy proceeds with the diesel/bio-diesel generation. The impact of the exemption on competition in five markets is summarised, together with the implications for the incentives and opportunities to inhibit competition.

What are the relevant markets in the electricity industry?

- 5.7 The Authority has considered the competition implications of the exemption application for the same four markets identified by Top Energy, (a)-(d) in paragraph 4.8 above as well as a fifth market – the local wholesale market. Top Energy's exemption application argues that the exemption would not impede competition in the four markets that they discussed.

What are the implications for competition?

- 5.8 Like Top Energy, the Authority considers the competitive impact on the national wholesale market to be negligible. Increased generation is expected to reduce profit margins of other suppliers in the wholesale electricity market to the benefit of consumers, though these effects are expected to be small. This conclusion for the wholesale market is consistent with the Authority's assessment in the earlier Part 3 exemptions involving the Ngāwhā generation.⁶
- 5.9 Top Energy has indicated that it will run many of the generators when electricity prices are high. We consider that using generators in this way will provide a modest boost to competition. An increase in the supply of electricity at peak prices should, at the margin, place additional competitive pressure on peaking power plants. Once again, the effects should be small given that the diesel generators only yield 17.87 MW. We note, however, that there is a risk that the diesel generators may introduce constraints on Top Energy's network if they are providing peaking power, which could potentially prevent other generators from providing similar services on Top Energy's network.
- 5.10 Top Energy has suggested that increased reliability of supply may promote competition in the local retail electricity market. The Authority considers that the reliability effects on retail competition would be small, but would not likely degrade competition in the local retail market. Exemption EA003, associated with the Ngāwhā geothermal plant, also prohibits Top Energy and NGL from retailing to customers on Top Energy's distribution network, further diminishing the incentives to distort retail competition.
- 5.11 The Authority considers the effect on the local wholesale market is likely to be negligible. If part of the network becomes islanded, the price charged to retailers will depend on the prevailing price at the nearest grid exit point, and there will be little scope for Top Energy as the local generator to distort this price. The Authority regards the diesel generation's impact on Ngāwhā Generation Limited as being of negligible importance for competition.
- 5.12 The principal concern for competition is that Top Energy has scope to distort investment in the capital used for network support, with competitive implications for that market. Top Energy and its managers have scope to affect competition in the network services market because they are the sole purchaser of those services in Top Energy's network area. We expand on this concern further below.
- 5.13 A second concern is that the network support market can provide a base revenue stream to a competitor that would be able to provide a bundle of services that would otherwise be unviable without it. This additional revenue stream for a competitor has the potential to lower the costs of all the services provided, including network support.
- 5.14 Consumers' long term interests are best served through distributors utilising the most efficient network support services available. This is especially important for Top Energy as it has the highest distribution charges in New Zealand.⁷
- 5.15 Top Energy is owned by a consumer trust on behalf of consumers in their network region. The alignment of 'distributor' and 'consumer' interest should mitigate the incentives to exploit consumers for the benefit of the distributor. Inhibiting competition in

⁶ See for example section 4.2 in <https://www.ea.govt.nz/dmsdocument/26054-final-decision-paper-application-for-amendment-to-exemption-from-arms-length-rules-top-energy-limited>.

⁷ Source – Quarterly Survey of Domestic Electricity Prices dated 15 August 2020, <https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-statistics-and-modelling/energy-statistics/energy-prices/electricity-cost-and-price-monitoring/>

an input market – network services – would not be in the interests of consumers since competition should reduce input costs, increasing Top Energy’s profitability and reducing the prices borne by consumers. Making poor decisions about inputs – such as providing diesel generation for reliability purposes if better alternatives were available – would not be in the best interest of consumers.

- 5.16 This assessment relies on a benevolent view of the distributor as a servant of consumer interests and/or relies on strong and effective oversight of managers by the board and the owners of the distributor.
- 5.17 Given that managerial and consumer interests are not perfectly aligned, and regulation and corporate governance may be imperfect, managers may benefit from distorting the provision of network support. Such a distortion may increase the size of Top Energy at the expense of its competitors, which may be to the advantage of management even when it is not necessarily to the benefit of consumers.⁸
- 5.18 Distribution pricing may also discourage competition on the edge of the network. Consumers are commonly grouped into broad classes and are charged the same tariffs, even though providing services to consumers in different locations often results in different costs (particularly when there are differences in the density of consumers, eg per kilometre of line). Some consumers, particularly those on the edge of a network, may be receiving service at a price that is below their marginal cost. Such network pricing may distort the incentive to adopt off-grid solutions to serve high-cost, remote communities. Top Energy’s 2019 asset management plan (p. 35) recognises this problem, noting that replacement or renewal of many of the existing assets on Top Energy’s rural network is uneconomic.⁹
- 5.19 Installation of diesel generators in the more remote locations may contribute to the distortion of investment because remote communities may not pay for the generators that only serve their needs. While society in general, and the community trust in particular, may want all communities to have access to electricity, it remains important to adopt the most cost-effective solutions to achieve that objective.

Can a distributor cross-subsidise a generator?

- 5.20 Top Energy is subject to Default Price-Quality Path (DPP) and input methodology regulations from the Commerce Commission. These regulations constrain Top Energy’s acceptable rates of return (and implicitly pricing), and the inputs that can be used to provide network services. These regulations prevent Top Energy and other regulated distributors from gold-plating their regulatory asset base.
- 5.21 While regulators endeavour to ensure that regulation is fit for purpose and outcomes are efficient, a distributor such as Top Energy may still have some scope to misallocate costs associated with generation to the distribution business, particularly since the line between the two businesses is quite blurry in the context of network support. As above, the fact that Top Energy is owned by its consumers should reduce the incentives to cross-subsidise the local generation. However, managerial incentives may nevertheless differ to those of the consumer-owners, and consumers cannot directly elect new

⁸ Research indicates that managers in larger companies receive higher compensation. See Kevin D. Murphy (1999) Executive compensation, in Orley C. Ashenfelter and David Card (eds), *Handbook of Labour Economics*, Vol 3B, pp. 2485-2563, Elsevier, Amsterdam.

⁹ See <https://topenergy.co.nz/assets/Documents/2019-AMP.pdf>.

trustees if they become concerned that Top Energy is not acting in their best interest, given the appointment process specified in the trust deed.

What are the implications for arm's-length behaviour?

- 5.22 Part 3 of the Act requires corporate and managerial separation. Corporate separation ensures that the connected generator needs to be run separately and independently, for the benefit of the generator and not for the distributor. Corporate separation also prevents managers of the distributor from misdirecting the resources of the connected generator or misdirecting distribution resources that skew generation investment.
- 5.23 An exemption from section 76 removes one of the regulatory features that encourage good performance by distributors. An exemption exacerbates concerns about the competition implications described above, associated with managerial incentives and the potential for cross-subsidisation and distorted investment.

The rationale for the Authority's decision – in summary

- 5.24 The Authority has reservations about the competitive impact of Top Energy's installation of diesel/bio-diesel generation. Top Energy contends that the proposed exemption does not have adverse implications for competition and that the forced separation of generation from Top Energy is unnecessarily inefficient. The Authority proposes conditions to support competition in the network support market. Information from these conditions will also inform any future exemption application.

