23 October 2018

Miriam R Dean CNZM QC
Chair, Expert Advisory Panel
Electricity Price Review
Ministry of Business, Innovation and Employment
Via e-mail: energymarkets@mbie.govt.nz

SUBMISSION BY WEL NETWORKS TO ELECTRICITY PRICE REVIEW

Our submission to the Electricity Price Review provides the Expert Advisory Panel with insight into the disciplines and operation of WEL Networks (WEL).

WEL is pleased to illustrate how a community-owned distributor has operated within the constraints of the national system to deliver sustainable and fair pricing and price structures. This has been made possible by applying the 'community interest' test on everything we do, hiring and managing a highly skilled group of people, utilising our own metering system, and integrating next-generation technology.

Our key recommendations for the Expert Advisory Panel are as follows:

1. The Review undertake further work to quantify and accurately determine the number of consumers facing energy hardship. 25% of WEL's Hamilton customers are in the highest (most deprived) two categories on the Deprivation Index. WEL has undertaken research in its own network area and would be happy to discuss the methodology.

2. The WEL OurPower retail trial demonstrates a model that could be used to set up a national retailer of last resort so consumers suffering energy hardship are offered the lowest cost electricity possible. OurPower is a low cost social enterprise, where local community groups act as advocates to connect and service customers.

3. The Review should consider how distribution companies' asset management capabilities can be enhanced by more effective collaboration, or by the consolidation of these specialised resources into centres of excellence or shared services.

4. Multi-million dollar reductions in network management costs are possible from using metering data, so it is in the interests of consumers and New Zealand that data is readily available on reasonable commercial terms and support creation of an open–access regime for meter data with standardised terms and conditions for all parties.

Yours sincerely

Garth Dibley
CHIEF EXECUTIVE

ELECTRICITY PRICE REVIEW

SUBMISSION FORM

How to have your say

We are seeking submissions from the public and industry on our first report into the state of the electricity sector. The report contains a series of questions, which are listed in this form in the order in which they appear. You are free to answer some or all of them.

Where possible, please include evidence (such as facts, figures or relevant examples) to support your views. Please be sure to focus on the question asked and keep each answer short. There are also boxes for you to summarise your key points on Parts three, four and five of the report – we will use these when publishing a summary of responses. There are also boxes to briefly set out potential solutions to issues and concerns raised in the report, and one box at the end for you to include additional information not covered by the other questions.

We would prefer if you completed this form electronically. (The answer boxes will expand as you write.) You can print the form and write your responses. (In that case, expand the boxes before printing. If you still run out of room, continue your responses on an attached piece of paper, but be sure to label it so we know which question it relates to.)

We may contact you if we need to clarify any aspect of your submission.

Email your submission to energymarkets@mbie.govt.nz or post it to:

Electricity Price Review

Secretariat, Ministry of Business, Innovation and Employment

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Summary of questions

Part three: Consumers and prices

Consumer interests

1. *What are your views on the assessment of consumers' priorities?*

WEL commissioned customer focus group research in April 2017, designed to understand preparedness of business and residential consumers to adopt and adapt to developments in the pricing and delivery of electricity.

The single biggest priority of most residential consumers is convenience; the ability to heat, cook and do the laundry when they want to. Cost is a factor, but they estimate the cost savings required to make changes to their usage would need to be above 20%. This equates to approximately the distribution component of a customer's total retail bill.

The priority of businesses is to power their operations. They feel they don't have much option but to use power when they need it for their type of business. This inflexibility makes them alert to opportunities to reduce costs by adopting new technology.

Although we would like it to be different, our independent research is unequivocal that electricity use and pricing is not a top of mind issue. The status quo is acceptable to the majority, even if they would like to pay less.

This reality should not necessarily change our efforts to act in their interests, but it should be kept in mind when considering how we identify and represent those interests.

