25 September 2015

UNITED ENERGY

Tariff Structure Statement: Appendices

Public

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1. Long Run Marginal Cost (LRMC)

United Energy are required to calculate a long run marginal cost (LRMC) for the network to set prices that reflect the future costs of network investments.

Pricing proposals prior to the most recent rule change had to comply with a set of pricing principles set out in the NER which included the requirement for distribution network businesses to take into account the LRMC for a network service in setting network prices.

The recent rule changes have introduced a requirement for distribution network businesses to have cost reflective network tariffs that are based upon the LRMC of providing network services at peak times. Linking the marginal costs at peak times to tariffs should signal the change in network costs that could result from reduction in peak demand. The use of long run marginal costs (rather than short run marginal costs) is to capture the cost of building additional capacity on the network to meet future demand.

1.1 Methodology

United Energy has adopted an Average Incremental Cost (AIC) method of calculating the LRMC. The AIC method has been selected as the most efficient approach for calculating LRMC by using, largely, input values (and the procedures used to obtain these) that are obtained in business as usual activities. These values and processes were recently audited and approved in UE's EDPR submission and reflect efficient network costs. The choice of approach (i.e. the AIC approach) is consistent with the approach taken by other electricity and gas distribution network businesses across Australia.

The inputs in the calculation of the LRMC for the United Energy network using the AIC method are the:

- Annual forecasts, disaggregated by connection level (sub-transmission, high voltage and low voltage) in the following streams
    - Demand-driven augmentation expenditure
    - Demand-driven augmentation added capacity (in kVA)
    - Customer Initiated Connections expenditure
    - Customer Initiated Connections added capacity (in kVA)
- Annual overheads
- Opex rate of change for output growth (measures and weightings) as the basis to calculate the incremental cost to operate and maintain the growth of our network
- Subtransmission and High/Low voltage asset lives
- Weighted average cost of capital (WACC) and CPI figures

The Average Incremental Cost method for calculating LRMC involves the following steps

- Total (i.e. not annualised) capital costs are determined for each connection level each year. This is performed by:
    - Summing the Customer Initiated Connection and demand-driven augmentation costs associated with each connection level for each year.
    - Applying overheads to the total capital costs.
    - Converting the total capital costs to nominal terms, based on the CPI input.

- The total capital costs for each connection level each year are then annualised. Annualising involves calculating the incremental cost of two components, a “return on asset” component and a “depreciation” component.

- Forecast incremental operating costs for each year are determined as being the opex rate of change output

- Total additional capacity values are determined for each connection level each year.

- Present value (PV) of the annualised forecast capital cost and incremental opex is divided by the PV of the added capacity of the network to obtain an LRMC

The LRMC calculation (outlined above) is performed for each connection level individually (i.e. sub-transmission, high voltage and low voltage) and then combines these individual LRMC values to obtain Total LRMC values by connection level.

This approach relies on the assumption that in the long run, and with all costs of production fully variable, that all of the available capacity in the network as a whole is fully utilised, and that each individual level of the network is also fully utilised. This would mean, for example, that an additional kVA of capacity at the LV connection level would necessitate building an additional kVA of capacity at each level of the network. With this assumption in place, it is appropriate to add the relevant LRMC values for the individual connection levels listed above when determining the Total LRMC value for each connection level.

1.2 UE network LRMC

The LRMC values for the United Energy network obtained using the methodology described above are;

Table 1.1: United Energy LRMC values

Network Functional level	Estimated LRMC ($/kVA)
Sub-transmission	15
High Voltage	80
Low Voltage	124

Notes:

(1) 2016 LRMC values, 10 year forecast period

United Energy have assessed LRMC estimates over forecast periods ranging from 5 to 20 years, selecting the 10 year period for the final values as the most robust considering the trade-off between the long run nature of the costs and the confidence we have in the forecast costs. The variance between LRMC values for forecast periods from 10 to 20 years is small due to a consistency in the nature and magnitude of investment in augmentation and connections in forecasts for these periods. A forecast period of less than ten years begins to demonstrate a sensitivity to the specific investments forecast for the period.

We have also calculated LRMC values for the two locational regions of the network that UE distinguishes for the operation of the network, a northern and a southern region. This locational scenario was also tested for forecast periods ranging from 5 to 20 years. The LRMC values between the northern and southern operational regions show no substantive differences for each of the forecast periods of 10 years and above.

We have also tested the sensitivity of the LRMC calculation to changes in the allowed WACC. If the allowed WACC varies from our proposed figure by a magnitude that significantly impacts our LRMC then United Energy will reassess the appropriateness of the LRMC calculation methodology.

2. Tariff parameters

Table 2.1 below summarises the charge parameters for current tariffs for distribution services and those that are intended to be offered to customers in the coming TSS period (2017-2020).

