



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, October 2018, March 2020 and these documents can be viewed on our website [here](#). This document presents an update and contains information in the following key areas:

- Background on future electricity industry trends and the need for efficient distribution pricing
- An update on the Government and industry moves to remove the Low Fixed Charge (LFC) 2004 Regulations
- BEL's experience with the half-hour data request process which we undertook with Retailers in mid-2020 to obtain data required for the analysis associated with our pricing reform work program
- Commentary on the drivers and enablers for the adoption of efficient distribution pricing and BEL's relevant circumstances
- An update on the progress BEL has made on the indicative plan for distribution pricing reform in 2021/22 published in March 2020
- Our indicative plans for the introduction of more efficient distribution pricing structures for 2022/23 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 increasingly be 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 used efficiently, and the investment decisions 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.

Low Fixed Charge (LFC) Regulations 2004

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 delivery prices have increased the pricing inefficiency introduced by the LFC has increased in scale as the daily fixed charge amount has remained constant. Since the introduction of the LFC, all delivery price increases for consumers on low user pricing plans have been recovered in the form of variable (energy/consumption) charges causing an overall increase in the proportion of variable charge.

The need for a review of the LFC Regulations is a long-standing view held by many parties involved in the electricity industry and it was a key recommendation of the Governments Electricity Price Review (EPR). Further information on the EPR can be found [here](#). 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.

As of January 2021 BEL is of the understanding that the Government is now in favour of removing the LFC Regulations, and that the Minister of Energy will soon table a proposal to phase out LFC pricing and the LFC 2004 Regulations over a 2-3 year transition period.

Smart Meter Data Access

In mid-2020 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 new pricing structures. The key elements of this pricing analysis which were identified as being necessary for BEL to advance our distribution pricing reform work program are as follows:

- Appropriate reorganisation of our non-residential Price Category's using Anytime Maximum Demand (AMD) as the primary categorisation parameter
- A wider implementation of an AMD based fixed Capacity Charge for non-residential consumers
- Detailed analysis of individual consumer impacts from any proposed pricing changes

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

- Data is only 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 the systems/resources in place to extract/collate/process/validate the data prior to it being sent to BEL
- The release of data to BEL is subject to 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 in mid-2020 is somewhat improved from a year ago and is summarised as follows:

- With one exception all major Retailers have provided some form of half-hour related data
- Data has been provided in either the EIEP3 (BEL's preference) or the HERM format – the latter being a format used by Meter Equipment Providers (MEPs)
- HERM data needs to be adjusted to account for meter multipliers where they exist – a small number of sites with larger Connection Capacities
- The data received has generally been non-anonymised and subject to the signing of data supply agreements with non-disclosure clauses
- With the exception of one Retailer data has been made available free of charge
- Data requests have generally taken 1-2 months to be processed – from when data requests are submitted to when data is received
- BEL is under the impression that Retailers are in general under resourced to action data requests with the smaller Retailers trading on our network typically being unresponsive to data requests

While our overall experience with the data request process has improved in 2020, it remains slow, time consuming, frustrating, unproductive, and as a result we do not consider it to be fit for purpose. 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 Electricity Price Review (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 in a timely and regular manner so that we are able to undertake analysis associated with distribution pricing reform, and the operation/management/planning of our network.

While the Authority has included data access terms into the new Default Distributor Agreement (DDA), we are of the view that this will result in very limited improvement compared with the status quo, and this measure simply does not go far enough. Until an appropriate level of Distributor data access is mandated in the industry, Retailers and MEPs will simply not give this area the attention and priority it deserves. It is also recognised that Smart Meters have the potential to be much more than simple revenue or half-hour meters, with the ability to provide network diagnostic information such as voltage levels, power quality events and loop impedance if they are setup/configured appropriately. It remains to be seen how the industry can organise itself so that the true benefits of Smart Meters can be unlocked for the benefit of Distributors and consumers.

We look forward to the Electricity Authority continuing to make Distributor data access 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 will continue in our efforts to enter into arrangements with the Meter Equipment Providers (MEPs) Vector (AMS) and Intellihub. Vector AMS are planning on developing a range of services related to Smart Meter data, 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.

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 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 for the following reasons:

- 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 many other Distributors – approx. 50% in most Price Categories

A move toward 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. BEL has had a policy in place for a number of years to increase the revenue recovered as fixed charges to 50% for non-residential consumers, and we expect to achieve this target in the 2021/22 financial year.

