Horizon Energy Distribution Limited

Pricing Consultation Document

23 October 2015

1. Purpose

This document is part of the consultation process which has been initiated prior to setting 2016/17 tariffs effective from 1 April 2016.

This document presents the results from a review undertaken by Horizon Energy Distribution Limited ("Horizon Energy") with the continuing objective of delivering outcomes consistent with the Electricity Authority's Distribution Pricing Principles and Information Disclosure Guidelines 2010.

The purpose of this document is to initiate consultation with retailers, consumers, and other interested parties, on proposed changes to the tariffs and structure that Horizon Energy offers.

Horizon Energy's approach to pricing has not changed in recent years, following a redefining of domestic load groups in 2011/12. Horizon Energy is maintaining the path to transition line charges towards fixed tariffs where there is an economic requirement to ensure capacity and quality of service within the network is maintained.

In keeping with the transition to greater fixed tariffs, and with the strategy mentioned in the current 2015/16 Pricing Methodology[1], Horizon Energy is now proposing to introduce a Reactive Energy tariff and amalgamate the Standard Domestic, Non-Standard Domestic, and Capacity Group 1 tariffs.

In addition, Horizon Energy is proposing to introduce Small Scale Distributed Generation tariff codes in keeping with the distributed generation policy as contained within the 2015/16 Pricing Methodology.

2. Background

Horizon Energy owns, manages and operates over 2,300 kilometres of high voltage lines supplying 8,400 square kilometres of the Eastern Bay of Plenty, covering a diverse geographical area. Horizon Energy manages four large connections to the transmission system and more than 24,700 connections to customers' homes and businesses in the Eastern Bay of Plenty.

Regionally, the electricity distribution network is defined as being the area from Matata in the East, Te Kaha in the west and south out to Murupara township. There are four grid exit points that supply Horizon Energy's electricity distribution network from the national grid provided by Transpower; these are located at Edgecumbe, Kawerau, Waiotahi and Te Kaha.

The spread of population, industry and environment all contribute to Horizon Energy having a diverse area in which to provide electricity distribution services. Horizon Energy's pricing methodology therefore requires consideration of this diverse range of consumer requirements and attributes including single very high usage demands, multiple high density consumer groupings and very low consumer density groupings.

3. Regulatory Considerations

Horizon Energy is proposing changes as mentioned in this document in keeping with the current 2015/16 Pricing Methodology being consistent with the following regulations.

[1] Horizon Energy Pricing Methodology 2015-16

- The Commerce Commission's *Electricity Distribution Information Disclosure Determination 2012* ("IDD2012"), set under Part 4 of the Commerce Act 1986 ("the Act");
- The Electricity Authority's *Distribution Pricing Principles and Information Disclosure Guidelines 2010* ("the Pricing Principles")*;*
- The *Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004* ("the low fixed charge regulations"); and
- *Part 6 of the Electricity Industry Participation Code* ("the Code"), relating to the pricing of distributed generation.

4. Timeframe and Consultation Process

Horizon Energy welcomes interested parties to respond to this consultation on the changes proposed within this document. Horizon Energy has begun the consultation process in advance of the 2016/17 price setting process to allow for adequate time to consult with interested parties.

The consultation process will commence 23 October 2015; all interested parties will have 20 working days to respond. There are two ways to provide your views, these are listed as follows:

a. Via email at - commercial@horizonenergy.net.nz
b. Via post at:
   2015 Pricing Consultation
   Commercial Team
   PO Box 281,
   Whakatane, 3158

When communicating with Horizon Energy, please provide your name and contact details so that Horizon Energy is able to provide you with the summary of consultation feedback received and any direct response if required.

Key milestones and dates for the consultation period are outlined in the table below:

Consultation Timeframe	Start Date	Due Date
Consultation document published on Horizon Energy website and provided to interested parties for feedback	23/10/2015	20/11/2015

Following consideration of feedback, Horizon Energy will provide a summary of feedback to be published on the Horizon Energy website.