2. *What are your views on whether consumers have an effective voice in the electricity sector?*

Our consumer research shows that although customers are assured by the presence of distribution trusts operating on their behalf, in general they feel they are at the receiving end of the industry system that has been set up. This is not to say they are dissatisfied. They feel power is a necessary purchase, and their ability to influence their demand or cost is limited.

3. *What are your views on whether consumers trust the electricity sector to look after their interests?*

Our customer focus group revealed business and residential consumers were skeptical about the competing motivations of the various components of the sector. It also confirmed that there is a lack of understanding by consumers about how the industry works and how the charges in their bill are calculated.

This undermined preparedness of consumers to embrace concepts such as new pricing mechanisms. They wanted to see the reasoning behind the changes and to be empowered by technology and information to make new developments work for them without fear of surprises and penalties.

Prices

4. *What are your views on the assessment of the make-up of recent price changes?*

No Comment

5. *What are your views on the assessment of how electricity prices compare internationally?*

No Comment

6. *What are your views on the outlook for electricity prices?*

No Comment

Affordability

7. *What are your views on the assessment of the size of the affordability problem?*

- WEL estimates that up to 25% of our Hamilton residential customers could face energy hardship. We calculated this estimate by matching Installation Control Points (ICPs) to Statistics New Zealand mesh blocks and the Otago University Deprivation Index. This showed that 25% of Hamilton customers are in the highest two groups (i.e. most deprived) of the Deprivation Index.

8. *What are your views of the assessment of the causes of the affordability problem?*

- WEL agrees with the Review's conclusion that low-income consumers find it challenging to access electricity cheaply.
- Information from customers and through the WEL Energy Trust (Trust) signalled that these customers would be keen to use a low-cost retailer.
- In response, WEL and the Trust have trialled a retail service called "Our Power" in our network area.
- What we've discovered in our interactions with low income customers is that some of the real barriers to cheap electricity is language preventing explanations and interaction with companies, poor internet access preventing comparisons and communication, poor credit history preventing their acceptance by companies, and lack of education reducing their understanding of options and budgeting.

9. *What are your views of the assessment of the outlook for the affordability problem?*

- There is one industry development that could make affordability less of a problem; altering pricing structures.
- The Review says that aligning prices with the real cost of electricity production and distribution at different times of day sends the correct signals to enable efficient investment in emerging technologies. **But it notes that this could have mixed results for low-income households.**
- Our own experience shows that it is possible to switch to such a system without significant problems for customers.
- In April 2018 WEL introduced for all mass-market customers a system of Time of Use (ToU) pricing for peak, shoulder and off-peak periods.
- We decided to use ToU because it expresses our pricing strategy to:
    - Reflect the cost of transmission at the time it is used,
    - Use clear unambiguous pricing structures,
    - Focus on what customers are doing, rather than on what suits our systems,
    - Improve customer knowledge, and use, of pricing and pricing plans, and
    - Incentivise customers to efficiently adopt new technologies.
- ToU pricing **can** benefit the more deprived:
    - WEL used data from our own household smart meters to analyse the impact of our ToU pricing by those ICPs in the lowest Statistics NZ deprivation index.
    - This analysis shows that deprived households use proportionally more during the shoulder and less during peak. The less deprived a household, the more likely it is to use power during peak and shoulder times. This trend is encouraging, as it shows that low income households do have a degree of flexibility in power use and can, and will, adjust.
    - Since the introduction of ToU pricing in April to all mass-market customers, WEL is aware of two retailers having launched ToU pricing options for consumers in the Waikato. We see this as a positive, but small, step by retailers to move to more cost reflective pricing.