Table 2.1: United Energy NUoS charge parameters for TSS period (2017-2020)

Proposed NUoS Tariffs and tariff parameters (2017-2020)														
Charging Parameters	Units	Unmet	Opt out Single Rate	LVS1R Transitional	RESKWTOU	LVDed	TODFLEX	Peak/Off peak demand	Capacity	LVMKWTOU Transitional	LVMKWTOU	LVkVATOU	HVkVATOU	SUBTkVATOU
			Opt in from (LVS1R transitional) 2017	Transition demand components 2017	Fully cost reflective demand from 2016		Closed to new customers from 2017	LVSKW 100% demand from 2017	LVSCAP 100% capacity from 2017	Transition demand components 2017	Fully cost reflective demand from 2016			
Standing Charge	c/day		✓	✓	✓		✓	✓	✓	✓				
Summer peak energy	c/kWh	✓	✓	✓	✓		✓			✓	✓	✓	✓	✓
Non summer peak energy	c/kWh	✓	✓	✓	✓		✓			✓	✓	✓	✓	✓
Summer shoulder energy	c/kWh			✓	✓		✓			✓	✓			
Non summer shoulder energy	c/kWh			✓	✓		✓			✓	✓			
Off peak energy	c/kWh	✓		✓	✓	✓	✓			✓	✓	✓	✓	✓
Rolling Peak Demand	c/kVA/day											7am-7pm workdays	7am-7pm workdays	7am-7pm workdays

Proposed NUoS Tariffs and tariff parameters (2017-2020)														
Charging Parameters	**Units**	**Unmet**	**Opt out Single Rate**	**LVS1R Transitional**	**RESKWTOU**	**LVDed**	**TODFLEX**	**Peak/Off peak demand**	**Capacity**	**LVMKWTOU Transitional**	**LVMKWTOU**	**LVkVATOU**	**HVkVATOU**	**SUBTkVATOU**
			Opt in from (LVS1R transitional) 2017	**Transition demand components 2017**	**Fully cost reflective demand from 2016**		**Closed to new customers from 2017**	**LVSKW 100% demand from 2017**	**LVSCAP 100% capacity from 2017**	**Transition demand components 2017**	**Fully cost reflective demand from 2016**			
Summer demand incentive charge	c/kVA/day											3-6pm workdays Nov-Mar	3-6pm workdays Nov-Mar	3-6pm workdays Nov-Mar
Summer demand charge	c/kW/day			3-9pm workdays Dec-Mar	3-9pm workdays Dec-Mar		3-9pm workdays Dec-Mar	3-9pm workdays Dec-Mar		10am-6pm workdays Dec-Mar	10am-6pm workdays Dec-Mar			
Non summer demand charge	c/kW/day			3-9pm workdays Apr-Nov	3-9pm workdays Apr-Nov		3-9pm workdays Apr-Nov	3-9pm workdays Apr-Nov		10am-6pm workdays Apr-Nov	10am-6pm workdays Apr-Nov			
Off peak demand charge	c/kW/day							9pm-3pm workdays and anytime non-workdays						
Summer capacity	c/kW/day								Anytime Dec-Mar					
Non summer capacity	c/kW/day								Anytime Apr-Nov					
Capacity over run charge	c/kW/day								Anytime in month of over run					

The tariff parameters are described in more detail in appendix 5.

2.1 Determining the demand charge window

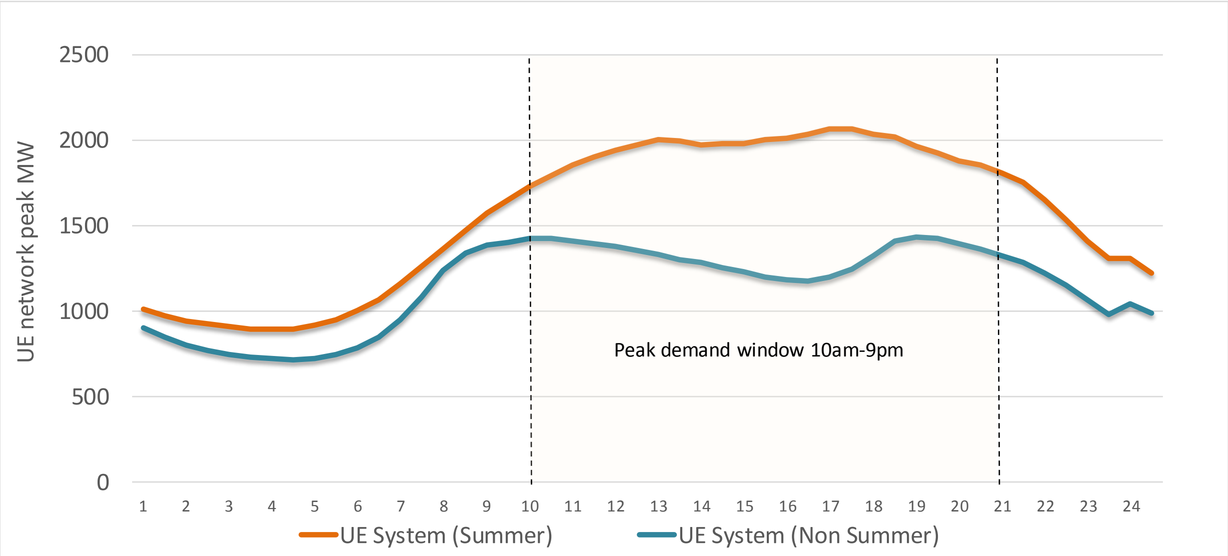
To determine the most appropriate demand charging window for each tariff class United Energy has assessed;

- Peak demands on our network based on time of day, day type (work day v non work day), seasonality and location.
- Feedback from customer/stakeholder consultation
- Balancing cost reflectivity against customer impacts from a cost and behavioural response perspective.
- Alignment with our tariff design objectives indicated in section 5.2 of the TSS.

