



Final residential Time of Use (ToU) prices

For year starting 1 April 2020



Contents

Contents.....	2
1 Purpose.....	3
2 Background.....	3
3 Implementation of ToU prices	4
4 Retailer feedback and our response	4
4.1 Confidentiality.....	4
4.2 Proposed ToU pricing structure.....	5
4.3 Industry wide structure	6
4.4 Encouraging pass-through	7
4.5 Transition to ToU	7
4.6 Opt-out options	8
4.7 Migration.....	8
4.8 Other comments	9
5 Final Time of use (TOU) pricing structure	9
5.1 Residential ToU structure	9
5.2 Residential ToU peak and off-peak signals.....	11
6 Eligibility and the migration process.....	13
6.1 Data file requirements	14
7 Change to the service fee definitions	14
8 Next steps and closing.....	14

1 Purpose

The Electricity Authority (the **Authority**) has provided guidance on the requirement for EDB's to adopt efficient prices for distribution services. The guidance includes pricing principles to support the development of efficient prices and introduction of a new scorecard framework to report on how cost reflective Electricity Distribution Businesses (**EDB**) prices are. The Authority has also required EDBs to publish a Pricing Road Map outlining how and when they will transition to cost reflective prices and to publish regular progress updates.

Wellington Electricity Lines Limited (**WELL**) published its Pricing Road Map¹ in 2017. In 2018, WELL completed the first phase of the Pricing Road Map by trialling cost reflective Electric Vehicle (**EV**) prices and then introducing Time of Use (**ToU**) prices for EV and Household Battery System consumers (the prices were called EVB). WELL is now implementing the next step on the Pricing Road Map – expanding ToU prices to residential consumers.

In November 2019, WELL consulted with Electricity Retailers (Retailers) on its proposed residential ToU pricing structure. The consultation process has now closed and WELL has considered Retailer feedback. The purpose of this consultation response document is to:

1. Summarise Retailer submissions;
2. Respond to Retailer submissions;
3. Present the final residential ToU price structure.

WELL will also be refining definitions for a number of the service fees contained within the Network Pricing Schedule (Module 15) to better align the definitions to actual field service work practices. These changes are outlined in section 7.

WELL would like to thank Retailers for taking the time to provide feedback to the proposed pricing structure. Your feedback provided important input into the final pricing structure.

2 Background

WELL published its Pricing Road Map in 2017. Like most electricity distributors, we have been working for several years on a pricing reform programme. Our efforts are motivated and informed by:

- The risks (e.g., of congestion and cost of higher network capacity) and opportunities (e.g., to reduce network investment pressures) of new and maturing technologies – these increase the value of adopting prices that clearly signal congestion periods and costs of increasing network capacity, which encourages more efficient use of the network;
- The Electricity Authority's work reviewing pricing principles and monitoring activities – this adds impetus to our focus on pricing efficiency;
- The recent Electricity Pricing Review considered pricing outcomes and frameworks – this supports pricing efficiency, affordability, fairness and points to the possible phasing out of low-fixed user charges.

¹ The Pricing Road map can be found at: <https://www.welectricity.co.nz/disclosures/pricing/2019/>.

Progress on the Pricing Road Map:

- WELL introduced ToU prices for Electric Vehicles (EV) in 2018 after trialling different pricing methods. An important observation from the EV trial was that an effective pricing structure balances cost reflectivity with practical considerations – whether consumers can readily understand and respond to price signals, whether Retailers can readily implement prices within their overall retail product and whether the structure allows for the consumer to take the price on offer to encourage the network to make the investment that relieves the congestion. For these reasons, we favour ToU pricing aligned with the emerging industry standard design for mass market consumers;
- A pilot programme of new technology that will allow the management of distributed energy resources (DERs) to reduce congestion will commence in 2020;
- Development of residential ToU pricing structures will be offered from 1 April 2020.

Next steps on the Pricing Roadmap (2020 work programme)

- Offer optional residential ToU prices from 1 April 2020;
- Consider mandatory residential ToU prices;
- Consider ToU prices for small commercial businesses;
- Consider lower prices for managed distributed energy resources (DERs) such as EV or household batteries, provided consumers meet with the relevant network standards. This is similar to our existing practice of offering lower cost heating periods for managed hot water demand where water heating is shifted away (managed) from peak congestion periods.

