

Potential solutions for peak electricity capacity issues:

Appendix C 1

Appendix C: Format for submissions

Questions

Comments

Q1: Do you agree with the principle that the winter capacity margin should be based on the trade-off between the cost of the hours of reserve or energy shortfall and the cost of the peaking generation needed to mitigate it?

No

Do you have any other suggestions on factors the Authority should consider and why?

Shed-able and translatable load must also be considered. The principle should also take into account the relativity of the profits of the generators and what margin should be provided by those profits as a cost of business, as while the cost of running a reserve generator that transpires to not be used might seem a lot, when put against profits a new perspective on the amounts involved results.

Also consideration to longevity of any capital investment for example life of chemical batteries is likely to be vastly less than the life of a hydro pumped battery facility.

Q2: Do you agree with our assessment of the incentives for demand response?

The paper includes: "New Zealand is not currently facing a supply shortfall or comparable scale or immediacy."

I am not persuaded by the former sentence however:

"The cost of implementing any solution should be lower than the next cheapest generation investment."¹

the second sentence at first glance makes sense, all be it a portfolio approach continues to be required making that view potentially too simplistic. What is cost, and over what time frame?

If not, what is your view?

See below.

The assessment is out of sync with the nature of the problem, the timing of the problem, i.e. urgency, and the cost and availability of producing more demand response vis-a-vis the cost of producing more generation on time and in time.

How to maximise the shed-able load to mitigate any problem.

Are there other criteria that the Authority should consider?

Q3: Other than financial incentives, what are the other barriers to entry for demand response participation in the wholesale market that you have identified?

Incentives can be positive or negative. E.g. financial rewards for something, and savings for doing / not doing something.

An increase of promotion of shed-able load promotion to consumers (and potentially industry) seems in the wider interests of the power system.

We've all seen power retailers promotions of various plans. When did we last see a power retailer promoting use of a night tariff plan to reduce power use and to reduce cost (to reduce the need for new generation)? Why aren't they promoting this option for more people? I suggest the profitability for those companies promoting those plans is less.

1 Para 30 of the consultation paper.

Similarly considering the peak consumption / acute risk times promotion of demand shifting approaches also has merit e.g. Shifting the TV3 six o'clock news to 7 (and 8) pm. Or creating TV channels TV1+2 and TV3 +2?

Also considering absolute power demand measures, for example turning on water heating load control systems 4 hours later at 03:00 would result in less absolute power consumption and therefore provide some preservation of hydro reserve capacity particularly during dry years while having negligible effects on consumers. Staggered load control switching might also have some advantage to smooth the night load.

Access to market price indicators for ease of home to grid systems including vehicle to grid BESS options for consumers to (also) maximise their wealth.

Q4: Do you agree that the Authority should focus its resources on identifying and lowering barriers for BESS² and demand side flexibility to participate in the wholesale and ancillary services markets?

“focus its resources” means what exactly, in particular sacrificing what in support?

BESS seems inadequately defined as Lake Onslow seems to me to meet the criteria as defined.

Increased demand side flexibility and increased shed-able load across the whole consumption system may provide greater economic and grid efficiency, I suggest more focus on this vis-a-vis BESS which the market opportunity is evident for potential participants.

In accord lobbying of the government for pumped hydro battery alternative options that are smaller and can come on stream sooner seem appropriate long term approaches.

Some acknowledgement of the growing EV battery capacity in NZ seems a relevant consideration and the plans for tapping V2G opportunities surely is a component of BESS thinking?

Demand side “flexibility” seems to understate the problem and to fail to appreciate the opportunity.

Demand side shed-able load capacity and availability across all markets seems to me what should be the question posed.

If so, where do you think the Authority should focus first?

First? Planning to get through the 2024 Winter without any rolling power cuts (and worse) is the priority objective mixed with solving the longer term dry year problem.

Urgent recruitment of more Shed-able, translatable and translated load is deserving acute “focus”.

Why?

