



Updated Plan for the Adoption of Efficient Distribution Price Structures

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Distributors to Publish Plans for Adopting Efficient Distribution Pricing

The Electricity Authority has identified the adoption of efficient distribution pricing – which is cost-reflective and serviced-based – as a key area of importance to promote the efficient operation of the New Zealand electricity industry for the long-term benefit of consumers. Electricity industry participants and stakeholders agree that distribution pricing needs to be reviewed to ensure that the structures being employed are fit for purpose and suitable for the widespread introduction of new evolving technologies in the distribution sector. An industry-led approach to distribution pricing reform is in progress, and as part of this the Electricity Authority has requested that Distributors report on the progress made towards achieving efficient pricing and publish their updated plans prior to 31 March each year.

Buller Electricity Limited (BEL) has previously published information detailing the Company's plans for the adoption of efficient pricing structures in March 2017 and October 2018, and these documents can be viewed on our website [here](#). This document presents an update and contains information in the following key areas:

- Background information on future electricity industry trends and the need for efficient distribution pricing
- An overview of the key industry developments which have recently occurred with particular reference to the:
 - Government response to the [Electricity Price Review](#) (EPR) Final Report
 - Progress which has been made towards the removal of the Low Fixed Charge (LFC) 2004 Regulations
 - Electricity Networks Association (ENA) Working Group Activities
- An update on the progress made with regard to the half-hour data requests BEL initiated with Retailers in September 2018, and identification of the key pricing analysis work for which this data is required
- Commentary on the drivers and enablers for the adoption of efficient distribution pricing, and BEL's relevant circumstances
- Our indicative plans for the introduction of more efficient distribution pricing structures in 2021/22 and beyond

This document fulfils the Electricity Authority's expectations and demonstrates BEL's commitment to reviewing our pricing and to undertake pricing reform where appropriate.

Future Electricity Industry Trends & Efficient Distribution Pricing

The introduction of evolving technologies such as PV solar generation, energy storage and management systems, more energy efficient appliances, Smart Meters with modern data handling capabilities, advanced demand response, and electric vehicles (EV's) has significant implications for the electricity industry and consumers. The adoption of these technologies will be increasingly driven by the social and political desire to mitigate the impact of climate change through the decarbonisation of the energy and transportation industries.

The electricity related services consumers make use of, and their decisions to adopt evolving technologies, are influenced by the cost of electricity – energy cost plus delivery cost – and the relative benefits which they provide. To ensure that electricity infrastructure is being used efficiently, and the investment decisions being made by Distributors and end use consumers are in the long-term benefit of all consumers and the wider economy, it is necessary for electricity pricing structures to be put in place which accurately signal the costs to consumers of the services they use. This is referred to as cost-reflective service-based pricing and encourages consumers to make decisions that bring long-term benefit.

Government Response to the Electricity Price Review (EPR) Final Report

Following the General Election in 2017 the Government commissioned the [Electricity Price Review \(EPR\)](#) to investigate whether the electricity market was delivering a fair and equitable price to end-consumers. Electricity prices have increased faster than inflation for many years, putting pressure on household budgets. On a national basis the electricity prices faced by commercial and industrial customers have however remained relatively flat.

The EPR Final Report, delivered to the Minister of Energy in May 2019, contained a number of key recommendations which have now been considered by the Government, and were the subject of Cabinet Papers released in February 2020. From BEL's perspective the key items related to Distribution Pricing are the EPR recommendations to:

- Ensure Distributors have access to Smart Meter data on reasonable terms – *EPR Final Report Item E3*
- Phase out the Low Fixed Charge (LFC) Regulations 2004 – *EPR Final Report Item F4*

Access to Smart Meter data is to be reviewed by the Electricity Authority, while the Ministry of Business Innovation and Employment (MBIE) is currently considering the issues which exist in relation to the phasing out of the LFC in terms of the economic impact on consumers, mechanisms for targeted energy hardship relief, and the options for a phased transition to standard pricing for all residential consumers.

BEL welcomes the work which has been done – and continues to be done – by the Government in relation to reviewing the LFC. It is BEL's expectation that the Government will be in a position to signal if/when the LFC will be removed in the second half of 2020 – with the most likely date for implementation being 1st April 2021.