Exemption conditions to support competition in network support

- 5.25 In its application, Top Energy claims that no company would provide network support services to Top Energy. Contact's submission contradicts this claim, noting that it had visited Top Energy in 2017 demonstrating an interest in providing such services. The Authority considers that Top Energy's application does not provide enough assurance that all possible counterparties and all technologies were considered on an impartial basis.
- 5.26 The Authority considers that participants should have an equal opportunity to compete for business and a distributor's local monopoly over lines should not be used to competitively disadvantage other providers of services.
- 5.27 Corporate and management separation obligations under Part 3 of the Act place distributors and competing (network support) generators on a level playing field, since a competing supplier faces costs associated with corporate and management separation. If there are no competitors and if there is no likelihood of competitors entering the market in future, then the exemption would not adversely impact competition. However, further information about the state of the network support market is required to ascertain whether the network support market is active or inactive on Top Energy's network. If the network support market has the potential to provide reliability at lower cost to consumers on Top Energy's network, it would be inappropriate to provide a permanent exemption. Given the possibility of technological change, more limited exemptions may also be preferable to exemptions that last the lifetime of the generation assets.
- 5.28 The Authority is also concerned that Top Energy did not give due consideration to alternatives that could have competed against diesel generation. Expanding the range of solutions considered increases competition because there is a greater range of possible providers. In similar circumstances, Powerco conducted a Request for

Information in relation to transmission alternatives in the Hinuera Area, and in Whangamatā Powerco installed a mix of batteries and diesel generation.¹⁰ Similarly, Aurora Energy canvassed a range of options for network support in the Upper Clutha area, considering backup generators, generators continuously supplying electricity, large and small-scale battery systems and even demand response to support network reliability.¹¹

- 5.29 Top Energy also claims that competition in distribution would remain unaffected by the exemption given that Top Energy has a de facto local monopoly on the supply of network distribution services. This claim deserves scrutiny, as technology in batteries and distributed energy resource is improving rapidly. Non-network alternatives, particularly at the network edge, are increasingly viable in comparison to expenditures on traditional distribution networks. Micro-grids, connected or islanded from the main distribution networks, are increasingly viable. Thus, the boundaries of Top Energy's network may be subject to a degree of competition that is not apparent in Top Energy's exemption application, although it is recognised in Top Energy's asset management plan.
- 5.30 By installing local generation, Top Energy may be skewing incentives away from non-network alternatives. Top Energy is a local monopoly in the supply of electricity distribution (network) services in the Far North. As a monopolist, Top Energy is the sole buyer of network support services in its region (a monopsonist) and could exert market power affecting outcomes in the network services market.
- 5.31 Monopsonists typically demand fewer inputs than is optimal. Top Energy also has the capacity to dictate whether external competitors could ever successfully compete to provide network support services. In contrast, the intent of Part 3 of the Act is to provide equal access to the network and put competitors on an equal competitive footing.
- 5.32 Distributors are sometimes concerned that external parties cannot be relied upon to provide a service that has been contracted for. This concern relates to a long-standing debate about when it is desirable to use markets to allocate resources and when it may be preferable to organise activity within a corporate entity.¹²
- 5.33 The Authority considers that appropriate commercial contracts to provide diesel generation or batteries or other forms of distributed generation to facilitate network support are feasible and should be considered against alternatives provided by a distributor.
- 5.34 A variety of contractual features are available to ensure performance. Payments could be made in arrears, and penalties could be imposed if performance is not forthcoming. Liens could be placed on assets and claims for damages could be made if performance requirements are not met. Planned outages could be instituted to test capability, with scope to reverse the outage if network support services are not forthcoming as contracted for. Consequently, there is no inherent reason why a distributor should prefer to provide generation itself, over purchasing network support from other participants.

¹⁰ See <https://www.powerco.co.nz/news/rfi-transmission-alternatives-for-hinuera-area/> and <https://www.powerco.co.nz/news/whangamata-central-project-starts-to-take-shape/>.

¹¹ See for example <https://www.gets.govt.nz/AURORA/ExternalTenderDetails.htm?id=21495328>.

¹² This debate can be traced back to Ronald H. Coase (1937), The nature of the firm, *Economica*, 4, 386-405, and the subsequent literature in industrial organisation.

- 5.35 The Authority nevertheless recognises that a distributor may have pre-existing assets or responsibilities (such as land in proximity to sub-stations, or network maintenance obligations), that create synergies or 'economies of scope' that result in cheaper or more reliable network support. To ensure a level playing field, a distributor should make those pre-existing assets available to all potential providers of the network support service on the same terms that it would make them available to its own generation business. Both price and reliability should influence the choice between the alternatives under consideration.

What would happen without an exemption?

- 5.36 Should Top Energy not wish to meet the conditions associated with the exemption, they may instead choose to accept the default provisions of Part 3 of the Act, namely corporate and managerial separation. Under both the exemption and the default provisions of the Act, local generation can be installed to support reliability for Top Energy's consumers. To be clear, reliable supply is one of the Authority's main objectives under section 15 of the Act and this exemption decision does not compromise Top Energy's ability to meet reliability objectives, it simply imposes additional conditions.
- 5.37 Top Energy and the consumer trust would incur some additional costs given the corporate and management separation required by the Act. Those costs are borne to support competition in the long run and to enable that competition to foster innovation for the long-run benefit of consumers on Top Energy's network.
- 5.38 Lastly, we note that Top Energy has another option available to it, namely it could choose to divest its existing ownership of Ngawha Generation Limited. This could be through a number of possibilities including a full sale or vesting in a new consumer trust. In this case the 50 MW limit on generation would cease to be a binding constraint and ownership of the diesel/bio-diesel generation would no longer require corporate and managerial separation. If NGL were divested, it could continue to generate electricity and support the Northland economy as a distinct corporate entity.

6 The Authority published a draft decision and invited comments

- 6.1 On 7 July 2020, the Authority published its draft decision on the application¹³ and sought comments from interested parties. The Authority received comments from three parties:
- (a) Pioneer Energy Ltd
 - (b) Contact Energy Ltd
 - (c) Mercury Energy Ltd

The submissions support the decision to extend the exemption for 365 days but have concerns around the effects of Top Energy's actions on competition

- 6.2 In summary, the submissions:
- (a) support the use of a tender process during the 365 days prior to considering instituting a lengthier exemption (Pioneer, Contact, Mercury)

¹³ <https://www.ea.govt.nz/code-and-compliance/act-and-regulations/part-3/exemptions-part3/>

- (b) indicate industry concerns that Top Energy is repeatedly investing in assets prior to obtaining regulatory license to operate them (Pioneer, Contact, Mercury)
- (c) state using the diesel to manage wholesale electricity prices in the Far North would create incentives and opportunities to inhibit competition (Contact)
- (d) highlight continuing concerns about the degree to which Top Energy's exemptions are exceeding the 50MW legislative threshold (Pioneer, Mercury)
- (e) note that because Top Energy has already invested in the diesel generation assets, a tender process is unlikely to deliver competitive third-party solutions given they will be competing against the sunk cost of already built generation (Contact)
- (f) note prior interest in providing network support for planned and unplanned outages to Top Energy in 2017 (Contact)
- (g) recognise there are other ways to manage Top Energy's desire to use generation assets for the betterment of their customers without unduly affecting competition such as divesting of Ngawha or setting up corporate separation (Pioneer, Mercury)
- (h) caution against allowing one entity to exceed the 50MW threshold and using these assets to influence prices in the Far North (Pioneer, Mercury, Contact).