3 Implementation of ToU prices

WELL will be offering residential ToU prices as a pricing option from 1 April 2020. The final pricing structure, eligibility requirements and migration instructions are provided in this document. WELL has also calculated final prices that will apply from 1 April 2020 – the final prices have been circulated separately to Retailers. The final prices include the residential ToU pricing structure.

To support the implementation of ToU prices, WELL will be providing guidance on our website about how ToU prices work and ideas on how to change energy habits to benefit from lower off-peak prices. WELL will communicate those key messages to Retailers before prices are published.

4 Retailer feedback and our response

WELL thanks Retailers for providing feedback to the proposed pricing structure. WELL has carefully considered all submissions before finalising the residential ToU pricing structure. Eleven Retailers made submissions, providing 99% coverage of WELL's connections.

4.1 Confidentiality

One Retailer has requested for submissions not to be published as they provide commercial information. WELL will not be publishing submissions and have aggregated and anonymised the feedback in this response.

4.2 Proposed ToU pricing structure

WELL proposed a ToU pricing structure with morning and evening peaks which were consistent with other networks and matched residential demand on the Wellington Network. WELL have initially proposed no peak periods on the weekend as weekend peak demand periods are currently not as high as weekday demand peaks. WELL also proposed no seasonal changes to the peak period pricing signals as it adds complexity (for supply chain and consumers) and exacerbates winter energy hardship for vulnerable consumers facing budgeting challenges.

A single set of tariffs was proposed to apply to both residential customers and EV and battery customers. The current fixed and variable tariffs would be retained for the next year for Retailers who choose not to move to ToU tariffs.

WELL also proposed lower peak and off-peak prices for all inclusive prices compared to uncontrolled prices to reflect that inclusive users also allow their demand to be managed during congested periods. Eligibility for All Inclusive ToU prices still requires that a control device is present as indicated by a registry content code of IN19.

ToU prices were not applied to dedicated control prices as dedicated control prices are already low to reflect that this tariff provides WELL with the ability to move the supply of energy during peak demand periods.

4.2.1 Retailer feedback and WELL's response

Retailers all supported the proposed residential ToU tariffs. Several submissions noted that this should be considered an intermediate step before moving to more cost reflective methods in the future. Other submissions said they would like to see the tariff structure extended to small commercial customers.

WELL notes the general support of the proposed tariffs. The finalised structure has not changed from that proposed and is presented in section 5, apart from WELL will now be retaining the EVB price category.

WELL will be considering cost reflective prices for small commercial business in early 2020. WELL regularly reviews the appropriateness of its pricing and will consider other pricing methods if they become more appropriate.

A submission asked for clarification on whether there would be peak periods on the weekend. WELL can confirm that the weekend does not currently have peak prices – off-peak rates will apply all weekend.

A submission said that it was not appropriate to offer ToU for inclusive control because users may not be able to respond if their load is being controlled. Inclusive control only impacts a proportion of the load that is equivalent to hot water use. The remainder of the load is uncontrolled and can be influenced by the consumer. WELLs final peak and off-peak structure recognises that only part of the inclusive load can be controlled by:

- Providing a peak and off-peak tariff that provides lower prices for using energy off-peak, for the proportion of load that is not controlled.
- Providing peak and off-peak prices which are lower than uncontrolled prices, recognising that part of the load can be controlled

A submission highlighted that ToU prices for uncontrolled meters were higher than current EV prices – specifically that the ToU off peak rate is double the current EV off peak rate. The peak rates are similar. The submissions said that it is inequitable moving current EV users onto the new structure and punitive towards early adopters of the EV ToU prices.

The proposed ToU prices were set at a level which were a better reflection of the cost of congestion and were consistent with WELL's other prices. In comparison, the EV off peak rate was lower than the equivalent ToU price. The lower price reflected that in 2016 EV prices included a discount to reflect that EV users were adopting relatively new technology that had yet to benefit from lower prices that would come from mass production. Early adopters of EVB prices have benefited from much lower prices than WELL's standard prices.