To ensure cost reflectivity the time periods used for charging different pricing elements should reflect the peak demand on the network elements used by the customer group. For residential and small business customers this is the LV network. For larger customers this is generally the high voltage network.

United Energy network demand window – Figure 2.2 below indicates the peak demand profile by half hour for United Energy on the peak days for summer and winter of 2014. As depicted below the period of peak demand for the year fell on work days between 10am and 9pm. This band of peak demand being consistent over the top 5 peak days. It is anticipated that this peak demand window will remain relevant for the TSS period 2017-2020.

Figure 2.2 United Energy peak system demand daily profile MW



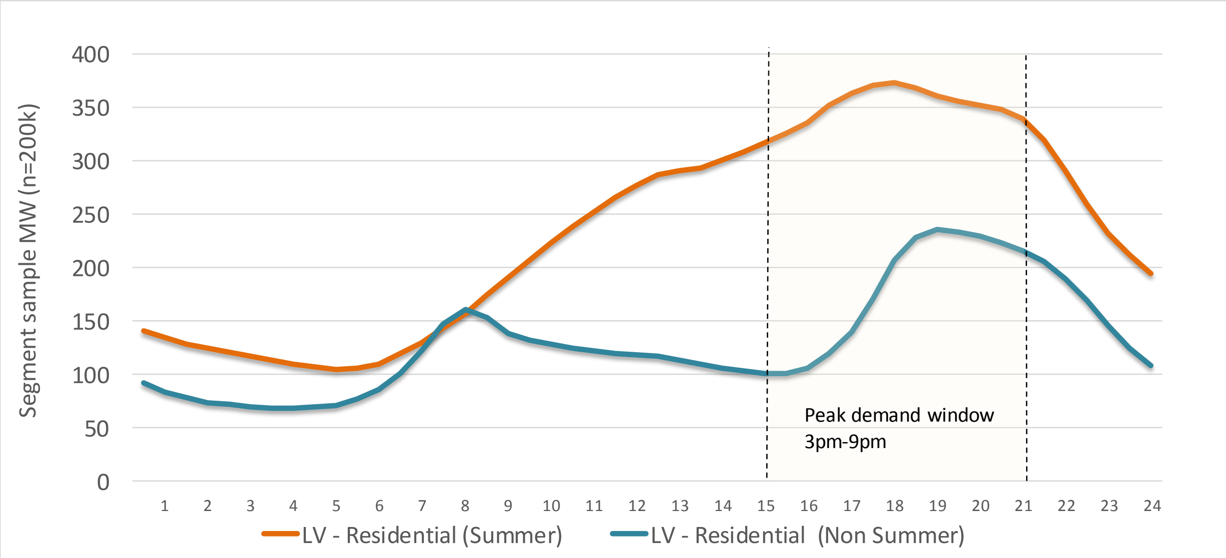
Residential demand charging window – Figure 2.3 following indicates the peak demand daily profile for a representative sample (n=200k) of residential customers on the peak days for summer and winter of 2014. Based on this and an assessment of the demand profile on similar days, United Energy has determined that a demand charge window of 3-9pm work days is most appropriate in meeting the desire for cost reflectivity balanced against other tariff design objectives.

The 3-9pm window is consistent with the peak period under the common time of use tariff that is currently offered by distributors and retailers. Our consultation supported consistency with this already established time window as we move towards more cost reflective tariffs. We note that the period needs to be;

- wide enough to ensure that it captures the peak at the local area on the network
- wide enough it does not increase the potential for bill shock and