167³ to 200⁴ MW shed-able load was available in the context of demand for generation of about 7,000 MW. That's 3%. I do not

2 BESS = Battery Energy Storage Systems

3 Consultation paper para 21 et al.

4 <https://www.rnz.co.nz/national/programmes/ninetonoon/audio/2018924482/winter-is-coming-but-how-prepared-is-the-country-s-energy-system>

know what the household proportion of demand and mix of power use is (cooking and heating) during the peak demand periods but given the timing it seems a large percentage is likely.

Why do I not know the mix? Because smart metering technology is able to give direct measurements to a consumer to log, monitor and make observations and decisions BUT to date New Zealand has not facilitated or promoted the availability of real time measurements direct to consumers systems. Better information to a leading tech savvy group of consumers would likely lead to more efficiencies, more innovation and more information to base a submission on.

Household hot water heating is typically 25 to 33% of household power use.

Why isn't there an urgent imperative to implement say 15% (how much could be achieved?) of demand as shed-able peak load, which would be equivalent to an additional 800 MW generator during acute peak demand periods.

Why is the shed-able load available averaging only 167 MW?

It seems the market is structured to ignore maximising shed-able load while optimising extraction of profits including via the generator capacity elevator as a market imperative.

Maximise the shed-able load to mitigate any peak generation problem by using existing technology systems that seem under-utilised – see my proposed code change that would result in consumers being given full information to make informed decisions from⁵.

How much market profit is drawn from new generation vis-a-vis encouraging more demand response, reduced demand and translated demand?

What is the economic efficiency of BESS compared to shed-able load, I suggest long term economic efficiency is a responsibility and chemical BESS are (currently) likely to be less efficient economically.

Given the failure of retailers to promote, indeed strongly discourage⁶ the cheaper tariff options available from long established load control approaches this seems a low hanging fruit option available to optimise and maximise capital,

5 Proposal to amend the Electricity Industry Participation Code 2010 "Retailers must provide information about generally available retail tariff plans both as the ICP is configured, and as the ICP could be configured." 23-8-2023 appended

6 I can recount several experiences of being strongly discouraged to use higher cost tariffs based on failure to provide information and proactive shifting of my tariff to a higher tariff without my knowledge or agreement. How many other consumers are similarly "managed"?

generation and grid efficiency.

How can a consumer tell which load control option would a) be cheapest for them, b) be reliable for them, c) might actually be available for them over what actual (and not speculated) time periods⁷? This information may well not be promoted or even readily available in the wider market place.

Load Translation

Shifting a CN19⁸ tariff to CN10⁹ translates the load away from the peak demand times and reduces total power consumed / and also power required to be generated¹⁰.

Shifting to CN8¹¹ gives additional benefit to the grid and to consumers through more savings (lower rates and lowered consumption) and grid reliability.

Which retailer is explaining these things to customers?

Indeed which retail customer contact staff understand these things?

Maximise Load translation from peak times. The Flick time of use model might be further varied in this direction e.g. adjusting their settings so that power used between 7pm to 9 pm is priced in between 5-7pm and off peak times.

Urgent review of Powerswitch to give accurate predictions based on actual consumer historical use (using consistent data that is compliant with the required specification) analysed for optimal plans when assessing each and every timed half hour use pattern and abandoning the inaccurate series of assumptions and statistical averaging calculations.

While in my experience and testing Powerswitch fails to report true lowest cost plans for several consumers the consumer market will continue to be unnecessarily distorted and fail to deliver the market efficiency potential available.

While the inaccurate Powerswitch reporting continues the retail market response will also be inefficient.

Existing load shedding technology should be maximised across the markets with power retailers obliged to advise both available and potentially available tariff options (as per my proposed code change appended)

7 Seems a consumer product awaiting Consumer's review.

8 In the Wellington Electricity region notionally a 19 hour power availability that in reality is 24 hour power except when infrequently turned off to control demand when uncommonly required.

9 In the Wellington Electricity region CN10 is controlled power available 1 to 3pm and 11pm to 7 am which can be turned off to control demand when currently rarely required.

10 Based on data attained by the submitter following intermittent network errors in load control switch off.

11 In the Wellington Electricity region CN8 is controlled power available 11pm to 7 am which can be turned off to control demand when currently rarely required.