WELL has decided to delay the removal of EVB prices for one year while it considers new managed service prices. WELL is trialling new technology to allow the charging of EV's (and other devices) to be managed when the network is congested and is considering whether to offer lower prices for this service to customers with EV's. Prices for this service could be similar to the current ToU Inclusive price (which is in line with the previous EVB prices). WELL will be consulting on potential new pricing structures this year.

EVB prices in 2020 will be retained at the same level as 2019 prices to reflect they are already set at a discounted level.

A submission suggested a simplified structure which included the new ToU prices and the current range of flat variable prices as a sub-code of low user and standard prices. WELL agrees the simplified tariffs reduced complexity. However, the down side of the alternative structure is there would be no visibility of how many people were using the new ToU prices and how many remained on our current prices. Visibility will be essential as we embed the new prices. WELL will retain the proposed pricing structure and will monitor its operation.

A submission asked for clarification on the comment that fixed charges have not been adjusted, yet the prices showed all charges reducing. The indicative prices provided used an estimation of the revenue allowances for the year starting 1 April 2020. The decrease is due to an expected decrease in distribution revenue due to a reduction in the regulatory weighted average cost of capital (WACC). All prices decreased to reflect the reduction in revenue allowances. Fixed charges have not changed as a proportion of total price or as a relative proportion between pricing categories.

4.3 Industry wide structure

WELL proposed a structure which aligns with industry standard solutions and with residential demand patterns in Wellington. WELL believes that aligning pricing structures with other networks would help minimise implementation costs for Retailers.

4.3.1 Retailer feedback and WELL's response:

The majority of submissions supported a pricing structure that was consistent with other networks as this helped to reduce Retailer implementation costs and it would be easier for customers to understand.

One submission disagreed with the need to have a structure that was consistent with other networks and that it was more important for the peaks to more closely match peak demand periods in Wellington.

Specifically, it was suggested that a narrower morning peak period would provide a better match to demand.

WELL supports a consistent pricing structure as a way of minimising implementation costs and believe the proposed morning peak is still a good match to demand in Wellington. WELL believes that while a narrower morning peak may provide a slightly closer fit to demand, the trade-off of a wider peak to allow the cost saving benefits from industry consistency is warranted. WELL also regularly reviews its pricing structures and may consider changing the peak periods in the future once prices are bedded in and if a different peak period is more appropriate.

4.4 Encouraging pass-through

The proposed residential ToU prices have been designed to reflect the additional cost of congestion on the Wellington network.

4.4.1 Retailer feedback and WELL's response

Submissions were mixed on whether prices would be passed through. Some Retailers pass-through distribution costs as policy, others would use the price signals to develop innovative prices and others said pass-through would depend on customer demand and competition.

WELL is buoyed to see that a significant number of Retailers will pass-through ToU prices. It is important that customers have the opportunity to keep long term network costs as low as possible by changing their energy habits to reduce network congestion, based on clear network pricing signals.

4.5 Transition to ToU

WELL proposed to move all customers to residential ToU prices 1 April 2020 and to provide an 'opt-out' tariff for those who could not provide the data in the required format to bill ToU accurately. The 1 April 2020 reset of the regulatory price/quality path provides a unique opportunity to manage any potential bill shocks because our target revenue will be reducing as networks move to a new regulatory period with a lower WACC.

4.5.1 Retailer feedback and WELL's response

Retailer feedback was mixed. Four Retailers agreed with moving all customers to residential ToU prices. Comments included that ToU prices have been offered by other networks for some time now so Retailers should be able to apply the new prices.

The majority of submissions supported making ToU prices optional for a variety of reasons. Several Retailers billing systems could not provide the data in the required format to bill accurately at the moment – these Retailers are upgrading their billing systems so they soon will be able to process ToU tariffs. Other Retailers commented that prices should be optional because it's the Retailers' choice whether to pass ToU prices through. Several Retailers said that not enough time has been given to incorporate the new prices into their own billing processes and to educate their own customers on the new prices. Other networks offered ToU prices as an option initially before applying the prices to all customers, providing time to embed the new prices.