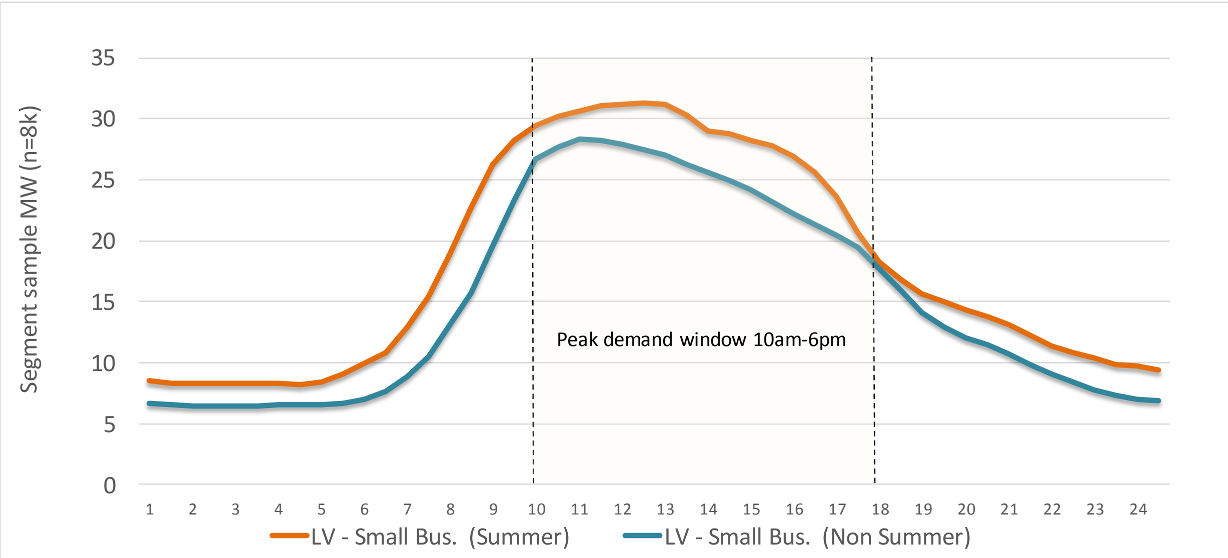
- short enough that customers are able to react.

Figure 2.3 United Energy residential customer sample demand daily Profile MW



Small Business demand charging window – Figure 2.4 indicates the peak daily demand profile for a representative sample (n=8k) of small business customers on the peak days for summer and winter of 2014. Based on this and an assessment of the demand profile on similar days United Energy has determined that a demand charge window of 10am-6pm work days is most appropriate in meeting the desire for cost reflectivity balanced against other requirements including minimising the customer impacts of the transition

Figure 2.4 United Energy small business customer sample demand daily profile MW



Large commercial and Industrial Customers - Our larger high voltage use a much higher proportion of the network infrastructure that they are connected to. As a result, the infrastructure needs to be sized to the needs of the customers regardless of the time of peak demand. Consequently, we currently charge larger customers for peak usage between the hours of 7am and 7pm and propose no changes to this pricing window.

3. Mapping of LRMC to tariffs and tariff parameters

3.1 Mapping of peak demand to tariffs

The process of establishing tariff level cost reflectivity aligned to the network functional level requires an approach that takes account of the relationship between network peak demand, segment coincident demand and finally the assessable demand for the purpose of calculating segment revenue. The aim of this approach, described in more detail below, is to deliver a scaled LRMC of demand (expressed as $/kVA or $/kW) for each tariff class. The estimates of scaled LRMC of segment demand can then be used as the basis for assessing cost reflectivity of tariffs and tariff components.

The scaling method adopted by United Energy is described below:

a) Establish LRMC of demand in $/kVA at the network functional level (Figure 3.1).

b) From a representative customer segment sample establish the coincident demand contribution assessed on the top 5 network peak demand days for the year.

c) From the same segment sample determine the cumulative annual demands that would form the basis of the tariff segment revenue. Ensuring they are weighted for seasonal demand rates.

d) The segment scaled LRMC is then calculated by multiplying LRMC established at; a) by coincident segment demand at; b) divided by segment revenue demand at; c).

Figure 3.1 below depicts the relationship between LRMC at the network functional level and the scaled LRMC for each customer segment.