In the context of capital expenditure on peaking generation incentives to shift load to more favourable time of use / shed-able load tariffs may be more economic to include in the approach taken for example free tariff changes to more favourable tariffs previously unknown or promoted to consumers.

The demand side survey is targetted towards industry, what about the consumer market who also care about their security of supply and may also have in mind ways to pitch in towards reducing the issues, particularly their demand, and how better information might assist consumers willing and interested to participate, to receive cost savings and to influence politicians.

New smart systems might well be encouraged.

Change the time of the 6pm news of one of the main TV channels.

Q5: Do you agree that any solutions should satisfy these principles?

If not, what is your view and why?

Are there other principles that the Authority should consider?

Q6: Do you agree that a standard product for financial 'super peak' hedges is required?

Q7: What factors do you think we should consider in the design of such a product?

Q8: Do you agree with our assessment of the risk for the medium to long term?

Q9: Do you think it would be beneficial to create a new integrated standby ancillary service?

What is your view and why?

Q10: How should the costs for a standby ancillary service be allocated?

Q11: How should the residual requirement be set?

Should it be an operational setting or dynamically calculated?

If it is dynamically calculated, what factors should be considered in the calculation?

Q12: How should deficit (scarcity) standby residual be priced in relation to scarcity energy and scarcity reserve prices?

Q13: Do you agree with our assessment of the issues associated with procuring

additional resource out of market?
If not, what is your view and why?

Q14: Do you think it would be beneficial to create an out-of-market tender for emergency demand response?
If not, what is your view and why?

Q15: Do you think it would be beneficial to provide payments to resource providers for any uncleared generation and/or dispatchable demand?
If not, what is your view and why?

Q16: What do you consider to be an appropriate scaling factor to determine the price for residual and why?

Q17: What is your view on the factors the Authority should consider when valuing the costs associated with a standby ancillary service?

Q18: What other options should be considered to better manage residual supply risk for winter 2024?

Ultimately the benefits and costs of risk reduction needs to be fairly applied across all consumers of power but is or should be a cost of generation effectively shared amongst all significant generators.

The papers conclusion was: This analysis highlights the importance of accelerating the uptake of demand response and BESS solutions for winter 2024 and winter 2025.

My response focuses on the demand response side which seems to need more emphasis as mentioned herein this submission.

Q19: Do you have information on any other international standby ancillary services and their positive impacts?

If yes, please share your information.

Q20: Any other comments?

The concept of “consumer preferences” is referred, I suggest that is less direct of a concept than the reality that there is a critical political intolerance of generation shortfalls that is more relevant to consider and is the operative benchmark that is a more direct measure of consumer preference.

The short term peak demand capacity issues (outside the dry year problem) might be measured around 10-20 hours of a year comprising some 8760 hours. Short term mitigation in this light suggests demand shedding is a much more economic approach to capital investment in

generation.

My impression is dry years are insufficiently planned for with political and spread profit incentives obfuscating the possibility of agreement on the most economic long term generation capacity planning.

Layers of shed-able load systems might reduce the needed / chosen reserve requirements.

For some reason Wellington Electricity seems to strongly discourage sole night (11pm to 7 am) tariffs, which is contrary to the objectives of reduction of total energy demand (and cost of living issues) and this discussion. I am not familiar with other regions.

The home generation potential solar production is not economically encouraged with poor returns to consumers which results in more use of hydro reserves than otherwise might have been necessary. A related question is whether micro generators are treated with full fair competition, or are they second rate participants e.g. when there is deemed an excess generation production are micro generators first turned off ahead of the larger industry players with their desired financial returns promoted ahead of consumer financial interests.

Fixed solar panel systems are commonly tuned to mid day generation¹² tuned away from Winter generation with little acknowledgement that use of multiple solar planes tuned to mornings and evenings would widen the spread of sun powered generation which may prove to be a resource efficient approach to generation that is not to my knowledge being considered as an approach to explore and measure.