Summary of feedback on Part three

10. *Please summarise your key points on Part three.*

- Our research shows that the highest priority of customers, by a long margin, is the convenience (residential) and reliability (businesses) of power when they need it. Overall, power is a low interest purchase - cost savings must be over 20% before they change patterns of use. They are suspicious that that industry is not structured to deliver in their best interests.
- 25% of WEL's Hamilton customers are in the two most deprived categories of the Deprivation Index.
- What we've discovered in our interactions with low income customers is that some of the real barriers to cheap electricity is language preventing explanations and interaction with companies, poor internet access preventing comparisons and communication, poor credit history preventing their acceptance by companies, and lack of education reducing their understanding of options and budgeting.
- Time of Use is WEL's preferred method for distribution pricing, and can be implemented without significant disruption, discord or price shock. It can also benefit those who are facing higher deprivation or are energy poor.

Solutions to issues and concerns raised in Part three

11. *Please* briefly describe any potential solutions to the issues and concerns raised in Part three.

- **Quantify energy hardship**:
  - 25% of WEL's Hamilton customers are in the highest two categories on the Deprivation Index (i.e. most deprived). These customers could be facing challenges in paying their electricity bill.
  - WEL recommends to the Review that further work is required to quantify and accurately determine the number of consumers facing energy hardship. WEL has undertaken research in its own network area and would be happy to discuss the methodology.
- **Model for Retailer of last resort**
  - The WEL OurPower trial demonstrates that there is a model which could be used to set up a national retailer of last resort so consumers suffering energy hardship are offered the lowest cost electricity possible. OurPower is effectively a social enterprise, where local community groups act as advocates to connect and service customers. A national social enterprise or collection of regional enterprises could be utilised by the Government.
  - WEL's low cost power retailer OurPower is based on the ethos of offering low electricity prices to the community within the WEL Networks area. This emerges from the vision and values of our shareholder and key stakeholder, the WEL Energy Trust. The trial currently has 350 customers.
  - OurPower delivers the lowest possible price by running a bare minimum retail operation. OurPower has minimal sales and marketing costs. It has partnered with St Vincent De Paul to connect and manage clients.
  - It is envisaged that if OurPower moves beyond the trial it will be set up as a social enterprise (a social enterprise fundamentally aims to address deep-rooted social problems, through trading goods and services in sustainable and scalable businesses), with community groups acting as advocates on behalf of OurPower to connect and manage customers.

Part four: Industry

Generation

12. *What are your views on the assessment of generation sector performance?*

No Comment

13. *What are your views of the assessment of barriers to competition in the generation sector?*

No Comment

14. *What are your views on whether current arrangements will ensure sufficient new generation to meet demand?*

No Comment

Retailing

15. *What are your views on the assessment of retail sector performance?*

No Comment

16. *What are your views on the assessment of barriers to competition in retailing?*

- The Electricity Retailers Association of New Zealand (ERANZ) told the Review that a lack of standardisation in distributors' contract terms and price structures raised costs for retailers and hindered competition.
- Since 2013, 14 retailers have signed WEL's Use of System Agreement (UoSA), five of them in the last 12 months.
- Typically, a Retailer will sign the UoSA and return it to WEL within a short timeframe.
- Based on this evidence, we do not agree with ERANZ's statement that a lack of standardisation is hindering competition.

Vertical integration

17. *What are your views on the assessment of vertical integration and the contract market?*

No Comment

18. *What are your views on the assessment of generators' and retailers' profits?*

No Comment

Transmission

19. *What are your views on the process, timing and fairness aspects of the transmission pricing methodology?*

- The continued delays in the finalisation of the transmission pricing methodology (TPM) does create uncertainty for long term planning. Clear signals are required by the Electricity Authority (EA) in regards to how the TPM will inform the efficient long-term capital planning of our network.
- For example, the Hamilton 33 GXP is at its N-1 Transformer limits. Increasing this limit would require approximately $15 million of investment by Transpower, which would reflect through into the prices charged to our customers.
- We are investigating methods to shift load from this constrained GXP to the Te Kowhai and Huntly GXPs to better utlise their capacity. However, the cost-benefit analysis cannot be completed until the TPM is finalised, due to the current lack of visibility and certainty of future pricing methods.
- The continued delays in the finalisation of the TPM creates uncertainty for long term planning. The EA needs to be held accountable for the current process and lack of progress and finalise the TPM as a matter of urgency.