The short term exemption and associated conditions will allow the Authority to make a more complete analysis of the effects on competition

- 6.3 The Authority recognises concerns raised by submitters about the effects on competition that further exemptions above the 50MW threshold may have without corporate separation. The Authority has received conflicting accounts regarding the existence of a viable network support market in the Far North. Requiring Top Energy to conduct a formal registration of interest/tender process will allow the Authority to understand the effects on competition a more enduring exemption could have.
- 6.4 The Authority also needs to understand the true cost of instituting corporate separation as part of a counterfactual to any subsequent Top Energy application.

Top Energy's purchase of the assets prior to applying for the exemption does not influence the Authority's decision

- 6.5 Promoting the competitive provision of alternatives to traditional network infrastructure is a key element of the Authority's strategic focus on 'Thriving Competition'. As part of this strategic focus, the Authority is working to identify and remove inefficient barriers that might prevent new entrants from competing with existing participants. The Authority is also looking to promote the efficient provision of distributed energy resource to foster a low-emissions energy future. The Authority will closely examine the processes and decisions adopted by Top Energy during the exemption period, and may consider whether distributors need to be provided with more guidance in procurement processes.
- 6.6 The Authority and submitters are concerned that Top Energy did not apply for the exemption prior to acquiring the diesel assets. The Authority considers that Top Energy's decision to invest in generation prior to receiving an exemption should not influence the Authority's decision about whether to grant any extension of the exemption. Top Energy assumed certain risks by proceeding in that order.

The intent of Part 3 of the Act

- 6.7 Contact, Mercury, and Pioneer all questioned whether the exemption is consistent with the policy intent of Part 3 of the Act. They consider the 50 MW threshold for generation on a distributor's own network to be generous, and a figure that was subject to consultation and legislative scrutiny. In their view, extending Top Energy's ability to exceed this limit beyond what has already been given for Ngawha undermines competition with regards to generator investment and is unfairly applying the rules.
- 6.8 The Act does not prohibit a distributor owning generation above 50MW but specifies the threshold as the point at which corporate separation and arm's-length rules are triggered to manage any competition issues. The inclusion of the exemption provisions in Part 3 of the Act are an additional indicator that the 50MW threshold may go further than is necessary to give effect to the purpose of Part 3. That is, the 50MW threshold is presumed to give rise to the need to have corporate separation and arm's-length rules to make sure the purpose of Part 3 is met. However, the exemption power in section 90 acknowledges that this will not always be the case and instead analysis of the competitive effects of the relevant conduct is required.
- 6.9 Given the legislative intent as noted above, corporate separation above the 50MW threshold will continue to be a consideration on any exemption request.

The ROI/Tender process

- 6.10 Contact expressed concerns in their submission regarding the ability for any entity to be competitive when tendering for network support services when considered against the sunk costs of the already-purchased diesel assets.
- 6.11 The Authority agrees that the sunk costs will influence the viability of any offers for network support services. The nature of the tendering process will be considered for future exemption applications beyond this 365-day exemption. The Authority expects that to make an informed decision at the conclusion of this exemption, it may need to:
- (a) view the proposals/tender documents
 - (b) perform an analysis of any offers
 - (c) review materials presented to Top Energy's Board, their discussion of options (eg board papers/minutes), and the rationale for any decision
 - (d) consider the true cost of any corporate separation required should the exemption not be granted.

Involvement in the wholesale market

- 6.12 Contact has also expressed concerns that using diesel generators to manage wholesale prices in the Far North will influence and distort price outcomes in the market.
- 6.13 While Contact did not detail the type of distortion they expect, the Authority's view is that that the impact on nodal prices is unlikely to be substantial/material. This is discussed in more detail in the section "What are the implications for competition?" above.
- 6.14 However, the full effects of the assets will be apparent when the assets have been in use in the market and will enable the Authority to make a more accurate assessment of the effects on wholesale prices.

7 Attachments

1. Appendix A – Application for an Exemption from Top Energy Limited pursuant to Section 90 Electricity Industry Act 2010
2. Appendix B – Sections 74 and 76 of the Act
3. Appendix C – Schedule 3 of the Act
4. Appendix D – The Authority's analysis of the statutory criteria for different markets
5. Appendix E – Draft Gazette notice

Appendix A Application for an Exemption from Top Energy Limited pursuant to Section 90 Electricity Industry Act 2010



Application for an Exemption pursuant to Section 90 Electricity Industry Act 2010

Date: 12 December 2019

Applicant: **Top Energy Limited**
Level 2 John Butler Centre
60 Kerikeri Road
Kerikeri

Applicant's contact: **Russell Shaw**
Chief Executive
Top Energy Limited
P O Box 43
Kerikeri

Tel: (09) 407 0622
Email: Russell.Shaw@topenergy.co.nz

Application: Pursuant to section 90 (1) of the Electricity Industry Act 2010 (**Act**), application is hereby made to the Electricity Authority (**Authority**) for exemptions in respect of Section 76 under Part 3 of the Act.

Background

1. On 7 October 2017 the Authority granted Top Energy Limited (**Top Energy**) an exemption from the requirements to comply with arm's-length rules 9 and 10 in respect of Top Energy's geothermal generation at Ngawha Springs geothermal plant owned by its wholly owned subsidiary Ngawha Generation Limited (**NGL**)(**Ngawha Exemption**). The generation capacity to which the Ngawha Exemption applied reflected the existing nameplate capacity of 32 MW and the proposed expansion of the existing plant. The Ngawha Exemption was granted for a period of 10 years to 1 November 2027.
2. On 11 November 2019, the Ngawha Exemption was amended to apply to nameplate capacity of 75 MW and the expiry date was extended to 31 July 2052.
3. The Ngawha Exemption only applies to the geothermal generation at Ngawha Springs. At the time of the original application for the Ngawha Exemption, a further exemption application in respect of diesel/bio diesel generators was made by Top Energy. That application was subsequently separated from the application relating to the Ngawha Springs generation by the Authority and was not progressed by Top Energy.
4. This application revives the original application for an exemption in respect of the ownership and operation of diesel/bio diesel generators by Top Energy for network support purposes.