Low Fixed Charge (LFC) Regulations 2004 – Background

The Low Fixed Charge (LFC) Regulations 2004 were introduced to offer a low fixed charge pricing option to residential consumers at their primary residence. Due to the general trend of lowering electricity consumption at the household level and the introduction of new technologies, these Regulations are no longer delivering the outcomes they were originally designed for e.g. to assist low income households with electricity affordability. Furthermore, as electricity and delivery prices have increased the pricing inefficiency introduced by the LFC has increased in scale, as the daily fixed charge amount has remain constant, and all subsequent electricity price increases have been levied on the Retailer and Distributor variable (energy/consumption) charges.

The need for a review of the LFC Regulations is a long-standing view by many party's involved in the electricity industry including BEL. From a pricing reform perspective, the removal of the LFC Regulations, and/or their replacement with more effective alternatives, is a key requirement for the implementation of more cost-reflective serviced-based pricing.

BEL Half-Hour Data Requests & Related Pricing Analysis Work

In September 2018 BEL submitted half-hour data requests using the standard ERANZ (Electricity Retailers Association NZ) data request template to the major Retailers trading on our network. This data has been requested for the purpose of allowing BEL to undertake pricing analysis work required for the design and implementation of more efficient pricing structures. The key elements of this pricing analysis which have been identified as being necessary for BEL to advance our distribution pricing reform work program are as follows:

- Appropriate recategorisation of our commercial consumer groups (Price Category's) using maximum demand as a metric
- A wider implementation of a maximum demand-based fixed Capacity Charge for commercial consumers
- Improvement of the consumer group cost allocation algorithm used in the price setting process so that it becomes more cost-reflective
- Detailed analysis of individual consumer impacts of any proposed pricing changes

The following points are noted in relation to half-hour data:

- Data will only be available for consumer sites with Smart Meters – approx. 50% of consumer sites on the BEL Network
- The release of data is subject to a Retailer having access to the data, and a Retailers data privacy policy and/or customer contracts
- Half-hour data is also commonly referred to as Time-of-Use (TOU) data

BEL's experience with the half-hour data request process is summarised as follows:

- With one exception all major Retailers have provided some form of half-hour related data
- The data received to date has generally been non-anonymised and subject to the signing of data supply agreement with non-disclosure clauses

- Data has generally been made available free of charge
- Data requests have generally taken 3-6 months to be processed – from when submissions are made to when data is received
- In many cases numerous follow ups have been required in an attempt to try and progress the data requests
- We are under the impression that Retailers are under resourced in terms of both staffing and suitable systems to action data requests
- Data is only being provided for approximately half of the sites with Smart Meters
- The smaller Retailers trading on our network are typically unresponsive to data requests
- Overall BEL has found the data request process is slow, time consuming, frustrating, unproductive, and as a result we do not consider it to be fit for purpose

Given our experience with the existing data request process we are of the view that open and timely access for Distributors to half-hour data is a key issue that needs to be reviewed by the Electricity Authority as recommended in the EPR Final Report. The existing data access arrangements are clearly not working for the industry in terms of allowing BEL to obtain half-hour data so that we can undertake the analysis required for distribution pricing reform.

We look forward to the Electricity Authority making Distributor access to half-hour data a key issue on their work program and acting with urgency on this matter. We would be interested in working with the Electricity Authority to establish a centralised data repository for the half-hour, reconciliation and billing data associated with our network on a limited trial basis – with a longer-term view to a full national rollout.

In terms of gaining better access to Smart Meter data BEL has made contact with Vector AMS – the Meter Equipment Provider (MEP) for the vast majority of the Smart Meters on the BEL network. Vector AMS is planning on developing a range of services related to Smart Meter data in 2020, and we await further information and developments so that we can assess if value exists for BEL to enter into commercial arrangements for these services.

BEL has also been undertaking a trial of the [powerpilot](#) low voltage network and consumer site monitoring system. This system, or a similar equivalent, may in future be used to provide additional data for our pricing analysis work.

ENA Working Group Activities

The Electricity Networks Association (ENA) Distribution Pricing Working Group (DPWG) continues to pursue active work programs in relation to distribution pricing reform, with particular regard being given to:

- Formalising the methods which are used to allocate costs to the different consumer groups as part of the distribution price setting process
- Identification of the advantages/disadvantages and potential consumer impacts of different pricing strategies

- Consideration of the technical issues related to the implementation of different pricing structures e.g. billing data and related billing processes
- Supporting the Industry in the removal of the Low Fixed Charge (LFC) Regulations 2004

The DPWG is expected to release significant publications on their work during in 2020 which will provide guidance to Distributors. BEL strongly supports the work which is being undertaken by the ENA on behalf of its members in relation to distribution pricing reform, and we look forward to the significant progress which is expected to be made over the next 12 months.