Distribution

20. *What are your views on the assessment of distributors' profits?*

- The Review's analysis demonstrates that distributors are not making excessive profits and that Part 4 of the Commerce Act is working effectively.
- The outliers who appear to be making excessive profits account for only 2.5% of the total number of customers connected to distribution networks.
- WEL is also unaware of any cost-subsidisation. We have used the Part 4 cost allocation input methodology to determine cost allocations between regulated and unregulated businesses. This is an effective regulatory tool to manage the risk of cost-subsidisation by distributors.
- Since its inception in 1993, the WEL Energy Trust has supported the return of $273 million (excl. GST) to WEL Networks customers through discounts on individual electricity accounts and investments (over $60 million) in community and energy efficiency grants.

21. *What are your views on the assessment of barriers to greater efficiency for distributors?*

Pricing

- WEL supports the Review's statement that distribution pricing should reflect the cost of distribution networks, and pricing must send the correct signals to enable efficient investment in emerging technologies.
- In April 2018 WEL introduced for all mass-market customers, the cost reflective pricing known as Time of Use / ToU, to price differently peak, shoulder and off-peak periods.
- WEL introduced ToU pricing because customer focus groups confirmed that ToU is easy to understand and can directly influence consumer behaviour, whereas more complex pricing structures (e.g. dynamic pricing) were difficult for the customer to understand.
- Since the introduction of ToU in April, WEL is aware of two retailers having launched ToU pricing options for Waikato consumers. We see this a positive, but small, step by retailers to move to more cost reflective pricing.
- WEL managed the transition to ToU by ensuring that the change would not result in any material price shocks for customers. The change was intentionally price neutral when taken as a whole across customers. WEL smart meter data has shown that 95.27% of prices (at the ICPs) have changed by less than +/-5%.
- The move to ToU pricing was made possible by WEL's existing investment in 61,000 residential smart meters. They allow real-time meter-reading, which means we can record power use through any number of variably priced time periods.

Efficiency pressures, business size and governance

- WEL Networks is the largest community owned distributor which is exempt from price-quality regulation.
- The 2017 Information Disclosure Compendium (PwC) demonstrates that our performance is in line with, or if not better, than comparable distributors who are on the default price-quality path.
- When compared to the two closest distributors in size (both on the default price-quality path), WEL outperformed both companies in Operating Cost per ICP, Expenditure on assets per ICP, Revenue per ICP and SAIDI.
- This shows that the default price-quality path does not necessarily mean a distributor will perform better.
- Our own efficiencies have been driven by the:
    - introduction of better asset management processes (ISO 55000);
    - adoption of more efficient planning tools (such as Condition Based Risk Management (CBRM));
    - utilisation of smart data; and
    - tight control of costs overheads.
- For example, by re-setting our asset management planning and decision-making processes, WEL reduced capital expenditure in its 2015 Asset Management Plan (AMP) by approximately $61M over the 10-year period. Since then, WEL has further optimized its AMP capital spend and reduced network risk. For example, in 2016 we used smart meter data to optimise distribution transformer end of life projections and reduced our asset renewal expenditure by $9.2M.
- Finally, the WEL Energy Trust has set out to recruit Directors with strong backgrounds in innovation, technology and change to ensure the company has the Governance capability to lead WEL Networks through this time of change.