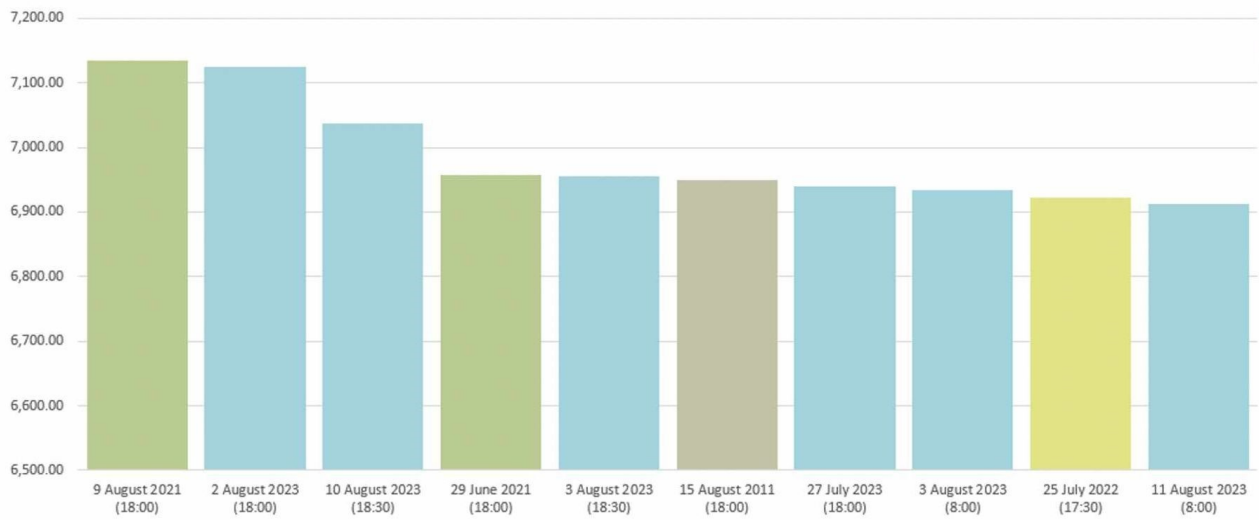
Provision of a word document might encourage more non funded submissions as pdf editing software is generally licensed to the more resourced corporate entities.

No funding has been received towards the presentation of this submission beyond that of a retail consumers personal resources.

¹² Small scale chemical BESS help maximise mid day solar capture and panel efficiency under the assumption this is a viable economic approach. I question this.

Peak demand was June, July, August, 08:00, 17:30 and 18:00.

Figure 3: Top MW demand peaks (trading period average)



Glossary

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
ASX	Australian Stock Exchange
AU\$	Australian dollars
Authority	Electricity Authority Te Mana Hiko
BESS	Battery Energy Storage Systems
Act	Electricity Industry Act 2010
CAN	Customer Advice Notice
Code	Electricity Industry Participation Code 2010
DDA	Default Distributor Agreement
DER	Distributed Energy Resources
DFS	Demand flexibility service
DR	Demand response
ECRS	ERCOT Contingency Reserve Service
EMA	Energy Market Authority (Singapore)
ERCOT	Electricity Reliability Council of Texas
ERC	Electricity risk curve
ERS	Emergency Response Service
ESO	Electricity system operator (UK)
FCAS	Frequency control ancillary service
GBP	British Pounds
GEN	Grid Emergency Notice
IL	Interruptible Load
KS-9	Kupe gas operation
MDAG	Market Development Advisory Group
MW	Megawatt
NEM	National Electricity Market (Australia)
NPS	Network Service Providers
Regulations	Electricity Industry (Enforcement) Regulations 2010
RERT	Reliability, Emergency Reserve Trader
S\$	Singapore dollars
SCADA	Supervisory Control and Data Acquisition
SPD	Scheduling, Pricing and Dispatch
SSAD	Security Standard Assumptions Document
TCC	Taranaki Combined Cycle Power Station
TJ	Terajoule
US\$	U.S. dollars
VoLL	Value of lost load
WDR	Wholesale Demand Response
WRN	Warning Notice
\$/kWh	Dollars per kilowatt hour
\$/MWh	Dollars per Megawatt hour

Firming

As the level of intermittent generation increases, there is a growing need for other resources to provide the flexibility required to compensate for the short-term variability in output, for example, during cold, cloudy, windless mornings. This management of intermittent generation variability is referred to as 'firming'.