One Retailer was also concerned about the industry's ability to collect and process the half hour data needed to calculate ToU prices – that the data delivery performance and quality is not yet at a point where

it can be used for all residential customers. The Retailer recommended an opt-in approach initially as the industry as a whole works on improving the quality and reliability of interval data for use in TOU pricing.

WELL has decided to make ToU prices optional and will consider moving all customers to ToU next year, subject to further consultation. This will provide time for Retailers to upgrade their billing systems and to embed the new prices. WELL believes that for a cost reflective price to be successful in signaling congestion, it must be cost reflective, visible and able to be applied practically. This was the reason that the ToU pricing method was chosen over other cost reflective pricing methods.

WELL disagrees that ToU prices should be optional because it's the Retailers' choice of what pricing method is offered to customers. WELL's pricing is not cost reflective while ToU prices is only offered as an option (the alternative flat variable price does not reflect congestion). If congestion is not signaled, customers will not have the opportunity to avoid higher future network costs from having to re-enforce the network because demand is not moved away from the congested periods.

4.6 Opt-out options

WELL's original proposal was to move all residential customers to ToU at 1 April 2020. Opt-out options would have been an important consideration for those who could not provide data in the required format to calculate ToU prices accurately.

After considering customer feedback, WELL has decided to make ToU optional initially. Therefore an opt-out requirement is not needed at this stage. WELL will refine the opt-out framework before it considers moving all residential customers to ToU prices next year.

The eligibility criteria and migration process is set out in section 6 for Retailers that wish to bill based on ToU prices.

4.7 Migration

While WELL will now be making ToU optional, Retailers who choose ToU prices will still need to migrate their customers to the new prices.

4.7.1 Retailer feedback and WELL's response

Retailers commented that more detail was needed on the migration process, including confirmation that WELL will be providing the new prices in the EIEP 12 format and the Electricity Networks pricing schedule – Module 15². A number of Retailers also asked for confirmation of the new prices as early as possible to perform systems checks and to incorporate the new tariffs.

WELL has provided the new prices to Retailers in the EIEP 12 format via the Registry Hub and have also attached an Excel copy of our prices in the email accompanying this document.

The eligibility criteria and migration process is set out in section 6 for Retailers that which to bill based on ToU prices.

² The submission note this as module 40 which we assume was an error

4.8 Other comments

One submission expressed concerns about WELL playing a role in encouraging end user uptake. It is not the role of the network operator to promote one Retailer over another. The submission also had concerns about WELL providing energy behavior education outside of the relationship that the customer has with the Retailer.

WELL believes that it has a responsibility to consider the impact that its prices has on customers, especially those in energy hardship. The recommendation from the Electricity Price Review is to make this responsibility explicit. WELL will do this by considering smoothing any price increase to avoid large price shocks. WELL will also provide guidance on understanding ToU pricing and how to benefit from changing energy behavior. WELL believes that it has a responsibility to provide tools to support new prices – that it would be irresponsible to introduce prices without providing guidance on how they work, how to benefit from them and how congestion leads to an increase in network costs and higher prices to consumers if congestion is not managed.

Another submission asked if we still offered Night Boost. Yes, WELL still offers Night Boost.

5 Final Time of use (TOU) pricing structure

WELL will be offering ToU prices as an optional tariff from 1 April 2020 to Retailers who can comply with the eligibility criteria (the eligibility criteria is provided in section 6). WELL will consider moving all customers to the ToU tariff next year.

5.1 Residential ToU structure

Our final residential ToU pricing structure reflects demand patterns *and* aligns with other network distribution ToU structures. Aligning pricing structures with other networks will help minimise implementation costs for Retailers. Our final pricing structure is summarised in Figure 2.