Pricing Reform Drivers, Enablers & BEL Circumstances

Key drivers for distribution pricing reform include:

- The level to which cost-reflectivity currently exists in a Distributors pricing
- The uptake of evolving technologies
- The forecast capex expenditure required to manage/relieve network growth and constraints
- External factors such as transmission pricing
- A Distributors appetite for (radical) pricing reform

In addition to this there are a number of factors which will impact/enable a Distributors ability to implement pricing reform, including:

- Access to appropriate data for mass market consumers
- The level of Smart Meter penetration
- The capabilities of Retailer and Distributor billing systems

While BEL's circumstances are not unique (listed below) it is clear that our need to implement distribution pricing reform is not as strong as that for Distributors with high growth and/or major urban centres;

- A very small rural based network
- A low level of Smart Meter penetration – approx. 50% of consumers
- Significant spare network capacity and no congestion issues
- No forecast capex expenditure required to manage/relieve network growth and constraints
- A relatively slow uptake of evolving technologies (PV Solar & EV's)
- A higher percentage of fixed charges compared with other Distributors – approx. 50% in most Price Category's

A move towards increasing the overall percentage of fixed charges compared with variable (energy/consumption) charges is seen as being a key area to be addressed in distribution pricing reform by the Electricity Authority, and BEL is ahead of most Distributors in this regard.

BEL's Asset Management Plan 2020-30, available from our [here](#), provides details on our Load Forecasts, Constraints & Proposed Capex Program in Sections 6.6 – 6.8 respectively. Section 6.8.2

states that, as BEL is forecasting zero growth for the 2020-30 planning period no allowance has been made for capex expenditure for system growth.

At this early stage in our pricing reform journey BEL is of the view that the best option for us is to adopt a measured approach to reform, where we can learn from the early adopters, and make the best use of industry experience as the understanding of distribution pricing develops and matures.

BEL has limited expertise and dedicated resources for the development of efficient pricing structures, and as a result we intend to make use of consultants to advise us and help us conduct this work where appropriate. We also intend to make extensive use of the industry-led work (such as the ENA) currently underway to develop distribution pricing guidelines and standards. This will limit the amount of preparatory and consultation work we will need to do ourselves.

Indicative Plan for Distribution Pricing Reform 2021/22

BEL's primary goal for 2021/22 is to address the long-standing issue which exists in relation to the fixed charges applied to our small commercial consumer group (BEL Price Category LG2). This issue became evident in 2015/16 when BEL embarked on a program to increase the percentage of fixed charges to 50% for all consumer groups (except the residential low user fixed charge consumer group – BEL Price Category LG1L) over the 3 years between 2015/16 and 2018/19. Given the wide range of commercial consumers existing in LG2 – in terms of both maximum demand and consumption – it was deemed inappropriate to further increase the overall percentage of fixed charges for LG2 consumers, as that would result in unreasonably high fixed charges for those consumers with low energy consumption.

This is an inherent issue associated with the application of a fixed daily charge (\$/day), and it has resulted in BEL capping the fixed charge percentage for LG2 at approx. 30% over the past 3 years. The solution which has been identified and we are seeking to implement in 2021/22 is to:

- Appropriately recategorise our 3 existing commercial consumer groups – small commercial (LG2), medium commercial (LG3) & large commercial (LG4) – using maximum demand as a metric
- Shift the larger consumers in LG2 (measured in terms of maximum demand) to LG3
- Introduce a maximum demand-based fixed daily Capacity Charge for LG3 as is currently the case in LG4

Our indicative plan to implement this pricing reform is outlined in Table 1.

While BEL envisages that we will be able to implement the proposed program of pricing reform in 2021/22, issues may be identified during the course of this work which necessitate that we change or delay the implementation plan outlined in Table 1. This particularly relates to:

- Being able to gain access to sufficient half-hour data to allow us to implement a maximum demand-based fixed Capacity Charge for our medium commercial (LG3) consumer group

- The assessment of individual consumer impacts being deemed to be acceptable subject to the design/implementation of transition plans if required