Urgency

5. Top Energy requests that the application is dealt with as a matter of urgency. It believes it is appropriate for it to be treated with urgency, because in the absence of an exemption for the ownership and operation of these generators, from June 2020 when the Ngawha Expansion is expected to be in the course of commissioning, it will not be possible for Top Energy to operate the generators it currently owns and operates, without breaching section 76 of the Act. Accordingly, Top Energy will not be able to maintain supply to approximately 12,000 remote electricity consumers when network failure occurs or maintenance is required (approximately 10, 8 hour shutdowns per annum).
6. The need for urgency has not arisen through inactivity on Top Energy's part. As the Authority is aware, Top Energy is currently in the course of expanding its existing geothermal generation capacity at Ngawha Springs. In light of the original terms of the exemption granted by the Authority in respect of the expanded generation at Ngawha, it was not appropriate for Top Energy to rely on the exemption and it determined that the expanded capacity at Ngawha would be connected to the national grid. As a consequence, the connected generation capacity of Top Energy would allow Top Energy to use of diesel/bio diesel generators to manage supply in circumstances of network outage without being required to comply with the corporate separation and arm's-length rules. Top Energy therefore went ahead with acquisition of the diesel/bio diesel generators and these will become available for use on Top Energy's network from late February 2020.
7. In July 2019, after discussions with Transpower, it became apparent that the costs of connecting the expanded capacity from Ngawha to the national grid were prohibitive and materially adverse to the interests of electricity consumers in Top Energy's distribution network area. It was therefore necessary for Top Energy to seek an amendment to the Ngawha Exemption. This was granted by the Authority on 11 November 2019.

Introduction

8. The circumstances in which network companies operate in New Zealand are rapidly changing. Network companies must now examine whether the construction of new lines and replacement lines is appropriate and whether other means of managing reliability and security of supply obligations can be more effectively and economically efficiently adopted. As the Authority will be

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- aware, Eastland, Unison and PowerCo already operate diesel generators for network support purposes. None of these entities have the generation capacity that Top Energy (through NGL) has.
9. Specifically, in the context of a largely rural radial line network where various parts of the network supply energy to a few thousand and (often) less customers, the use by network companies of strategically installed diesel or bio diesel generators to maintain supply when planned or unplanned outages have interrupted supply, has become the standard tool for use by network companies for restoring supply. The use of such generators is now proving to be a more effective and economically efficient method of dealing with network construction and maintenance issues than simply constructing more lines.
 10. If generation is used for network purposes, it makes little practical or economic sense to corporately separate that generation from the network company, and yet where the capacity thresholds are breached, that is what section 76 of the Act requires. Additionally, that generation is required to be operated at arm's length in those circumstances, which again, when it is being operated for network purposes, makes little economic sense.
 11. Top Energy's circumstances are unique in that few network companies own generation with the capacity of Ngawha. However, the Ngawha Exemption applies only to the Ngawha generation and a further exemption is required by Top Energy to operate the diesel/bio diesel generators.

Confidentiality

12. No Confidentiality in respect of any information in this application is sought.

Exemption in respect of the operation by Top Energy of diesel/bio diesel generators for network security of supply and peak demand purposes

13. Application is hereby made to the Authority under Section 90 (1) (a) of the Act by Top Energy for an exemption from the requirements to comply with section 76 (1) (corporate separation) and section 76 (2) (arm's-length rules) but only in respect of the diesel/bio diesel generators Top Energy has purchased and intends to use for the purposes of maintaining supply when planned or unplanned outages would otherwise interrupt supply and to sell any resulting incidental generation on the wholesale market as set out below:
14. In respect of 3.65 MW diesel/bio diesel generation located at Taipa, an exemption to Top Energy to operate such generation as follows:
 - (a) In respect of 3.65 MW for the purposes of network support in circumstances of an unplanned network outage; and/or
 - (b) In respect of 3.65 MW for the purposes of network support in circumstances of a planned network outage;

Note 1: Resource Consents for the generators at Taipa only allow them to be run for planned and unplanned network outages.

Note 2: It is not intended, and the Network Development Plan does not make provision for, the building of a second 33kV line to the Taipa Zone Substation. This backup generation is therefore intended to stay in location for the life of the generation asset.
15. In respect of 8.16 MW diesel/bio diesel generation located at Bonnetts Road, Kaitia an exemption to Top Energy to operate such generation as follows:
 - (a) In respect of 8.16 MW for the purposes of network support in circumstances of an unplanned network outage; and/or
 - (b) In respect of 8.16 MW for the purposes of network support in circumstances of a planned network outage; and/or
 - (c) In respect of 8.16 MW, the ability to sell such generation into the wholesale market with the intention of taking advantage, as a price taker, of prices at the time so as to, in effect, lower the costs of delivered energy to consumers in the Far North as a result of Top

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Energy's capped regulatory revenue. In this respect it should be noted that this relates to price peaks and not demand peaks arising from network constraints. The network area concerned has no capacity constraints and has sufficient capacity headroom to accommodate future demand.

- (d) For a period of time until the second 110kV line to Pamapurua (Kaitaia) grid substation is built and the existing Kaikohe to Kaitaia line is refurbished.
- 16. In respect of 3.06 MW diesel/bio diesel generation located at Top Energy's Kaitaia Depot an exemption to Top Energy to operate such generation as follows:
 - (a) In respect of 3.06 MW for the purposes of network support in circumstances of an unplanned network outage; and/or
 - (b) In respect of 3.06 MW for the purposes of network support in circumstances of a planned network outage; and/or
 - (c) In respect of 3.06 MW, the ability to sell such generation into the wholesale market with the intention of taking advantage, as a price taker, of prices at the time so as to, in effect, lower the costs of delivered energy to consumers in the Far North as a result of Top Energy's capped regulatory revenue. In this respect it should be noted that this relates to price peaks and not demand peaks. The network area concerned has no capacity constraints and has sufficient capacity headroom to accommodate future demand.
 - (d) For a period of time until the second 110kV line to Pamapurua (Kaitaia) grid substation is built and the existing Kaikohe to Kaitaia line is refurbished.
- 17. In respect of 2.0 MW diesel/bio diesel generation located at Omanaia an exemption to Top Energy to operate such generation as follows:
 - (a) In respect of 2.0 MW for the purposes of network support in circumstances of an unplanned network outage; and/or
 - (b) In respect of 2.0 MW for the purposes of network support in circumstances of a planned network outage; and/or

Note: It is not intended, and the Network Development Plan does not make provision for, the building of a second 33kV line to the Omanaia Zone Substation. This backup generation is therefore intended to stay in location for the life of the generation asset.
- 18. In respect of 1.0 MW diesel/bio diesel generation located at Pukenui an exemption to Top Energy to operate such generation as follows:
 - (a) In respect of 1.0 MW for the purposes of network support in circumstances of an unplanned network outage; and/or
 - (b) In respect of 1.0 MW for the purposes of network support in circumstances of a planned network outage; and/or

Note: The Network Development Plan does not make provision for the reinforcement of this part of the network with lines. This backup generation is therefore intended to stay in location for the life of the asset.
- 19. All electricity generated by such diesel/bio diesel generators, will be sold into the wholesale electricity market. As the amounts generated will be small, spasmodic and usually unpredictable, the price received for these volumes will be determined by the ruling price set by the market.