Figure 3.1 LRMC Estimates by customer segment

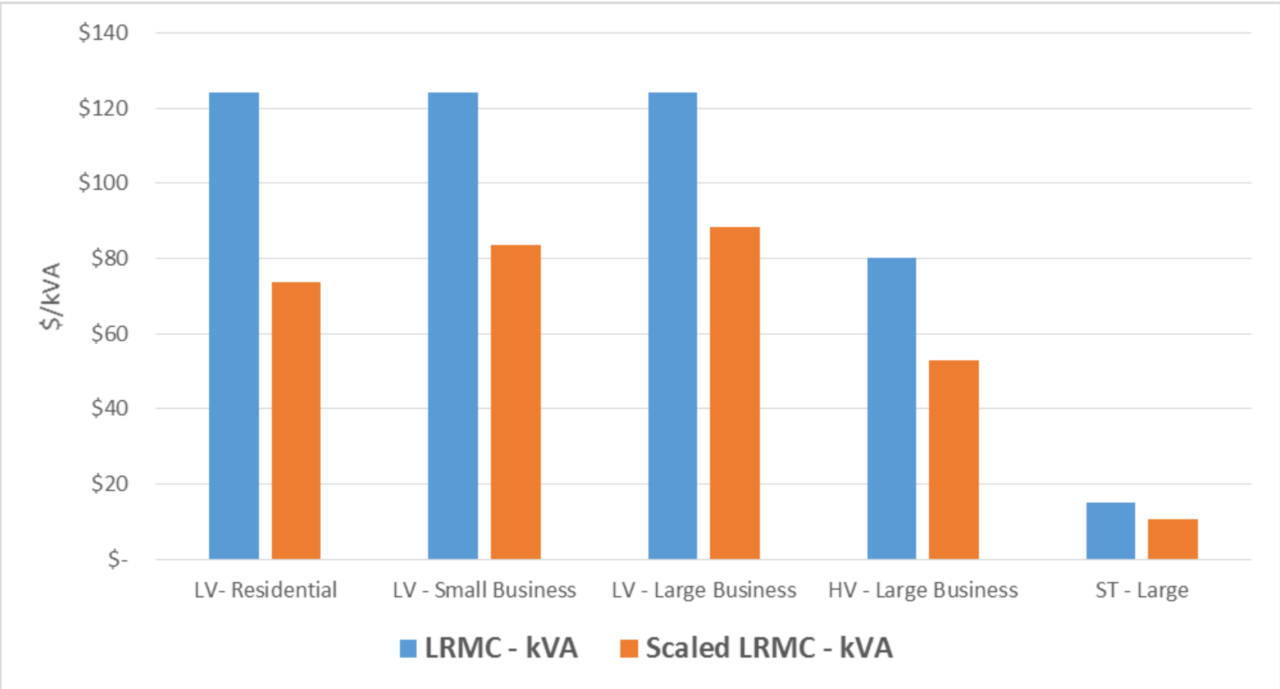


Table 3.1 below provides a summary of LRMC estimates by tariff class.

Table 3.1 LRMC estimates and scaled demand component level ($2015)

Tariff Class	Tariff Code	Tariff Description	LRMC Estimate ($/kW)	Scaled demand component est. ($/kW)
Low voltage small	LVS1R	Low voltage small 1 rate	115.32	64.73
	LVS2R	Low voltage small 2 rate	115.32	64.73
	LVDed	Dedicated circuit (off peak HW)	115.32	64.73
	WET2Step	Winter economy tariff	115.32	64.73
	TOD	Time of Day	115.32	64.73
	TOD9	Time of Day 9pm off peak	115.32	64.73
	TODFLEX	Time of Day Flexible	115.32	64.73
	LVKW TOU RES	Seasonal Demand Time of Use	115.32	64.73
Low voltage medium	LVM1R	Low voltage medium 1 rate	111.60	73.59
	LVM2R5D	Low voltage medium 2 rate 5 day	111.60	73.59
	LVM2R7D	Low voltage medium 2 rate 7 day	111.60	73.59
	LVkWTOU	Low voltage KW time of use	111.60	73.59
	LVkWTOUH	Low voltage KW time of use – HOT	111.60	73.59
	TOU	Time of use	111.60	73.59
	TODFLEX	Time of Day Flexible	111.60	73.59
Tariff Class	**Tariff Code**	**Tariff Description**	**LRMC Estimate ($/kVA)**	**Scaled LRMC Estimate ($/kVA)**
Low voltage large	LVL2R	Low voltage large 2 rate	124.00	88.16
	LVL1R	Low voltage large 1 rate	124.00	88.16
	LVkVATOU	Low voltage large KVA time of use	124.00	88.16
	LVkVATOUH	Low voltage large KVA time of use-HOT	124.00	88.16
High voltage large	HVkVATOU	High voltage KVA time of use	80.00	52.97
Subtransmission large	SubTkVATOU	Subtransmission KVA time of use	15.00	10.64

Having established the scaled LRMC by each customer segment, the resulting $/kVA is used as the basis for aligning DUOS revenue recovered via tariffs. This alignment is performed at:

a) The customer segment level; where average customer segment revenue is assessed against the scaled LRMC $/kVA multiplied by the average max demand of the customer segment. The results are indicated in Figure 3.2 below where they are defined as 'Calculated LRMC demand as % DUOS'.

b) The tariff component level; where an assessment of the average tariff revenue from demand components is compared to the scaled LRMC revenue determined at a). The results are indicated in Figure 3.2 below where they are defined as 'Target DUOS from demand tariff components'.

c) The customer segment level where demand tariff revenue is currently recovered from customers. Indicated in the chart below as ‘Forecast DUOS from demand tariff components’