Proposal to amend the Electricity Industry Participation Code 2010

Please complete as many sections of this form as possible and email to info@ea.govt.nz.

The more information you include, the faster your proposal will be able to be assessed and progressed.

This form is to propose:

- An amendment to an existing clause in the Electricity Industry Participation Code 2010; or
 A new clause in the Electricity Industry Participation Code 2010.

Proposer's details

Name:	David Lewis Hingston
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Signature:	
Date:	23-08-2023

The proposal / preferred option

Suggested proposal name (please keep it short)	Retailers must provide information about generally available retail tariff plans both as the ICP is configured, and as the ICP could be configured.
State the objective of your proposal	<p>Ensure the utilisation of Load Control Devices is maximised by removing the mystery and ambiguity of the existing information requirement / clauses</p> <p>to ensure consumers are fully informed so they have the greatest opportunity of making fully informed choices in pursuit of their economic efficiency</p> <p>which is aligned with the interests of the wider electricity grid and</p> <p>in particular the efficient management of its generation capacity with a view to maximising grid up time</p> <p>amongst other economic benefits and</p> <p>minimising inconvenience to electricity consumers from power outages.</p>

Does the proposal relate to an existing Code clause? If yes, please state the full clause reference.

Interpretation

generally available retail tariff plan—

(a) means a retail tariff plan that a **retailer** will make available to any **consumer**

(subject to credit requirements) if the **consumer** satisfies the requirements

specified for the retail tariff plan relating to:

(i) physical location:

(ii) **metering** configuration:

(iii) **price category** code; but

(b) does not include a retail tariff plan made available by a

retailer only under an

agreement reached as a result of the **retailer** directly

contacting a **consumer** to

offer a retail tariff plan that provides the **consumer** with a financial discount or

other benefit when compared with any other of the **retailer's** tariff plans to which

paragraph (a) applies that are available to that **consumer**

and:

Electricity Industry Participation Code 2010 Part 11

11.32G Retailers must provide information about generally available retail tariff plans

Electricity Industry Participation Code 2010 Part 11

19 1 June 2017

(1) If any person asks a retailer to provide information about **1 or more of the retailer's current generally available retail tariff plans**, the retailer must give the requested information to the person no later than 5 business days after receiving the request.

(2) If the person requests that information be provided under subclause (1) in a manner or format that differs from the manner or format the **retailer** typically uses to provide such information, the **retailer** may impose a reasonable charge for providing the information in the manner or form requested.

Describe the specific amendment(s) that you propose be made to the Code OR attach a draft of the proposed Code amendment (optional). See guidance in the Code drafting manual on our website.

That a new interpretation definition is provided under the section 1.1 to cover the full plurality of possible options available for a consumer and also within 11.32G(1) (differences to the existing singular comparative highlighted in yellow) to state:

generally available retail tariff plans—

(a) means all retail tariff plans that a **retailer could** make available to any **consumer** relating to:

(i) physical location:

(ii) **current metering** configuration:

(iii) **price category** code;

(iv) **all other available metering register configuration and plan options potentially available (where the control structure and systems are or planned to be in operation across the local connected network) from the local network connected to the physical location that may and may and/or may not require alteration of the meter board devices;**

but

(b) does not include a retail tariff plan made available by a **retailer** only under an agreement reached as a result of the **retailer** directly contacting a **consumer** to offer a retail tariff plan that provides the **consumer** with a financial discount or other benefit when compared with any other of the **retailer's** tariff plans to which paragraph (a) applies that are available to that **consumer**