Background to the applications

Top Energy

- 20. As the Authority knows, Top Energy carries on the business of distribution business as defined in the Act. It owns and operates the local distribution network in the Far North region. The area reticulated is approximately 6,800 square kilometres. The geographic boundary is approximately 20 kilometres north of Whangarei at Hukerenui and generally equates to the Far North District

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- Council territorial authority. A total of 32,000 consumers are supplied by 4,016 kilometres of lines with an Regulated Asset Base of \$260 million. It also has the geothermal generation at Ngawha.
21. The area in which Top Energy's distribution network is located is economically disadvantaged in comparative terms, with relatively low household incomes relative to the national average. The customer density is 7.7 per kilometre of line compared to the national average of 12.2 customers per kilometre of line. Many consumers on the Top Energy network live in energy poverty.
 22. Top Energy is a regulated electricity distribution business as defined in the Commerce Act 1986. Although it is owned entirely by the Trustees of the Top Energy Consumer Trust, the Trustees of that trust are not elected by consumers. Top Energy is therefore not an exempt electricity distribution business and is subject to both the information disclosure regulatory regime and the default price-quality path regulatory regime under Part 4 of the Commerce Act.
 23. Further information on Top Energy is already held by the Authority as a result of its application in respect of the expanded generation capacity at Ngawha, and which is reflected in the authority's Decision 3. For the purposes of this application, the information relating to Top Energy contained in the application for the Ngawha Exemption and the application for amendment of that exemption as set out in the application dated 27 August 2019, to the extent necessary, is hereby incorporated by reference, in this application.
 24. In addition to that information, Top Energy provides the following information which specifically relates to the diesel/bio diesel generator exemption now applied for.
 25. As part of its network assets, Top Energy currently owns 3.65 MW (nameplate) diesel generation located at Taipa and which is used to maintain supply in the local area when supply through fixed lines has been lost for either planned or emergency unplanned work.
 26. Top Energy has acquired (but not yet brought into operation) further diesel/bio diesel generators with a combined aggregate of 14.22 MW (nameplate). Such generators, as is the case with the existing 3.65 MW diesel generator at Taipa, will be used solely for the purpose of maintaining network supply when planned and unplanned outages on the network occur or to lower the delivered cost to consumers at peak times. Top Energy intends to construct a second 110kV line between Kaikohe and Kaitaia. Construction of the 110kV line has been delayed by challenges by landowners to the consents granted to Top Energy by the Crown under section 186 of the Public Works Act. There is no certainty when these appeals will be decided or whether they will be decided in Top Energy's favour. In the meantime, Top Energy must provide the best levels of service that it can to its customers.
 27. In short, these generators will improve the security of supply to geographically remote areas, reduce the costs of maintaining reliable supply to such areas, address the risk of obsolescence of new line assets arising from technological advances as well as enabling Top Energy to manage peak demand on its network.
 28. The Taipa generation is located at Taipa because Top Energy's network extends beyond that point as a radial line which serves 4,108 consumers. If supply through Top Energy's fixed radial line is lost to that area, the generator is used to supply those customers. Since its installation in 2012, there have been 17 instances of lost supply during which it has operated to maintain supply. In total, the electricity generated through the Taipa Generator since installation has been 99MWh.
 29. The additional generators will be located around the Top Energy network because:
 - (a) 8 x Generators will be co sited at Bonnetts Rd as a generation farm to provide backup supply for 4417 customers on the Top Energy fixed radial lines. If the supply is lost to that area, the generator is used to supply those customers.
 - (b) 3 x Generators will be co sited at the Kaitaia Depot to provide backup supply for 1,657 customers on the Top Energy fixed radial lines. If the supply is lost to that area, the generator is used to supply those customers.

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- (c) 3 x Generators:
- (i) 2 generators will be located at Omanaia in the interim until the 33kV line is rebuilt, during which time they will provide backup supply for 1,534 customers on the Top Energy fixed radial lines. If the supply is lost to that area, the generator is used to supply those customers.
 - (ii) 1 generator will be installed at Pukenui to provide backup supply for 1,138 customers on the Top Energy fixed radial lines. If the supply is lost to that area, the generator is used to supply those customers.
30. Top Energy anticipates that these generators will run only between 16 and 25 hours per annum for planned and unplanned outages and potentially another 45 hours per annum to reduce the delivered cost of energy to consumers.

Requirement for the exemptions sought

31. Section 76 (1) of the Act provides that:
"the person or persons who carry on the business of distribution must carry on that business in a different company from the company that carries on the business of a connected generator or a connected retailer."
32. Section 76(2) of the Act provides that:
"Every person who is involved in a distributor, and every person who is involved in a connected generator or a connected retailer, must comply, and ensure that the persons businesses comply, with the arm's-length rules."
33. A connected generator is defined in section 76(3) in relation to a distributor means a generator
- (a) that has a total capacity of more than 50 MW of generation that is connected to any of the distributors network's; and
 - (b) in respect of which the distributor, or any other person involved in the distributor is involved.
34. Currently, Top Energy's generation is made up of the 3.65 MW diesel generator used for network support and the current 32 MW, but proposed 75 MW once the expansion is commissioned, generated at Ngawha.
35. Top Energy has acquired and intends to operate additional diesel/bio diesel generators with an aggregate nameplate capacity of 14.22MW giving a combined aggregate diesel/biodiesel generator capacity of 17.87 MW.
36. The ownership and operation of these generators will mean that Top Energy owns generation capacity greater than 50 MW. The requirements of section 76 (1) and (2) of the Act require corporate separation and compliance with the arm's-length rules in respect of the ownership and operation of this diesel/bio generation. However, since their use will be restricted to network support, it is not appropriate, sensible, or economically efficient to locate these assets away from the network business. It is important that the management operating the network are also in charge of decisions relating to the need/desirability of running the diesel/bio diesel generation. Accordingly, an exemption from the section 76 (1) and (2) requirements is required.

Benefits of granting the exemptions sought

37. Top Energy had previously intended to construct a second 110kV line between Kaikohe and Kaitaia as referred to in paragraph 26. Given the lack of certainty referred to, Top Energy provide the best levels of service that it can to its customers and meet its regulatory supply obligations by other means. The use of diesel/bio diesel generators as an alternative to building a second line for security of supply purposes is currently more cost effective and has become a standard practice in New Zealand. Top Energy's modelling of the capital and operating costs of the diesel/bio-diesel option (including the much greater cost of the variable operating costs of the units) indicate that the economic life of second 33kV lines must exceed 30 years.



Matters to be taken into account in considering application

38. The Authority has stated that it will consider whether granting an exemption would be contrary to the purpose of Part 3 and the Authority's objective set out in section 15 of the Act. The Authority will also take into account the following:

- *would the exemption promote, or not inhibit, competition in the electricity industry?*
- *would the exemption permit any involvement in a distributor and a generator or a retailer that may create incentives or opportunities to inhibit competition in the electricity industry?*
- *would the exemption, in respect of a business or involvement, create incentives or opportunities for a distributor to cross-subsidise the connected generator or a directly connected generator of over 250MW?*
- *would the exemption, in respect of a business or involvement, permit a relationship between a distributor and a retailer or generator which is not at arm's-length?*

Relevant markets

39. The Authority has determined that it will consider the relevant markets in the electricity industry. It is clear from Decision 3 and previous decisions in respect of applications under section 90 of the Act that the relevant markets are:

- (a) the national electricity generation and wholesale market (**National Wholesale Market**);
- (b) the electricity retail market corresponding with Top Energy's network (**Local Retail Market**); and
- (c) the electricity distribution market that corresponds with Top Energy's network (**Local Distribution Market**).