Figure 3.2 LRMC Demand revenue v DUOS Demand revenue by customer segment

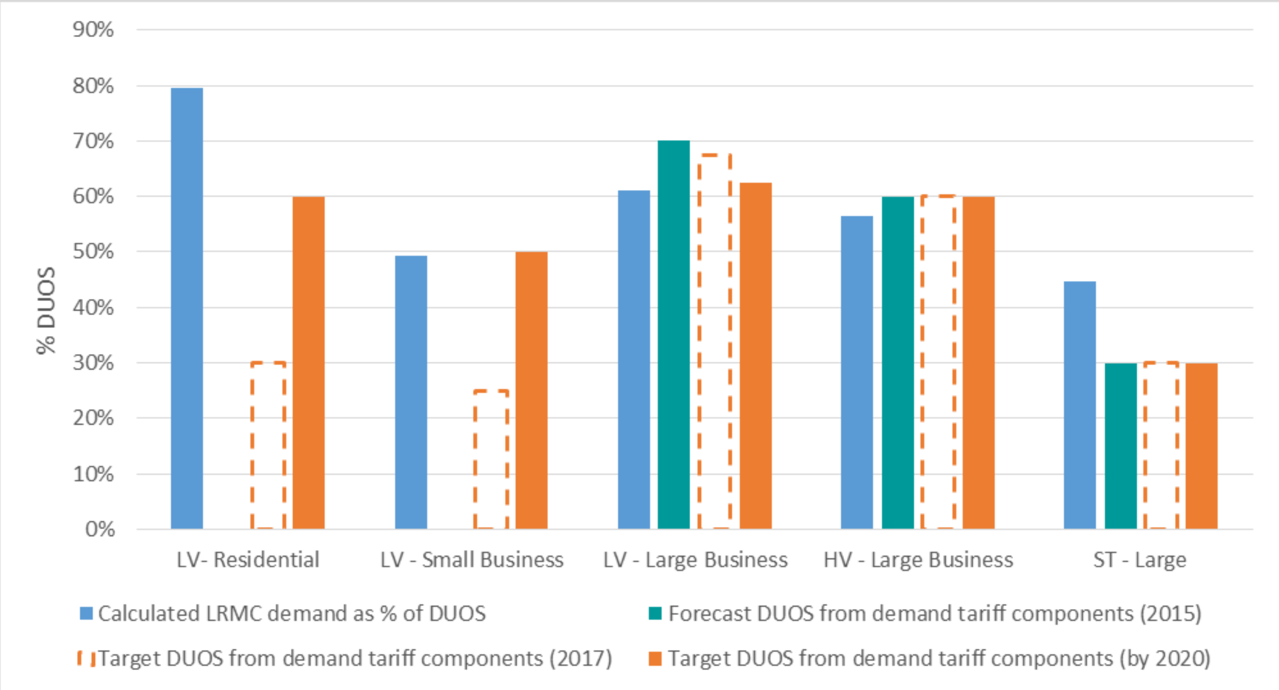


Figure 3.2 outlines the intended timing of and the approach to the introduction of demand tariff components for low voltage residential and small business customers. As our larger customers already have demand components in their tariffs that are approximate to the calculated LRMC values, significant changes to tariff structures are not anticipated for the duration of this TSS period.

Residual Cost

Evident from Figure 3.2 is that LRMC of demand does not recover fully against customer segment DUOS revenue. This is attributable to; a) the LRMC being a forward looking calculation and recognising that a tariff based solely on LRMC would not recover sufficient revenue to offset the total cost of supplying the distribution service to customers and; b) Pure LRMC of demand estimates need to be tempered to satisfy other tariff setting objectives including customer impacts.

The total cost of supply is assessed by the AER and is recovered by United Energy in the form of ‘approved revenue’. The difference between the approved revenue recovered via tariffs at the segment level and the revenue recovered via the scaled LRMC calculation is termed the ‘residual revenue’. We allocate this residual revenue to individual tariffs based on that tariffs contribution to our total revenue.

United Energy approach to LRMC signalling for TSS period

United Energy will apply the approach described in section 7.1 of the TSS to transition customers to tariffs which better reflect the estimated LRMC cost of demand within each customer segment. As part of this transition United Energy has also taken into account potential customer impacts. Therefore, indicative rates published in appendix 6 reflect a balance between the pure LRMC demand signal, recovered via tariff demand component revenue and the desire to minimise year on year customer NUOS impacts and the objectives described in section 5 of the TSS.

The proposed approach to transition for each tariff class is described briefly as follows;

Low voltage small residential customers – Whilst United Energy already has a residential tariff with demand components in operation, it is proposed that all customers transition to a tariff with a demand component by 1st January 2017. This initial step will target 30% of a customer's DUOS charge to be recovered from demand tariff components with a subsequent step up to 60% (of DUOS from demand) from 2019. At this level approximately 75% of the calculated LRMC of demand is being recovered from demand tariff components, with the residual revenue being recovered through an anytime energy tariff. Demand tariff components will be recovered on a $/kW basis.

Low voltage small business customers – United Energy will introduce an optional small business tariff with demand components in 2016. Additionally, it is proposed in this TSS that all customers transition to a new tariff with a demand component by 1st January 2017. This initial step will target 25% of a customer's DUOS charge to be recovered from demand tariff components with a subsequent step up to 50% (of DUOS from demand) from 2019. This level approximates the calculated LRMC of demand with the residual revenue being recovered through an anytime energy tariff. Demand tariff components will be recovered on a $/kW basis.

Large business customers – As our large customer tariffs already have well established monthly and seasonal demand components our approach will be to use the estimated scaled LRMC demand values to guide tariffs levied on demand components on a $/kVA basis. Residual revenue will be recovered on a TOU energy basis. For this customer class United Energy will be seeking to minimise tariff driven customer impacts for the current TSS period.

4. Customer impacts – how this has been addressed in developing the transition

4.1 Adjustment to tariff parameters

As indicated in appendix 3 United Energy seeks to meet the network pricing objective that tariffs for a customer should reflect the efficient costs of providing services to those customers. A detailed overview of how United Energy has approached these objectives has been provided in appendix 3 (basing tariffs on LRMC estimates) and appendix 7 (stand alone and avoidable cost). In circumstances where our proposal deviates from these principles we do so to mitigate the price impact of fully cost reflective tariffs upon our customers.