If the proposal is implemented, Horizon Energy will finalise changes as part of the 2016/17 price setting process in keeping with the required regulatory timeframes for pricing disclosure.

5. Proposed Changes

The below provides the explanation and rationale for the proposed changes, with the proposed changes to the tariff schedule as shown in **APPENDIX I.**

5.1. Proposed Amalgamation of the Standard Domestic, Non-Standard Domestic, and N1 Capacity Tariffs

Since the redefinition of the domestic load groups in 2011/12, Horizon Energy has continued progressing line charges towards fixed tariffs, where there is an economic requirement to enable the maintaining of capacity and quality of service within the electricity distribution network.

To this end, in 2012/13 Horizon Energy aligned prices for the Non-Standard Domestic and N1 Capacity tariffs, and is now proposing to align these tariffs with the Standard Domestic tariff, by amalgamating the tariff together into a single Normal Domestic tariff.

Horizon Energy recognises that the physical connection size of consumers within the Standard, Non-Standard, and N1 Capacity tariff groups are the same. All require a single phase connection rated at less than or equal to 60 amperes. This is an industry standard domestic premises connection size and as such Horizon Energy is proposing to amalgamate these load groups.

Within Horizon Energy's 2015/16 Pricing Methodology it is noted that it is appropriate to group consumers together based on their assessed capacity requirements using their installed fuse rating or assessed installed transformer capacities. This approach reflects that increased capacity requirements impose a greater demand on the value of assets required to supply these consumers.

Horizon Energy will continue to apply the cost of supply framework for the proposed aggregated Normal Domestic tariff, and will simply look to aggregate the revenue requirements from the original three individual tariffs into a single amount to then determine the price based on an assumed number of consumers and consumption profile.

Horizon Energy has conducted a review of the impact to consumers who are in the proposed aggregated Normal Domestic tariff group based on the current 2015/16 prices with the results as follows -

- Standard Domestic consumers can expect an increase in charges of not more than $8 per year (based on 2015/16 prices);
- Non-Standard Domestic consumers can expect a decrease in charges up to $29 per year, with a limited number of high use consumers seeing an increase not more than $7 per year (based on 2015/16 prices); and
- N1 Capacity consumers will have the same change in charges as the Non-Standard Domestic consumers due to the current prices within these tariffs groups being the same.

Horizon Energy is confident the proposed amalgamation will provide other benefits such as -

- Reducing transaction costs between retailers and Horizon Energy, as there will be less ongoing maintenance of consumers moving between tariffs;
- Increased clarity for retailers and consumers on the correct tariff to be assigned; and
- A simplified tariff structure which recognises the industry's current initiative to reduce complexity of tariffs in order to improve efficiency and transparency.

While Horizon Energy is proposing to amalgamate the Standard and Non-Standard Domestic tariffs, the Low User Domestic tariff for primary residences consuming less than 8,000 kWh as required under the low fixed charge regulations, will be retained.

Horizon Energy is proposing to implement the amalgamated Normal Domestic tariff for the 2016/17 pricing year, effective from 1 April 2016.

5.2. Proposed Introduction of a Reactive Energy Tariff

Horizon Energy is proposing to introduce a fixed Reactive Energy charge as is already commonly used amongst other Electricity Distribution Businesses ("EDBs").

In continuing the process of improvements to efficiency in the management of the electricity distribution network, Horizon Energy is acknowledging a low power factor requires a greater supply of reactive energy, which then increases the need for electricity distribution network capacity.

Power factor is therefore an important consideration for Horizon Energy when evaluating the ability of half hourly metered customers to efficiently use the capacity required for supply to their specific connection.

Some of the benefits of power factor monitoring and correction by consumers are as follows:

- Improved energy efficiency – reduced system currents and kilowatt losses;
- Improved quality standards – reduction in peak currents prevents fuse failures and loss of supply; and
- Increases the electricity distribution network load without the need to invest in additional infrastructure.