40. In Decision 3 the Authority referred to the existence of an additional market in respect of the provision of support services for distribution networks to maintain supply when planned and unplanned outages occur, support the quality of supply and reduce peak demand and to manage transmission charges or defer network investment (**Network Support Services Market**) and that there are potential participants who are prepared to compete in this market.
41. Top Energy does not agree that a market of this nature exists in the Far North region. Based on its experience there is no supplier which is prepared to offer these services to Top Energy.
42. Generators to support planned outages are available for hire in New Zealand and Top Energy accepts that these hire generators are able to be used where sufficient advance bookings can be made. However, hire generators are not always available even for planned outages. Top Energy has encountered circumstances where all hire generators were booked and not available. During the Rugby World Cup held in New Zealand in 2015 for example, no generators were available for hire in New Zealand. External events and circumstances of this nature therefore mean that there are no circumstances where reliance on hire generators provides an acceptable assurance of the availability of back up generation.
43. Top Energy has been unable to locate a generator hire entity that is prepared to guarantee generator availability for all planned network outages.
44. Even if generators are available at any point in time, they must be transported from Auckland to the Far North location at which they are required. This adds considerable cost to the overall cost of providing back-up electricity supply.
45. In addition, no generator hire entity has agreed with Top Energy to provide guaranteed generator availability for unplanned network outages on the Top Energy network. As well, the hire of generators for unplanned outages is operationally unsustainable. The delivery time for such equipment would be at least 4-6 hours, not including the organisational time required to bring a unit to a point ready for departure from Auckland. In almost all circumstances, the fault will be restored before the generation support arrives on site.

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46. As a result, while, at best, generator hire entities provide ad hoc generation back up, this potential supply of back up generation does not provide the assurance of availability that Top Energy requires to meet the supply quality requirements under the default price and quality path.
47. Top Energy has sought alternative network support generation from other electricity sector participants for both planned and unplanned outages. None of those participants approached by Top Energy were prepared to provide such services. Top Energy understands that this is the case because the returns that were previously available under the Avoided Cost of Transmission pricing regime are no longer available and the provision of this service is therefore no longer economically viable.
48. Despite the Authority's view that there are persons prepared to provide network support for network outages, the reality is that from discussions Top Energy has held with other network companies and gentailers, it has been unable to secure such services.
49. Even if some participants were willing to provide the services, the costs of the provision of those services would, as a result of the matters outlined above, be prohibitive. This means that the costs of the provision of any network support would far exceed the costs of Top Energy owning and operating diesel generation to provide this support on an entirely on demand basis.
50. Accordingly, Top Energy considers that there is no Network Support Services Market for planned or unplanned outages and does not provide any further information or make any submission relating to those services for the purposes of this application.

In respect of each of these markets would the exemption promote, or not inhibit, competition?

51. In light of the above, this application addresses only those actual markets, which in Top Energy's submission, might be impacted by this application.

National Wholesale Market

52. The diesel/bio-diesel generation will be sold into the National Wholesale Market. Based on anticipated hours of operation of the diesel/bio diesel generation at a maximum of 160 hours per annum, generation of up to 3,000 MWhr per annum would be produced. This amount in a national market of over 44,380 GWh will be so small, that there will be no material promotion of competition in this market.

Local Retail Market

53. The ability to use diesel/bio diesel generation at times of network unavailability and for managing peak demand should be positive from the perspective of the Local Retail Market. This is because the operation of the diesel generation assets will improve resilience and reliability on Top Energy's distribution network and reduce capital expenditure on the network. In turn, this will mean retailers can have greater confidence in continuity of supply which in turn should promote competition in the local retail market.

Local Distribution Market

54. As has been determined previously by the Authority in relation to Top Energy's application in respect of the generation capacity at Ngawha, Top Energy, as the local electricity distributor, is a natural monopoly within its own distribution network area and any exemption could not, and would not, affect the level of existing competition or scope for potential competition within this market. If the units are permitted to run at times of peak wholesale market then there is an opportunity to reduce the delivered cost of energy to consumers. This is a result of the regulated lines business being revenue capped, any additional net lines revenue will be netted off against this cap reducing the cost per customer.

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In respect of each of these markets would the exemption permit any involvement in a distributor and a generator that may create incentives or opportunities to inhibit competition in the electricity industry?

National wholesale Market

55. All the diesel/bio diesel generation assets owned by Top Energy will only be used to provide network resilience and security at times of planned and unplanned outages on parts of Top Energy's distribution network or to lower the delivered cost of energy to Far North consumers. There is no intention that this generation will run except where network issues give rise to supply continuity issues. Market prices will only have an input to running the units during extreme market prices and Top Energy will be a price taker in any event.
56. The costs of fuel to run the diesel/bio diesel generation will likely be in the order of \$300 per hour. In addition, fixed maintenance costs will be incurred. Although the electricity generated will be sold into the National Wholesale Market, the likely amount which will be received under normal circumstances will represent less than one third of that cost. As a result, the likely payment for generation produced by the diesel/bio diesel generators will not incentivise the running of the generation except at times of peak pricing in the market. In reality, the costs of running the generation are a natural disincentive to run the generation for any longer period than is necessary to maintain supply while that part of the network is the subject of an outage.
57. Based on its historical data, Top Energy expects the generation produced on a per annum basis by the diesel/bio diesel generators to be approximately 2,600 MWh.
58. Given the infrequency of outages and the very small supply area involved relative to the overall wholesale market, the impact would be immaterial.

Local Retail Market

59. The generation produced by the diesel/bio diesel generators will be sold by Top Energy into the National Wholesale Market and not to an end use customer on Top Energy's network. Accordingly, the granting of the exemption will not create incentives or opportunities to inhibit competition in this market.

Local Distribution Market

60. As determined in Decision 3, and referred to in paragraph 54, the granting of the exemption in respect of additional generation capacity in Top Energy's network will neither promote nor inhibit competition in this market.

Would the exemption in respect of a business or involvement or interest, create incentives or opportunities for a distributor to cross subsidise a connected generator namely NGL?

61. The use of the diesel/bio diesel generation does not create any opportunity to cross subsidise a connected generator. Top Energy will have paid for the generation to enable it to perform its obligation to maintain supply. The generators are network assets, are part of Top Energy's Regulated Asset Base and used solely for network purposes. The costs of acquisition and the costs incurred in running the generation are met by Top Energy itself, within the Regulatory Price Cap.

Would the exemption in respect of a business or involvement permit a relationship between a distributor and a generator which is not at arm's length?