<p>Identify how your proposal would support the Authority's objective, as set out in section 15 of the Electricity Industry Act 2010 (Act)ⁱ, specifically addressing the competition, reliability and efficiency dimensions of the objective.</p>	<p>Reliability</p> <p>When the grid is running close to capacity and/or demand is likely to exceed capacity the ability to control (and shed) more load as much as required maximises the chances of keeping all consumers supplied with electricity.</p> <p>Towards this objective implementation of load controlled power use that can be shed is plainly a significant grid demand control tool which in these days of tight supply and increasing dependence on suitable environmental conditions (wind and sun) must be maximised for the opportunity it provides to sustain the grid.</p> <p>Efficiency</p> <p>The ability to increase the controllable load connected to the grid provides for more efficient use of the limited capacity of the power generation resource.</p> <p>Competition</p> <p>Electricity retailers will have the opportunity of competing between each other on the basis of the quality and presentation of information to provide the best and most efficient services to consumers and the grid.</p> <p>For example if another retailer can point out a more economically efficient configuration for an ICP by utilising a night or night boost tariff then the consumer has the choice to invest in buying cheaper power rates, and the market place will have the opportunity to work more efficiently and reliably.</p> <p>The current competitive environment is failing to provide this information, regulation is therefore required to ensure competition in the new dimensions indicated and proposed.</p>
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<p>Which of the purposes listed in section 32(1) of the Act does your proposal most closely relate to?</p>	<p>The proposal will in particular provide benefits equally to purposes (b), (c), and following on (in descending order) also (d) and (a) of the purposes of the Act should also benefit.</p> <p>For reference:</p> <p>32 Content of Code</p> <p>(1) The Code may contain any provisions that are consistent with the objectives of the Authority and are necessary or desirable to promote any or all of the following:</p> <p><i>(a) competition in the electricity industry:</i></p> <p><i>(b) the reliable supply of electricity to consumers:</i></p> <p><i>(c) the efficient operation of the electricity industry:</i></p> <p><i>(d) the protection of the interests of domestic consumers and small business consumers in relation to the supply of electricity to those consumers:</i></p> <p><i>(e) the performance by the Authority of its functions:</i></p> <p><i>(f) any other matter specifically referred to in this Act as a matter for inclusion in the Code.</i></p>
<p>Identify whether you consider your proposed change to be urgent, providing supporting rationale.</p>	<p>The proposal is urgent as network demand has nearly and has exceeded generation capacity multiple times recently and the benefits of the proposal can only follow its implementation.</p> <p>The sooner the proposal is implemented the sooner the benefits to the grid and consumers can accrue.</p> <p>The tightness of supply is in particular due to the unpredictability of major generation outages which stable supply has come to depend on most generators functioning.</p>
<p>Please set out the expected costs and benefits of your proposal. These should include your assessment of the direct cost to develop and implement the proposed Code amendment, and the consequential costs and benefits as a result of the amendments, to all affected parties.</p>	<p>Costs</p> <p>Given each Electricity Retailer should be familiar with the specified information and have at its finger tips all possibly available options available to consumers the incremental cost of informing consumers of all the choices available to them with existing meter configuration and also with knowledge of all possible options should be negligible, particularly bearing in mind retailer marketing information seems to always be under regular review, revision and publication..</p> <p>Benefits</p> <p>When one buys a car the car retailers advise all the car engine size options</p>

with detailed specification brochures almost invariably available and the cost for the consumer to be well informed on their choices.

When a consumer seeks information from their power retailer they are not given the available “engine size” options, there is no detailed specification sheet nor full schedule of possible costs of supply of the alternatives.

Based on my experience the junior, supervisor staff and the separate support teams of a major gentailer have no idea what is available, kept changing their mind what was available, provided and maintained incorrect information, and have a great deal of difficulty obtaining that information and advising the correct information without delay or issue.

Particular confusion was in the gentailer coming to understand of the available differences between N8 night CN10 load control options making incorrect statements like:

“CN8 is not available in the Wellington Network, only CN10“

and

“our metering team double checking that it's the case that CN8 is no longer available in your area, only CN10 “.

The correct information came from the initiative of the assertive consumer and not from the Gentailer who eventually accepted the information the consumer (relying on some independently sourced information) was correct.

A ridiculous circus strongly dissuading uptake of load control is not in the interests of the grid nor consumers as defined in the act and could be considered by some as anticompetitive.

It is submitted the consumer of power is and should be entitled to the same “engine size” (Tariff register specifications, details and price possible options) information from power retailers as they are from car retailers.

It is postulated it is in the retailers financial interests to minimise the controlled power tariff’s available and implemented by consumers as this is how they conduct their business. I probably do not have enough information to be sure about the position for gentailers with their contemporaneous conflicting interest in maximising the return on the power they generate. This is done, it seems, by simply ensuring all potentially relevant information is not available to consumers, indeed neither across teams of staff in their businesses either.