Figure 2: Proposed ToU structure

Design Parameter	Industry Standard?	Approach	Comment
Hourly Pattern	Y	AM peak = 7 to 11 PM peak = 5 to 9 No shoulder	A shoulder period has not been included as consumers changing their 'discretionary' load are most likely to do this using timers on appliances (e.g. EV charging, or dishwashers) and are unlikely to discriminate between a peak and shoulder. In addition, a daytime shoulder will over-signal the value of midday PV production.
Weekly Pattern	Y	No peak periods on weekends	Low-cost weekend concept is relatively simple for consumers to understand and adjust to.
Seasonal Pattern	Y	Consistent signals year-round	Seasonal pattern adds complexity (for supply chain and consumers) and exacerbates winter energy hardship for vulnerable consumers facing

Design Parameter	Industry Standard?	Approach	Comment
			budgeting challenges.

Figure 3 below illustrates the proposed ToU pricing structure.

Figure 3: proposed ToU pricing structure

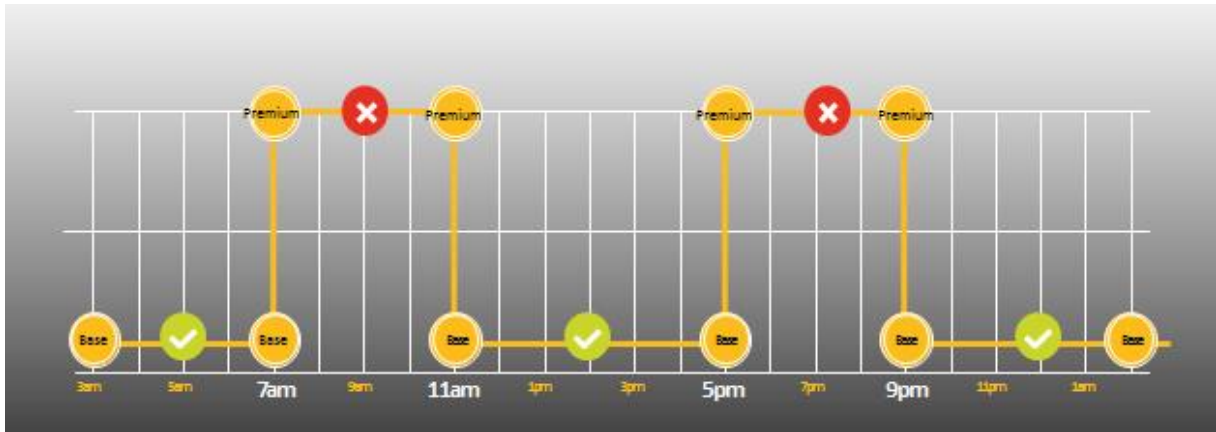


Figure 4 illustrates the ToU structures being offered by different distribution networks and highlights those offering structures which WELL’s proposed residual prices are aligned with. WELL’s ToU structure aligns with six networks serving the majority of the New Zealand residential consumer market³. It is also consistent with our existing EV and battery pricing structures and with the structure the Electricity Network Association are proposing to include in its ‘pricing menu’⁴.