Metering data

- WEL agrees that metering data should be readily available on reasonable commercial terms and supports the suggestion of an open–access regime for meter data with standardised terms and conditions for all parties.
- WEL's experience of running its own network of 61,000 residential smart meters has provided tangible evidence that large cost savings to the industry and consumers, and improved service, are possible when distributors have access to the data.
- WEL uses data analytics for real time operation and planning activities. Benefits are, but not limited to:
    - proactive low voltage correction – to improve supply quality;
    - improved fault detection and management – which means: we don't need to rely on customers reporting problems; we can identify the fault location remotely, to reduce repair time; we can identify faults before they occur and replace equipment;
    - improved network flexibility – so we can, for example, reroute supply so fewer customers are affected by outages;
    - reduction of fault call outs – we can confirm whether faults are on the customer side of the meter or on our network;
    - revenue assurance - ensuring retailer data submission accuracy;
    - reduction in capital expenditure – better data about our network means we are more accurate in assessment of equipment lifespans and replacement; and
    - ToU pricing – real-time meter-reading allows accurate recording of power use through any number of variably priced time periods.
- WEL, as a Metering Equipment Provider, shares these benefits and expertise with other EDBs with similar systems via Smartco.
- WEL is also implementing a retail meter service where the costs allocated to this service have been set in accordance with the Part 4 cost allocation input methodology. The pricing for non-regulated meter services is to be based on recovery of the costs allocated to the non-regulated business, plus a reasonable return. The methodology means this service will be at a lower cost than current market benchmark pricing, which should reduce charges to consumers

Asset management and planning

- WEL's system forecasts are over a 20 year period. This forecast estimates peak demand at the GXP level. This long term forecast then informs the 10 year AMP at the substation level.
- Secondly, the economic and physical life of assets is critical to asset management decision making. Often these assets can have a life of beyond 40 years.
- For clarity: the 10 year AMP timeline does not mean that distributors only plan for 10 years.

Aging assets

- We agree with the Review's conclusion that there are no grounds for concern over the replacement of assets.
- WEL has taken a risk based approach to asset replacements with the implementation of Condition Based Risk Management (CBRM) across our asset

fleet since 2012. This approach to asset replacement was developed by EA Technology and has been adopted by most distribution network operators in the UK and Australia, and also by Orion and Unison in New Zealand. Central to this approach is the collection of accurate condition data of assets.

- This programme is now been running for 6 years and, as our 2018 AMP demonstrates, there is no material increase in nominal expenditure on asset renewals over the current 10 year period.

22. *What are your views on the assessment of the allocation of distribution costs?*

- WEL prefers to use coincident peak demand (CPD), not electricity consumption, as an indicator for the allocation of distribution costs between residential and commercial customers. This is because distribution networks are designed and built on peak demand constraints, not electricity consumption.
- WEL's own analysis, based on CPD for residential customers, shows that they make up 49% of total CPD and 50% of total charges.
- A core principle of WEL's pricing strategy is cost reflectivity. This principle is in accordance with the Electricity Authority's distribution pricing principles. WEL will continue to pursue this principle, and we do not consider any need for regulatory intervention.

23. *What are your views on the assessment of challenges facing electricity distribution?*

- The WEL Networks 2016 to 2021 Strategic Plan recognises that electricity distribution is moving from a mature and stable industry into a period of rapid change.
- In response to this challenge, WEL has undertaken radical redevelopment of its business activities and delivery model. This plan concluded that technology is focusing on the development of local sustainable microgrid initiatives at the expense of large scale national generation. Because WEL is local we can align ourselves to this trend.
- To meet the 2016 five-year plan, WEL has:
    - Developed and trialled a low-cost power retailer targeting households who are facing energy hardship. OurPower now has approximately 350 customers and a full launch of the OurPower brand is set for 2019. This proposition has been developed with the WEL Energy Trust and a third party technology provider.
    - WEL has developed a Smart Services proposition providing advanced analytical services to other distributors based on smart meters and advanced communication mesh networks.
    - WEL is currently livening its own Nano Grid (a small electrical domain connected to the grid which utilises various forms of distributed generation (DG) and some form of smart control (Distributed Energy Resources)). This trial will use a large commercial site (WEL operations depot), associated DG (PV and Diesel Generator), a grid sized battery and control systems from ABB.
    - WEL has embarked on a long-term project (five years) to provide operational control of the entire LV and HV networks through the upgrade of its Network Management System. This will achieve industry compliance, operational efficiency, and safety outcomes as well as an enabler for the future as Distributed System Operator (DSO).
    - WEL has installed 6 EV fast chargers throughout its network to reduce 'range anxiety' for EV users. It is now rolling out a further 16 chargers (mid and fast chargers), 15 of these in collaboration with Countdown, this calendar year. It is also currently developing network standards for controllable home chargers in the Waikato, and through EECA funding is building an electric bucket truck.
- WEL considers the above demonstrates that its governance and decision-making are more than adequate to develop and implement new technologies.
- WEL also believes that as we are local and at the center of the vertically integrated market, we have a significant role to play as the industry moves to the DSO model (value added or neutral facilitator or both).