BEL's Asset Management Plan 2020-30, available from our website [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.

Progress on Indicative Plan for Distribution Pricing Reform 2021/22

BEL has substantially completed the Indicative Plan for Distribution Pricing Reform 2021/22 which was published in March 2020. The work which has been undertaken will result in significant changes to our pricing for non-residential consumers from 1st April 2021 as summarised below:

- Adoption of non-residential Price Categories based on Anytime Maximum Demand (AMD)
- Separate Price Categories for specific load types e.g. Streetlight & Dairy Farm connections
- The wider application of a Fixed Capacity Charge based on AMD as a replacement for the existing Fixed Daily Charge

The pricing changes BEL is making in 2021/22 address issues with our pricing for non-residential consumers have their origins in the Monthly Maximum Demand (MMD) pricing system BEL had in place in the 1990's. Following deregulation of the industry in the late 1990's and the sale of BEL's retail business, the MMD pricing system was replaced with a pseudo Connection Capacity based system with wide Connection Capacity bands. Given that delivery charges at the time were heavily

weighted towards variable/consumption charges, these wide capacity bands, and any incorrect categorisation of consumers, were of limited consequence.

As BEL has sought to increase the proportion of fixed charges to 50% in recent years the categorisation/charging inconsistencies which exist between some non-residential consumers have become increasingly material and problematic. As BEL's fixed charges have historically not been accurately charged (e.g. based on the actual Connection Capacity), there is very limited justification and ability for BEL to adopt a Pricing Structure which makes use of this parameter. For example, in many historic cases the actual Connection Capacity requested is unknown, and because charges have not been accurately based on this quantity it has not been subject to the standard upgrade/downgrade process. As an alternative, BEL has deemed it necessary and appropriate to reset our non-residential Price Categories and fixed charges in 2021/22 using Anytime Maximum Demand (AMD).

The changes we have decided to implement will ensure that our pricing is fairer and more equitable as the fixed charges for consumers with an AMD >15kW are proportional to their AMD, and the Connection Capacity which is actually used.

BEL is aware that our use of AMD rather than Connection Capacity as the parameter on which our pricing and fixed charges are based is contrary to the Authority's Pricing Principles in terms of allocating Residual Costs in a manner which 'least distorts network use'. While our decision to base our pricing on AMD is very much a consequence of the historic MMD pricing structures BEL had in place, and therefore somewhat forced upon us, we are also of the view that the Authority has an overly heavy focus on pricing which least distorts network use, with there being a distinct trade-off against pricing which is fair and equitable. It is clear to BEL that in terms of the pricing structures being advocated by the Authority fairness and equity considerations are not being given an appropriate level of priority. These matters have been discussed with the Authority as part of our annual Distribution Pricing Scorecard assessment process, and will no doubt be the subject of further discussions in the future.

Readers are directed to our 2021/22 Pricing Methodology (available [here](#)) for further information on our pricing as follows:

- Details of the pricing changes which are being implemented from 1st April 2021
- An explanation of the reasons which led BEL to make these changes
- A discussion on the merits of pricing structures based on AMD versus Connection Capacity in relation to fairness/equity considerations and the Distribution Pricing Principles

Indicative Plan for Distribution Pricing Reform 2022/23 and Beyond

With the pricing changes being implementing in 2021/22 we have substantially completed our existing pricing reform work program. Our immediate goals for 2021/22 will be to bed in the pricing changes which are being put in place from 1st April 2021, and to refine and solidify our business processes in this area. We do not anticipate making any significant changes to our pricing in 2022/23. In terms of the resources BEL has available for pricing/billing related work the

implementation of replacement billing from 1st April 2021 is a key work activity which needs to be completed.

In discussions with the Electricity Authority in late 2019 it was made clear that the Authority does not perceive a need or expect BEL to implement TOU 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 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 heavily weighted on USI peak demand once a new Transmission Pricing Methodology (TPM) is implemented, this change is unlikely to put in place for a further 2+ 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 at this point in time area:

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

In terms of distribution pricing reform BEL's immediate plan for 2022/23 and beyond 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
- Consideration of TOU pricing with a most likely implementation date being in 2-4 years
- A transition away from legacy pricing options e.g. All Inclusive price components for residential sites
- 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 a 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 advice and information available
- 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.