It is proposed that the Reactive Energy tariff be applied to the following consumer groups -

a. Network Maximum Demand
b. Major Customers

The Reactive Energy tariff for Network Maximum Demand consumers will be based on the quantum of Anytime Maximum Demand ("AMD") placed on the electricity distribution network by this consumer group. This is currently applied in Horizon Energy's 2015/16 Pricing Methodology as follows:

> *"Each load group's maximum demand is used to allocate transmission charges, consistent with Transmission Pricing Methodology ("TPM") which apportions transmission charge via peak demand signals. For major industrial customers the peak coincident with RCPD is used to match TPM. For mid-range customers the price signal reflects the local capacity required to supply and as their load pattern is similar to the networks, the use of AMD does not disadvantage them."*

Through the allocation of the AMD to each load group being considered for a Reactive Energy tariff Horizon Energy is able to use the demand placed on the electricity distribution network to generate the rate at which the Reactive Energy tariff would be applied.

In order to assess the impact of introducing a Reactive Energy Charge on Horizon Energy's network, Horizon Energy will assess the power factor information per Installation Connection Point (ICP) for the Capacity Measurement Period (CMP) and will review the number of half hour periods where each ICP has had a power factor below 0.95.

The CMP is defined in the Transpower New Zealand Limited Transmission Pricing Methodology and extends from 1 September to 31 August prior to the commencement of the next pricing year.

It is proposed that a Reactive Energy charge will be set at a fixed rate based on the volume of reactive energy measured as kilo volt amps reactive hours (kVArh) used when the power factor is less than 0.95 within each half hour time period.

The standard industry calculation of the power factor of any connection is as follows:

Excess kVArh = 0 or, when power factor equals 0.95, kVArh – (kWh * 0.328684)

Where, kVArh is the metered kilo Volt Amperes reactive hours provided on a half hourly basis, kWh is the metered consumption of kilowatt hours, and 0.328684 is the cosine of the angle between kilowatts and kilo volt amperes when power factor is 0.95.

In keeping with the 2015/16 pricing methodology, Horizon Energy proposes the continued use of AMD (kW) as an appropriate driver to allocate a reactive energy charge for non-major customers.

A review of the impact to consumers affected by this proposal provides for an increase in line charges of less than 10% above current 2015/16 prices.

Horizon Energy is proposing that the Reactive Energy Charge will not be effective until 1 April 2017 (2017/18 pricing year), such that consumers have time to make the requisite improvements to power factor control as required.

Horizon Energy acknowledges that the CMP for the 2017/18 pricing year already commenced on 1 September 2015, therefore as an interim measure, the CMP for the proposed charges effective 1 April 2017 will only use data from 1 April 2016 to 31 August 2016. If the proposal was implemented, this then enables customers' time over the next few months to improve power factor control, prior to the use of this data at 1 April 2016.

In subsequent years the CMP will revert to the full year from the 1 September to the 31 August.

5.3. Proposed Introduction of Small Scale Distributed Generation tariffs

In keeping with Horizon Energy's distributed generation policy and current Pricing Methodology, it is proposed that new small scale distributed generation tariff codes be established for publishing within Horizon Energy's 2016/17 tariff schedule.

These distributed generation tariff codes can then be used within the Electricity Information Exchange Protocols files to enable retailers to provide billing and volume information to Horizon Energy at an ICP level to support the invoicing of variable line charges for small scale distributed generation with specific tariff codes for injection. It also allows Horizon

Energy to provide information to retailers to support line charge invoices for injection and for retailers to reconcile the Horizon Energy's injection line charges.

The price applied for injection is currently set at $0~~k~~/kwh, with Horizon Energy reviewing this price annually.

The new small scale distributed generation tariff codes will be attributable to each super tariff code under Horizon Energy's proposed tariff structure going forward.