62. Top Energy will own and make decisions as to when the network unavailability requires the diesel/bio diesel generation to run. Accordingly, the operation of that generation is solely the decision of Top Energy. NGL has and will have no involvement in the decisions whether to run the generation and is entirely unconnected to Top Energy in relation to those decisions. As a



consequence, the exemption granted will not permit a relationship between a distributor and a generator in relation to that generation which is not at arm's-length.

Declaration

63. The required declaration is attached.

Further Information

64. For further information, relating to this application, please contact in the first instance, the applicant's contact as set out on the front page.

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DECLARATION

This application is made by **TOP ENERGY LIMITED (Company)**

The Company hereby confirms that:

- all information requested by the Electricity Authority is provided;
- all relevant information known to the applicant is provided; and
- all information provided is true and correct as at the date of this application.

The company undertakes to advise the Authority immediately of any material change in circumstances relating to the application.

Top Energy Limited

Date: 12TH DECEMBER 2019

Signed by:

Russell Shaw



Chief Executive Officer

I am the Chief Executive Officer of the Company and am duly authorised to make this application.

Date: 12TH DECEMBER 2019

Signed by:

Russell Shaw



Chief Executive Officer

Appendix B Sections 74 and 76 of the Act

74 Meaning of involved in

- (1) For the purposes of this Act, a person is **involved in** a distributor, a generator, or a retailer if the person—
 - (a) carries on a business that does any of those things, either alone or together with its associates and either on its own or another's behalf; or
 - (b) exceeds the 10% threshold in respect of a business that does any of those things; or
 - (c) has material influence over a business that does any of those things.
- (2) A person exceeds the 10% threshold in respect of a business if the person—
 - (a) has more than 10% of the control rights in the business; or
 - (b) has more than 10% of the equity return rights in the business; or
 - (c) is one of 2 or more associates who, in aggregate, have more than 10% of the control rights in the business; or
 - (d) is one of 2 or more associates who, in aggregate, have more than 10% of the equity return rights in the business.
- (3) **Involvement** has a corresponding meaning.
- (4) This section is subject to Schedule 2.

Compare: 1998 No 88 ss 7, 8

76 Corporate separation and arm's-length rules applying to distributors and connected generators and connected retailers

- (1) The person or persons who carry on the business of distribution must carry on that business in a different company from the company that carries on the business of a connected generator or a connected retailer.
- (2) Every person who is involved in a distributor, and every person who is involved in a connected generator or a connected retailer, must comply, and ensure that the person's businesses comply, with the arm's-length rules.
- (3) In this section, unless the context otherwise requires,—

connected generator, in relation to a distributor, means a generator—

 - (a) that has a total capacity of more than 50 MW of generation that is connected to any of the distributor's networks; and
 - (b) in respect of which the distributor, or any other person involved in the distributor, is involved

connected retailer, in relation to a distributor, means a retailer—

 - (a) that is involved in retailing more than 75 GWh of electricity in a financial year to customers who are connected to any of the distributor's networks; and
 - (b) in respect of which the distributor, or any other person involved in the distributor, is involved.

Compare: 1998 No 88 ss 17D, 17E

Appendix C Schedule 3 of the Act

Schedule 3

Electricity Industry Act 2010

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Schedule 3 Arm's-length rules

ss 73, 76

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1 Objective

- (1) The objective of this schedule is to ensure that businesses to which section 76 apply operate at arm's length.
- (2) Without limiting the ordinary meaning of the expression, **arm's length** includes having relationships, dealings, and transactions that—
 - (a) do not include elements that parties in their respective positions would usually omit; and
 - (b) do not omit elements that parties in their respective positions would usually include,—
if the parties were—
 - (c) connected or related only by the transaction or dealing in question; and
 - (d) acting independently; and
 - (e) each acting in its own best interests.

2 Interpretation

- (1) In this schedule,—

business A means a business that is required to be carried out in 1 company under section 76 and the term **business B** then refers to a business that is required to be carried out in another company under that section

common parent, in relation to business A and business B, means a person that is involved in both business A and business B

electricity trust means a community trust or a customer trust or a customer co-operative

parent, in relation to a business, means every person that is involved in the business.
- (2) In this schedule, a person is **interested** in a transaction if the person, or an associate of that person,—

- (a) is a party to, or will derive a material financial benefit from, the transaction; or
 - (b) has a material financial interest in a party to the transaction; or
 - (c) is a director or manager of a party to, or a person who will or may derive a material financial benefit from, the transaction; or
 - (d) is otherwise directly or indirectly materially interested in the transaction.
- (3) Where this schedule applies to business A, it applies equally to business B, and vice versa.
- (4) References to trust A and trust B have corresponding meanings and application.

3 Arm's-length rules

The arm's-length rules are as follows:

Duty to ensure arm's-length objective is met

- 1 Business A and every parent of business A, and business B and every parent of business B, must take all reasonable steps to ensure that the arm's-length objective in clause 1 is met.

Arm's-length test

- 2 Business A, and every parent of business A, must not enter into a transaction in which business B, or any parent of business B, is interested if the terms of the transaction are terms that unrelated parties in the position of the parties to the transaction, each acting independently and in its own best interests, would not have agreed to.

Duty not to prefer interests of business B

- 3 A director or manager of business A must not, when exercising powers or performing duties in connection with business A, act in a manner that the director or manager knows or ought reasonably to know would prefer the interests of business B over the interests of business A.

Duty not to discriminate in favour of business B

- 4 Business A must not, in providing services or benefits, discriminate in favour of business B or the customers, suppliers, or members of business B.

Duty to focus on interests of right ultimate owners

- 5 A director or manager of business A must, when exercising powers or performing duties in connection with business A, act in the interests of the ultimate members of business A in their capacity as such, and must neither subordinate

the interests of those members to the interests of the members of business B nor, to the extent that the members or ultimate beneficial members of each business overlap, take account of that fact or have regard to their dual capacity as members of business B and business A.

Duty of directors and managers of parents of business A

- 6 A director or manager of a parent of business A must not, when exercising powers or performing duties in connection with business A, act in a manner that the director or manager knows or ought reasonably to know would prefer the interests of business B, or of the customers, suppliers, or members of business B in that capacity, over the interests of business A or the customers, suppliers, or members of business A.

At least 2 independent directors

- 7 At least 2 directors of business A must—
- (a) be neither a director nor a manager of business B; and
 - (b) not be an associate of business B, other than by virtue of being a director of business A.

No cross-directors who are executive directors

- 8 A director of business A may be a director of business B, but must not—
- (a) manage business B on a day-to-day basis; or
 - (b) be an associate of business B, other than by virtue of being a director of business A or business B; or
 - (c) be involved in business B (other than by having material influence over business B by virtue of being a director of business B).

Separate management rule

- 9(1) This clause applies if business A is involved in—
- (a) a generator that has a total capacity of more than 50 MW and that is connected to any of business A's networks; or
 - (b) a retailer that retails more than 75 GWh of electricity in a financial year to customers who are connected to any of business A's networks.
- (2) A manager of business A must not—
- (a) be a manager of business B; or
 - (b) be an associate of business B, other than by virtue of being a manager of business A; or
 - (c) be involved in the business of business B.