	<p>Powerswitch does not seem to take the information under the proposed new clause (iv) into account as it seems (its logic is uncertain) to use the information brought forward from the ICP configuration.</p> <p>Benefits to the Consumer and Small Businesses</p> <p>The consumer has all available options in front of them so that they can choose and instruct their electricians to take best advantage of available tariffs to ensure their economic efficiency, to allow them to minimise consumer cost of power and to maximise the grid's ability to shed load agreed available for that purpose thereby ensuring the consumer's "anytime" tariff and use is maximally available.</p> <p>Open market competition is in this regard simply not working therefore regulation is required.</p> <p>Sustainability and Reliability of Supply</p> <p>With the evolving mix of generation with generation increasing depending on appropriate environmental conditions the ability to provide power 24/7 with matching generation capacity is problematic. The ability to shed more agreed load during times of environmental conditions with low outputs (low wind and sun) is a critical green approach to maintaining continuous supply to more critical infrastructure.</p>
<p>Who is likely to be substantially affected by this proposal?</p>	<p>All consumers, all electricity retailers and the wider elements of the electricity grid.</p> <p>If consumers were enabled to make more controlled tariff choices the wider electricity network could benefit through better demand control, management, and reduction of risk to generation capacity.</p>
<p>Identify whether you consider (providing supporting rationale):</p> <p>(i) your proposed change to be technical and non-controversial; or</p> <p>(ii) there is widespread support for your proposed change among the people likely to be affected; or</p> <p>(iii) there has been adequate prior consultation so that all relevant views have been considered.</p>	<p>Given the choices I consider (ii) because:</p> <p>1) consumers will favour fuller and better information.</p> <p>2) the grid operator will appreciate increased power control and consumption options to increase their ability to control tight generation supply situations.</p> <p>3) retailers will benefit from more informed interactions with their customers and also their suppliers / related parties</p> <p>4) Meter installing contractors will become more efficient from a lower error instruction rate resulting from more informed directions from the retailers.</p>

Why is this your proposed option?	It is the most accurate of the three options presented above (as they are worded) however the best choice is not how I would have characterised it in these terms.
Any other relevant information you would like the Authority to consider?	Thank you for considering the proposed amendments.

Assessment of alternative options

Please list and describe any alternative means of achieving the objective you have described for your proposal. For each alternative, please provide the information in the table below (ie, repeat this table below for each alternative). The list of alternatives should include both regulatory (ie, Code amendments) and non-regulatory options (eg, education, information, voluntary compliance). If you have a preferred option, please identify and explain why it is your preferred option.

Brief description of an alternative means of achieving the objective. Note if this is your preferred option.	<p>The alternative is the Status Quo – continue as currently</p> <p>The data available to me suggests the status quo / no change alternative option is well proven for me to be failing to provide consumers reliable accurate accessible complete information.</p> <p>The status quo is a massive fail and has to be changed</p>
The extent to which the objective of your proposal would be promoted or achieved by this option.	Doing nothing is a market fail and enhances the risk of future power outages to consumers.
Who is likely to be substantially affected by this option?	All people with an interest in the electricity consumption and supply across New Zealand and in particular all users of electricity from the New Zealand Electricity Grid.
The expected costs and benefits of this option, including direct costs to develop it, and consequential costs and benefits to all affected parties.	<p>The cost of this option is the market and economic cost of grid fails, and of a higher than needed economic burden on consumers, and reduced efficiencies on service people who for example install meters with a high instruction error rate and high cost of rework ultimately an economic burden on electricity consumers as well.</p> <p>There is a duty to maximise continuity of efficient supply of electricity to consumers.</p>

ⁱ Section 15: Objectives of the Electricity Authority

1. The main objective of the Authority is to promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers.
2. The additional objective of the Authority is to protect the interests of domestic consumers and small business consumers in relation to the supply of electricity to those consumers.
3. The additional objective applies only to the Authority's activities in relation to the dealings of industry participants with domestic consumers and small business consumers.