Figure 4: ToU structures aligned with WELLs proposed residual prices

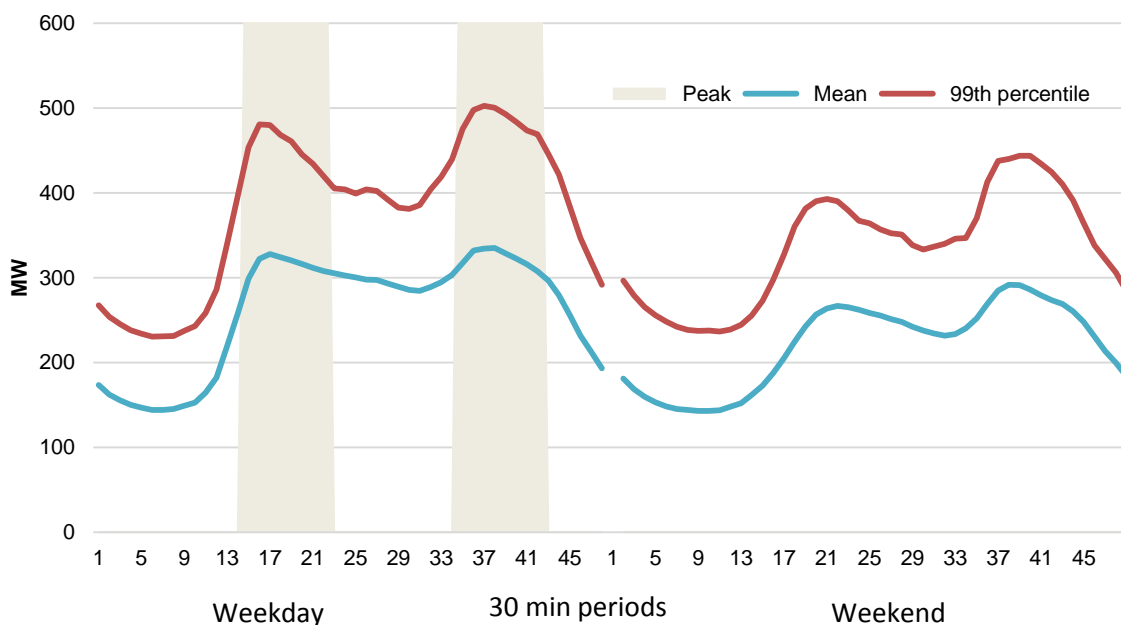
		3am	5am	7am	9am	11am	1pm	3pm	5pm	7pm	9pm	11pm	1am
Aligned with new TOU prices	WELL EVB												
	Vector												
	Counties Power												
	PowerCo												
	Unison												
	Centralines												
	WEL												
	Top												
	Northpower												
	TLC												
	Walpa												
	Electra												

³ The assessment was made against 2019 prices.

⁴ The pricing menu will propose a set of standard pricing structures designed to align distribution prices.

Figure 5 compares the standard time periods against demand patterns on our network. The final structure is a good match to Wellingtons demand patterns.

Figure 5: Illustrating the peak pricing period's alignment with peak demand



5.2 Residential ToU peak and off-peak signals

5.2.1 Current residential prices

Currently, WELL offers a number of controlled pricing options with lower unit rates that reflect the lower cost from avoiding congested periods on the network,⁵ compared to uncontrolled pricing tariffs (dependent on the amount, hours of operation and level of 'visibility' of the amount of load managed through those circuits). WELL offers these prices as a uniform variable price with a fixed daily charge. WELL also offers a ToU price to qualifying EV (or battery) users. The following table summarises our current (April 2019) product suite for residential end users.⁶

Figure 6: Prices currently offered

	Controlled supply to a connection ⁷		Uncontrolled supply to a connection
	Consumers with a dedicated meter	Consumers with an inclusive meter	
Uniform variable prices	Y	Y	Y
Time of Use	N/A	N	Qualifying EV and Battery users

⁵ Providing energy during congested periods costs more because of the additional infrastructure required to deliver the extra network capacity.

⁶ WELL also has a small proportion of residential consumers on a legacy night boost ('NITE') product. This is no longer available for new connections.

⁷ WELL provides different control tariffs depending on the type of meter a consumer has. A dedicated meter is directly connected to a specific device (usually hot water) and allows direct control of that device. An inclusive meter also allows the energy supply to be controlled but does not have a dedicated connection to the appliances being controlled. Without a direct connection to a device, inclusive meters have a reduced ability to control energy use.

Note:

- All prices have low and standard-user variants;
- All prices have a consistent fixed daily tariff;
- *Controlled* prices offer a lower tariff for (primarily) water heating with dedicated metering and ripple control. For consumers without dedicated control channel metering (i.e. with 'inclusive' metering), a more modest price is applied the All Inclusive usage of uncontrolled and controlled demand. All Inclusive Tariffs are only eligible to those with a control device that is indicated by a registry content code of IN19;
- *EVb* ToU products are only available for consumers with eligible electric vehicles or household battery systems. EVb ToU products are not available to consumers with all-inclusive metering. EVb ToU products have a higher peak price and lower off-peak price;
- Demand connected to dedicated controlled circuits have lower pricing (to reflect that the demand may be managed) rather than ToU pricing off peak rates.