Directors and managers must not be placed under certain obligations

- 10(1) Subject to subclause (2), no person may place a director or manager of business A under an obligation, whether enforceable or not, to act in accordance with the directions, instructions, or wishes of business B, or any director or manager or associate of business B, or any parent of business B, and no director or manager may submit to any such obligation.
- (2) A common parent, or a cross-director or a cross-manager, of both business A and business B may place a director or manager under an obligation referred to in subclause (1) if doing so does not contravene another of the arm's-length rules.

Restriction on use of information

- 11(1) Business A must not disclose or permit the disclosure to business B, or use or permit the use for the purposes of business B, of restricted information of business A.

An electricity trust that is a parent of business A (**trust A**), business A, and every parent of trust A, must not disclose or permit the disclosure to business B, an electricity trust that is a parent of business B (**trust B**), or any parent of trust B, or use or permit the use for the purposes of business B or trust B, of restricted information of business A or trust A.

In these rules, **restricted information** is information received or generated, and held, by business A or trust A that is connected with its business, being information that—

- (a) is not available to the competitors or potential competitors of business B or trust B; and
- (b) if disclosed to business B or trust B, would put, or be likely to put, business B or trust B in a position of material advantage in relation to any competitor or potential competitor.
- (2) This rule does not prevent cross-directors under rule 8 from having access to normal board information.
- (3) A manager of business A who is not prohibited from being a manager of business B under rule 9 may use restricted information of both business A and business B, but only to the extent that the use does not contravene another of the arm's-length rules.

Records

- 12 Every business to which this schedule applies must keep at its registered office a register of transactions entered into between business A, or any parent of business A, and business B, or any parent of business B.

- 13 Business A must, within 10 working days of entering into any such transaction, enter in its register details sufficient to identify the nature and import of the transaction.

Practical considerations

- 14 Business A and every parent of business A must ensure that its practical arrangements, such as use of accommodation, equipment, and services, do not contravene this schedule.
- 15 Business A and every parent of business A must ensure that its selection and appointment of advisors does not prejudice compliance with rules 7 to 11.

4 Rules do not limit objective

The arm's-length rules in clause 3 do not limit the generality of the arm's-length objective in clause 1.

5 These duties are additional to other duties

The requirements of this schedule are additional to the requirements of any provisions of the Code or regulations made under this Act.

Appendix D The Authority's analysis of the statutory criteria for different markets

Table 2: Will the exemption inhibit competition in the electricity industry?

	Top Energy granted exemption from s.76 with conditions attached (Baseline)	Top Energy granted exemption from s.76 without conditions (Counterfactual)	Top Energy corporately separates and obeys arm's-length rules (Counterfactual)
Network Support			
Assessment	Exemption conditions promote competition for network support	May inhibit competition for network support	Corporate separation and arm's-length rules limit scope to inhibit competition
Comments	Exemption conditions increase transparent comparison of alternatives; alignment of consumer/distributor incentives and board/trust oversight mitigate adverse competition effects	Management may have incentives and opportunity to distort investment outcomes; alignment of consumer/distributor incentives and board/trust oversight mitigate adverse competition effects	Separation and arm's-length rules increase transparency of generation costs, and require firms to pursue own interest; alignment of consumer/distributor incentives and board/trust oversight mitigate adverse competition effects
Distribution			
Assessment	Limited by conditions on exemption	May inhibit non-network competition by cross-subsidisation of remote areas	Limited by corporate separation and arm's-length rules
Comments	Limited by conditions on exemption	Managerial incentives to limit erosion of network through micro-grid competition	Limited by separation and arm's-length rules
Retail Market			
Assessment	No inhibition expected	No inhibition expected	No inhibition expected
Comments	Benign	Benign	Benign
Local and National Wholesale Markets			
Assessment	No inhibition expected; no scope to affect wholesale prices	No inhibition expected; no scope to affect wholesale prices	No inhibition expected; no scope to affect wholesale prices
Comments	Benign	Benign	Benign

Table 3: Will the exemption create incentives and opportunities to inhibit competition in the electricity industry?

	Top Energy granted exemption from s.76 with conditions attached (Baseline)	Top Energy granted exemption from s.76 without conditions (Counterfactual)	Top Energy corporately separates and obeys arm's-length rules (Counterfactual)
Network Support			
Incentives?	Limited by conditions on exemption	Potential managerial incentives to inhibit competition	Limited by corporate separation and arm's-length rules ¹⁴
Opportunities ?	Limited by conditions on exemption	Yes – scope for preferential treatment of local generation	Limited by corporate separation and arm's-length rules
Distribution			
Incentives?	Limited by conditions on exemption	Managerial incentives to limit erosion of network from micro-grid competition	Limited by corporate separation and arm's-length rules
Opportunities	Limited by conditions on exemption	Yes, via monopsony over network support	Limited by corporate separation and arm's-length rules
Retail Market			
Incentives?	No material incentives to inhibit retail competition	No material incentives to inhibit retail competition	No material incentive to inhibit retail competition
Opportunities ?	No material opportunity to inhibit retail competition	No material opportunity to inhibit retail competition	No material opportunity to inhibit retail competition
Wholesale Electricity Market			
Incentives?	Negligible incentives to inhibit competition	Negligible incentives to inhibit competition	Negligible incentives to inhibit competition
Opportunities ?	No practical opportunity to inhibit competition in the wholesale market	No practical opportunity to inhibit competition in the wholesale market	No practical opportunity to inhibit competition in the wholesale market
Local Wholesale Market			
Incentives?	No clear incentives to inhibit competition	No clear incentives to inhibit competition	No clear incentives to inhibit competition
Opportunities ?	No material opportunity to inhibit local wholesale competition	No material opportunity to inhibit local wholesale competition	No material opportunity to inhibit local wholesale competition

¹⁴ Rule 6 of Schedule 3 of the Act requires directors and managers of a connected business A not to prefer the interests of business B over the interests of business A.

Appendix E Gazette notice

Exemption under section 90(1)(a) of the Electricity Industry Act 2010 in Connection with distributed diesel/bio-diesel generation by Top Energy Limited (“Top Energy”)

In accordance with section 90(1)(a) of the Electricity Industry Act 2010 (“Act”), the Electricity Authority (“Authority”) provides the following notice.

Notice

Principal exemption and commencement

- (a) This notice grants Top Energy Limited an exemption from section 76 of the Act in respect of 17.87 MW of diesel/bio-diesel generation installed at Taipā, Bonnetts Road Kaitāia, Kaitāia Depot, Ōmanaia, and Pukenui upon such conditions as advised in the Authority Decision Paper dated 14 October 2020.
- (b) This notice comes into force on the day after the date it is notified in the New Zealand Gazette.
- (c) The exemption applies until 365 days after the date that the exemption is notified in the New Zealand Gazette.

Dated at Wellington this ____ day of _____ 2020.

For and on behalf of the Electricity Authority:

Thomas Brent Layton, Chair.