#	Description	Completion Month
1	Undertake an initial analysis of the proposed consumer group recategorisation and pricing changes, and gain BEL Board support for the proposal	Dec 2019 Completed
2	Undertake load monitoring of 50 small/medium commercial sites where annual consumption is >50,000kWh and no Smart Meter data is available or has been received	Apr 2020
3	Analyse the half-hour data received from Retailers and determine the maximum demand	May 2020
4	Seek feedback from the Electricity Authority and an independent expert on the proposed 2021/22 pricing reform program detailed in this document	May 2020
6	Undertake further consumer group recategorisation and pricing analysis including an assessment of the individual consumer impacts using 2019/20 financial year billing data	May 2020
7	Finalise our 2021/22 pricing reform proposal and obtain BEL Board approval to proceed	Jun 2020
8	Consult with Retailers on the required changes to our pricing structure e.g. consumer group recategorisation and implementation of a maximum demand-based fixed Capacity Charge for LG3	Aug 2020
9	Consult with consumers and communicate directly with those that will be subject to the greatest charge increases	Sep 2020
10	Prepare final pricing documents for 2021/22 pricing	Nov 2020
11	BEL Management and Board to sign-off on 2021/22 pricing	Dec 2020
12	Notify Retailers of 2021/22 pricing	Jan 2021

Table 1 Indicative Plan – BEL Distribution Pricing Reform for 2021/22

Other aspects of our pricing which we will be considering include:

- Analysis of data and information related to any Government proposal to remove the LFC from 1st April 2021, and the development of our own transition plans for LFC consumers

- Design and implementation of more accurate cost-allocation algorithms which are used to allocate costs to our different consumer groups
- Creation of a separate Price Category and pricing for streetlighting connections

Indicative Plan for Distribution Pricing Reform Beyond 2021/22

In discussions with the Electricity Authority in late 2019 it was made clear by the Authority that there was no perceived need or expectation for BEL to implement TOU based pricing at this point in time based on an assessment of our current circumstances. While BEL welcomed this information, we nonetheless see the most likely next step in our pricing reform journey (beyond 2021/22) as the implementation of some form of TOU pricing in order to better signal our existing and future peak demand related costs.

While no congestion issues currently exist on our network, Transpower transmission charges are heavily dependent on demand during the periods of peak Upper South Island (USI) transmission network demand. The implementation of more cost-reflective pricing would require BEL to pass this cost through to consumers based on their consumption during periods of peak demand. While it is acknowledged that the manner in which transmission charges are determined is expected to become less strongly weighted towards USI peak demand once a new Transmission Pricing Methodology (TPM) is implemented, this change is unlikely to put in place for a further 3-5 years. Furthermore, it is likely that a transitional peak transmission charge will be put in place for a period of 5-10 years as a part of any new TPM implementation.

Other options for distribution pricing reform which the BEL Management and Board have decided are not to be considered for implementation are:

- Increasing the overall level of fixed charges to being greater than 50% in any consumer group
- Urban/Rural locational pricing differentiation

In terms of distribution pricing reform BEL's immediate indicative plan beyond the 2021/22 financial year is outlined as follows:

- Monitoring, review and adjustment of the pricing structure changes put in place in 2021/22
- Reviewing the options available for managing the charging of new EV connections
- Implementation of TOU pricing starting in 3-5 years
- A transition away from legacy pricing options
- Review of our overall pricing strategy and consideration of the next steps

The most likely TOU pricing structure envisaged is where the 24-hour period is divided into 2-4 periods with different prices for the consumption in each period, for example peak/off-peak or peak/shoulder/night periods.

Key events, decisions, and outcomes which will have significant impact on BEL's future decisions and implementation plans relating to the adoption of efficient pricing structures include:

- ENA publications and guidance released by the Distribution Pricing Working Group (DPWG)
- The ability for BEL to be able to receive meter information (such as TOU data) in order to undertake analysis/planning of new pricing structures to a sufficient level of accuracy and penetration
- Subsequent key decisions BEL management and owners (Buller Electric Power Trust) make given the available advice and information
- Wider adoption of new technologies by consumers

In terms of pricing reform BEL is mindful of the balance which must be struck between the:

- Complexity of the structures adopted to achieve cost-reflective service-based pricing
- Practical aspects and costs associated with pricing administration and implementation
- Ability for the consumer to easily understand the pricing which is being applied

At this point in time it is unclear how this balance, and the best pricing for BEL and its consumers, can be achieved in the long-term. BEL will be looking towards the future work undertaken by the ENA and its working groups, and the response of Retailers and consumers in other distribution areas where new pricing structures have been adopted, to provide guidance.

Concluding Comments

BEL is looking forward to working with our stakeholders in the development and implementation of distribution pricing structures which are fit for purpose and facilitate the best outcomes for BEL, consumers and the wider economy. It is important that we consult with our consumers and stakeholders to ensure that any change to our pricing meets the needs of the majority now and into the future. BEL also looks forward to meeting the Electricity Authority's requirements for introducing more efficient distribution pricing structures during this period of industry reform.