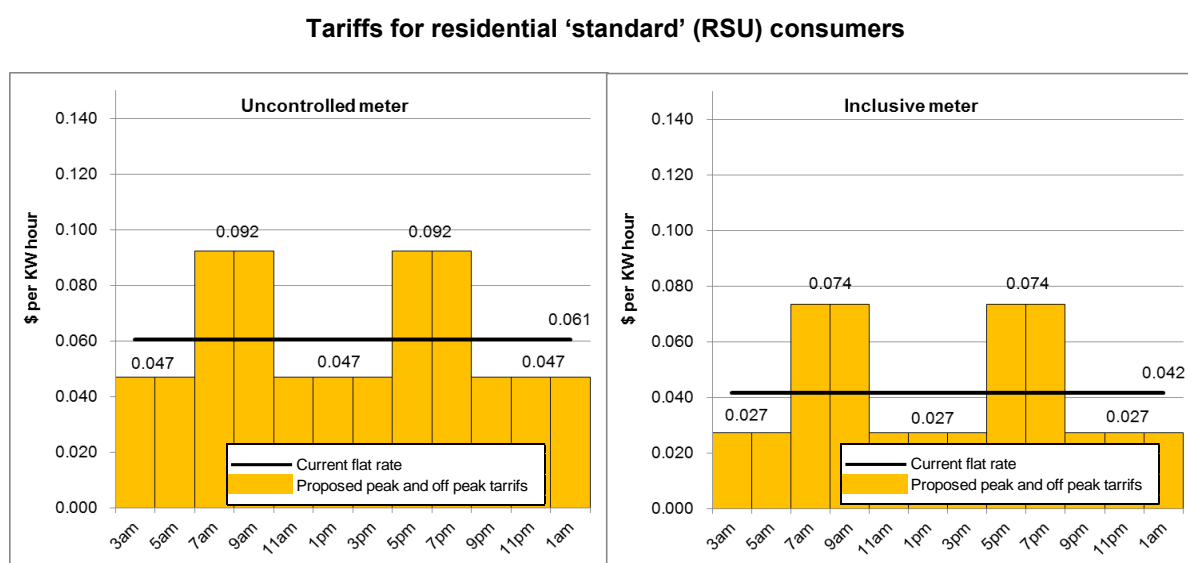
5.2.2 Designing residential ToU prices

From April 2020 we will introduce residential ToU tariffs for residential consumers. WELL will also be retaining the EVb pricing category for a further year while managed EV prices are being developed.

ToU unit rates have been designed so that the pricing signals are consistent with WELL's existing EVb unit rates and its unit rates for ripple control. Fixed charges have not been adjusted⁸. A common fixed charge has been used for all residential consumers, with the exception of the low fixed charge restrictions which WELL will continue to apply in accordance with the applicable rules, noting that the current low fixed user restrictions are expected to change.

Figure 7 compares the peak and off-peak rates with current flat prices which apply at all times of the day. Figure 7 compares prices for residential standard users (RSU) and residential end-users subject to the low fixed charge restrictions (RLU).

Figure 7: ToU peak and off-peak prices compared to variable prices



⁸ Fixed charges may change in the future as a result of the recommendations from the Electricity Price Review. The review has recommended the removal of low fixed users restrictions and the re-examination of the allocation of costs between residential and commercial consumers. WELL is waiting until the recommendations are finalised before it considers any changes.