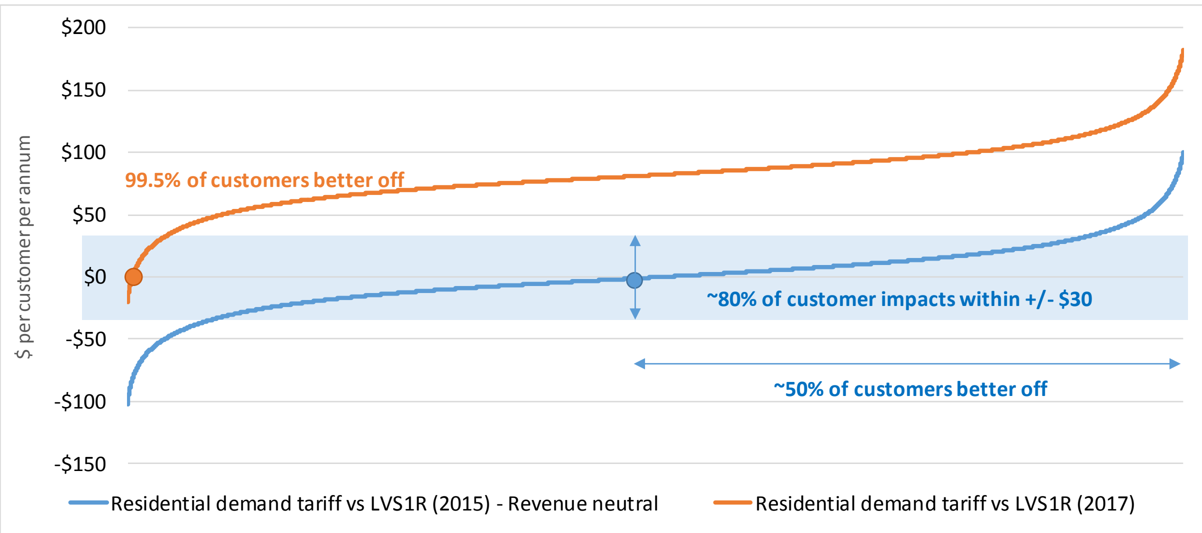
In constructing demand tariffs for both residential and small business United Energy has taken a balanced view of our pricing objectives and has emphasised a staged transition to full cost reflectivity that will extend beyond this current TSS. The tariff components and levels have been optimised to deliver the best overall balance for our customers and our network in the short and longer term.

Customer impact analysis

Figure 4.1 below plots customer impacts for a representative sample of 200,000 residential customers. From the chart it is apparent that on a revenue neutral basis (2015 comparison) approximately 50% of customers would be better off on the residential demand tariff (RESKWTOU). We have sought to contain the DUoS cost impact of transition to customers, evidenced by 80% of residential customers falling into the annual DUoS impact range of +/$-30. Notably, this is calculated before the customer has had an opportunity to change their consumption behaviour to obtain further cost reductions under the demand tariff structure.

We have considered the customer impact in the context of other charges levied by United Energy (jurisdictional and AMI schemes) and together with the projections for allowed revenue in the forthcoming EDPR (2016-2020) have determined forecast customer impacts during the first year of the TSS in 2017. These impacts are indicated in figure 4.1 below and result in 99.5% of customers being better off under a residential demand tariff in 2017 relative to 2015.

Figure 4.1 Residential customer impacts under demand tariff ($per annum)



We have also reviewed customer impacts relative to estimates of their retail bills and determined that 85% of customers have impacts less than +/-3% of the retail bill (equivalent to ~$35.2 per annum).

Analysis of the 50% of customers deemed to be negatively impacted under the residential demand tariff (2015) indicates that ‘peaky’ customers, who have below average load factors (i.e. average kW/Maximum kW), are more likely to be impacted. This confirms that the principle of cost reflectivity is being executed correctly, in that our tariffs are effective in targeting customers whose consumption profiles contribute more cost to the network than customers with ‘flatter’ load profiles.

We also reviewed the distribution and the annual dollar impact of residential customers deemed to be negatively impacted under demand tariffs from a number of perspectives. This information informed our approach to designing the parameters and setting the proposed rates to apply from 2017.

4.2 Workday v any day

In determining the most appropriate tariff construct United Energy had initially proposed that the demand charge window include weekends and public holidays. Whilst areas of our network can exhibit peak demands on non-work days, the results of our consultation with customer and stakeholder groups lead us to conclude that work days were a more practical basis for determining demand charges, particularly when considering the desire for tariff consistency across each of the Victorian distribution businesses. In areas where non work days represent a potential peak constraint on the network, United Energy is exploring the management of demand through optional locational incentives.