Summary of feedback on Part four

24. *Please summarise your key points on Part four.*

- There is no barrier to access the WEL network. We sign agreements with retailers within a short timeframe.
- ToU pricing can be implemented if the distributor has access to smart meter data. It can be introduced with a price impact of less than +/- 5% for most customers and it is a pricing structure that is simple for the customer to understand.
- The default price-quality path does not necessarily mean a distributor will perform better. What they need is commitment to asset management best practice, continuous process improvement and appointment of quality board and executive management.
- Metering data can reduce costs for distribution networks by tens of millions of dollars. Therefore, open access to meter data on reasonable commercial terms is critical to reduce prices paid by consumers.
- WEL prefers to use coincident peak demand (CPD) as an indicator for the allocation of distribution costs between residential and commercial customers. This is because distribution networks are designed and built on peak demand constraints, not electricity consumption. WEL's own analysis, based on CPD for residential customers, shows that they make up 49% of total CPD and 50% of total charges.
- Distributors must be ready for significant change in technology that uses and distributes electricity. Our own work programme indicates where these challenges are: OurPower for low income households, analytics services to other distributors, installation of DGs with overreaching smart control systems, and facilitate and support electric vehicle adoption.

Solutions to issues and concerns raised in Part four

25. Please briefly describe any potential solutions to the issues and concerns raised in Part four.

- The Review should consider how distribution companies' asset management capabilities can be enhanced via more effective collaboration, or by the consolidation of these specialised resources into centres of excellence or shared services.
- WEL agrees that metering data should be readily available on reasonable commercial terms and support creation of an open access regime for meter data with standardised terms and conditions for all parties.

Part five: Technology and regulation

Technology

26. *What are your views on the assessment of the impact of technology on consumers and the electricity industry?*

No Comment

27. *What are you views on the assessment of the impact of technology on pricing mechanisms and the fairness of prices?*

No Comment

28. *What are your views on how emerging technology will affect security of supply, resilience and prices?*

No Comment

Regulation

29. *What are your views on the assessment of the place of environmental sustainability and fairness in the regulatory system?*

- WEL supports the view that fairness and environmental sustainability should be considered as part of the electricity regulatory regime.
- Of note is the lack of regulatory guidance or framework to address energy hardship.

30. *What are your views on the assessment of low fixed charge tariff regulations?*

- WEL supports the Review's view that there are better ways than the current mandatory low fixed charge plans to help those in energy hardship.

31. *What are your views on the assessment of gaps or overlaps between the regulators?*

No Comment

32. *What are your views on the assessment of whether the regulatory framework and regulators' workplans enable new technologies and business models to emerge?*

- WEL would like to see regulation be more principle based rather than prescriptive. For example, the third party related transaction regulations are more principle based. Less prescriptive, more principle based regulation is more versatile and able to adapt to rapid changes being seen in the electricity market.

33. *What are your views on the assessment of other matters for the regulatory framework?*

No Comment

Summary of feedback on Part five

34. *Please summarise your key points on Part five.*

No Comment

Solutions to issues and concerns raised in Part five

35. *Please briefly describe any potential solutions to the issues and concerns raised in Part five.*

No Comment

Additional information

36. *Please briefly provide any additional information or comment you would like to include in your submission.*
No Comment