Tariffs for residential 'Low-User' (RLU) consumers

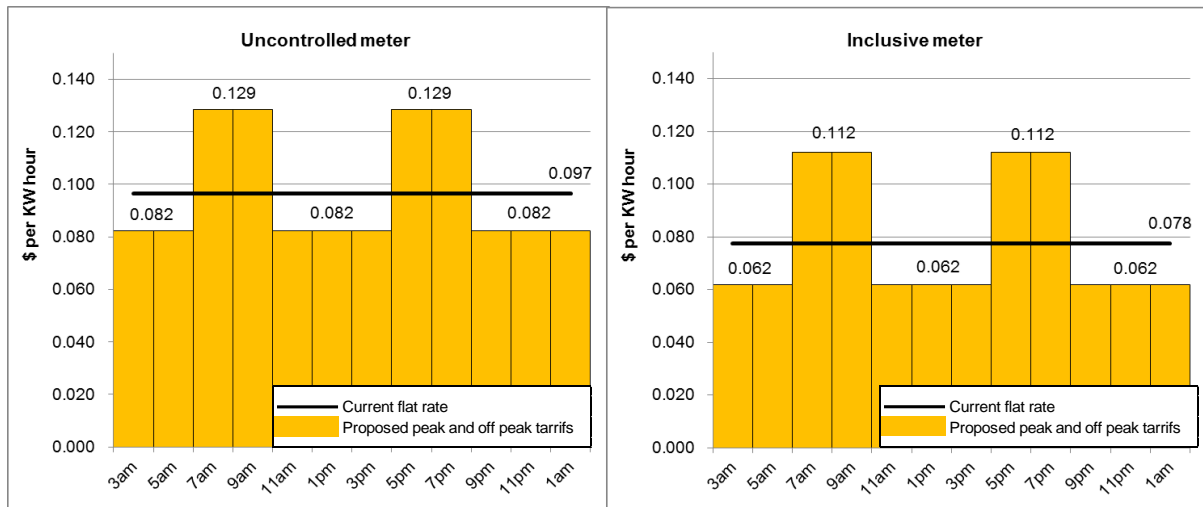


Figure 7 illustrates the consistency between prices – TOU prices for uncontrolled demand has stronger price signals than inclusive control prices, reflecting consumers already have access to lower prices if they allow their demand to be managed during congested periods.

ToU is not applied to dedicated control prices as dedicated control prices are already low to reflect that this tariff provides WELL with the ability to move the supply of energy during peak demand periods (and avoids the higher costs that are incurred when energy is provided during congested periods).

6 Eligibility and the migration process

WELL has provided residential eligibility criteria and a migration process. We have also used the process to clarify the pricing structures for all of our prices and billing file types (not just residential customers).

The customer eligibility criteria for the ToU tariff are:

- Must be residential customer as defined in WELL's Pricing Methodology Disclosure.
- Advanced meters with reliable communication (AMI meters that provide usage in half an hour increments).
- For billing purposes, Retailers will need to supply data to WELL in EIEP1 format, time-sliced according to the hours presented in section 5.

The process for migrating a customer is (assuming the eligibility criteria have been met):

- The prices will be included and circulated in EIEP12 and Electricity Networks pricing schedule module 15 formats. We can also provide prices in an Excel format if needed.
- A Retailer must submit a request for a customer to move to ToU using the EIEP8 format. This is a mandatory eligibility criterion.
- Submissions should be made as price code changes through our SAP portal.

- Retailers are limited to selecting ToU prices once per ICP, per year. We will review this restriction once prices are embedded. Note, as outlined in the Use of Network Agreement, if a Retailer selects ToU prices more than once per ICP per year, WELL may default the Retailer to the highest price category.

6.1 Data file requirements

WELL requires all residential ToU prices to be provided in EIEP 1 format – this includes both non-half hourly and half hourly ICP meters. ToU prices are not available if prices are submitted in EIEP 3 format. WELL does have some commercial prices which are required in EIEP 3 format.

Contact us at we_connections@welectricity.co.nz with any questions or clarification about how the new prices will apply.

7 Change to the service fee definitions

WELL will be refining the service fee definitions provided within the 2020/21 Network Pricing Schedule (Module 15), soon due to be published. The changes made are to better align the definitions to reflect actual field service work practices.. The changes are:

- The New Connection fee has been amended to better reflect the costs incurred by the network when installing new multiple streetlight connections on a single streetlight connections request.
- The two or three phase connection fee definition has been amended to clarify that this fee may be charged for upgrades or downgrades to and from two/three phase connections.
- The site visit fee has been amended to include ‘check for safety’ requests from Retailers and/or consumers.

8 Next steps and closing

Thank you for taking the time to read this consultation response documents. Please don't hesitate to ask any questions you might have by email to WE_CustomerService@welectricity.co.nz.