These are identified in the below table as follows:

Consumer Group	Super Tariff (Proposed)	Small Scale Distributed Generation Code (Proposed)
Domestic	NDU	HET134
Domestic	NDR	HET135
Capacity	N2U	HET141
Capacity	N3U	HET142
Capacity	N2R	HET146
Capacity	N3R	HET147
Network Maximum Demand	NMD	HET177

At this stage, Horizon Energy is only considering introducing distributed generation tariff codes for the above tariffs as the bulk of installations are small in scale, less than 10 kilowatts. Some Network Maximum Demand consumers provide Horizon Energy with injection readings and so, to accommodate those consumers Horizon Energy also proposes a distributed generation tariff for this consumer load group.

5.4. Proposal to Remove the Capacity Concession Urban and Rural Tariffs

Horizon Energy proposes to remove the Capacity Concession Urban and Rural tariffs from the Tariff Schedule as these are no longer offered to consumers and are closed off permanently.

6. Conclusion

Horizon Energy proposes implementing the amalgamation of the Standard Domestic Urban and Rural, Non-Standard Domestic Urban and Rural and the N1 Urban and Rural tariffs with the 2016/17 pricing year, effective 1 April 2016

The proposed Reactive Energy charge although not proposed to be implemented until the 2017/18 pricing year (effective 1 April 2017), will be measured using the abbreviated CMP Measurement Period of 1 April 2016 to 31 August 2016 initially, and then the annual CMP for every year from then on.

Horizon Energy is proposing to introduce Distributed Generation tariffs for small scale generation on the network with a tariff rate of $0.00 for all kilowatt hours generated and distributed.

Horizon Energy is also proposing to remove the Capacity Concession Urban and Rural Tariffs from the Tariff Schedule as these are no longer offered to consumers and are no longer allocated to any customers.

APPENDIX I – PROPOSED PRICE SCHEDULE 2016 - 2017

HORIZON ENERGY DISTRIBUTION LIMITED
LINE CHARGES
EFFECTIVE 1 APRIL 2016

Pursuant to requirements of the Electricity Distribution Information Disclosure Determination 2012

		2016/17 Tariffs (excluding Goods and Services Tax)		
			Line Charges (including Pass-Through Costs)	Distributed Generation
Consumer Group (Note 1)	Commencement date	Fixed Tariff Code (Note 2)	Variable Tariff Code (Note 2)	Variable Tariff Code (Note 2)
DOMESTIC				
(LUDU) Domestic LFC Urban	1 April 2016	HET001	HET012	
(LUDR) Domestic LFC Rural	1 April 2016	HET003	HET013	
(NDU) Normal Domestic - Urban	1 April 2016	HET034	HET054	HET134
(NDR) Normal Domestic - Rural	1 April 2016	HET035	HET055	HET135
GENERAL				
Specials				
(UV) U/Veranda Lights- Not available for new connections	1 April 2016	HET009		
(EF) Electric Fence - Not available for new connections	1 April 2016	HET006		
(SL) Street Lights	1 April 2016	HET131		
(PCM 24) PCM 24 hour - Not available for new connections	1 April 2016	HET115		
(PCMN) PCM Night only - Not available for new connections	1 April 2016	HET116		
Capacity Groups				
(N2U) 3ø 60A (15 - 42 kVA)	1 April 2016	HET017	HET041	HET141
(N2R) 3ø 60A (15 - 42 kVA)	1 April 2016	HET023	HET046	HET146
(N3U) 3ø 100A (43 - 70 kVA)	1 April 2016	HET018	HET042	HET142
(N3R) 3ø 100A (43 - 70 kVA)	1 April 2016	HET024	HET047	HET147
(N4U) 3ø 150A (71 - 100 kVA) Not available for new connections	1 April 2016	HET019	HET043	
(N4R) 3ø 150A (71 - 100 kVA) Not available for new connections	1 April 2016	HET025	HET048	
(N5U) > 3ø 150A (> 100 kVA) Not available for new connections	1 April 2016	HET020	HET044	
(N5R) > 3ø 150A (> 100 kVA) Not available for new connections	1 April 2016	HET026	HET049	
Network Maximum Demand (NMD)				
Variable Charge	1 April 2016		HET077	HET177
Capacity Charge	1 April 2016	HET074		
Demand Charge	1 April 2016	HET076		