4.3 Rate of change and start point

United Energy recognises that whilst a calculation of LRMC of demand can indicate a target level of cost reflectivity for each customer tariff class, transition needs to be sympathetic to both customer impacts and to existing mechanisms for recovery of approved revenue. Accordingly, United Energy has documented a staged approach whereby residential and small business customers, who have not previously been on tariffs with a demand component, will be gradually transitioned to cost reflective tariffs commencing in 2017.

The approach to transition during the TSS period 2017 -2020 is described in appendix 3.

4.4 Ability to influence

Inherent within the construct of tariffs designed with a greater emphasis on cost reflectivity is the capability for customers to influence network costs in both the short and long term. Customers can influence how much they pay for network services in the short term by redistributing load from discretionary activity away from the demand charge windows relevant to their tariff. In the longer term, a collective redistribution of load away from periods of network constraint should result in networks having to spend less on network augmentation. The consequences of which will most likely result in lower overall network charges for all of our customers.

4.5 Choice of tariffs

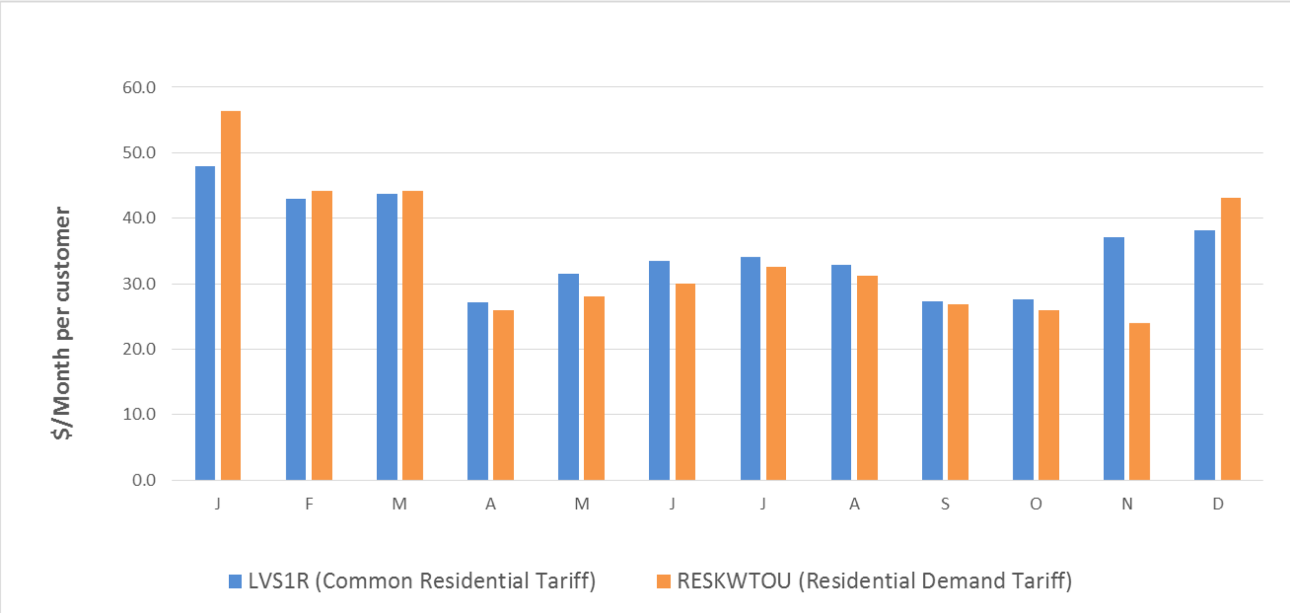
United Energy recognises that some residential and small business customers may seek an earlier transition to a more cost reflective tariff than the timing proposed in section 4.3. To accommodate these customers United Energy will offer both the transition demand tariff and the fully cost reflective demand tariff. For residential customers, RESKWTOU will continue to be offered and for small business a fully cost reflective opt in tariff will be available from July 2016.

Whilst United Energy is committed to transitioning all customers to tariffs with demand components, provision is made for residential customers seeking a single rate tariff on an opt out basis. This tariff will be adjusted annually to cost reflective levels based on the actual usage profiles of customers on the tariff, consistent with the rules, with a view to migrating all remaining customers on to demand tariffs at the commencement of the next regulatory control period in 2021.

4.6 Scaling of the demand charge over the months

In designing the rates and constructs of the tariff components, consideration has been given to the impact on customers with respect to the proposed seasonally cost reflective rates of NUoS recovery versus the current common residential tariff. Figure 4.2 below indicates that the proposed demand tariff structure is largely aligned with current NUoS monthly profiles.

Figure 4.2 Indicative monthly NUoS (Revenue neutral 2016 basis)



5. Assignment to Tariff structures

The table below outlines the customer categories based on energy consumption and maximum demand. The customer category determines the network tariff options.

Category	Maximum Demand (kVA)	Annual Energy Consumption (MWh)
Small	NA	<20
Medium	NA	20 to 400
Large	>150 and/or	>400

5.1 Network Use of System Tariff Allocation

The table below sets out the proposed network tariffs that will be available to newly connecting customers during the regulatory period 2016-2020.

Table 5.1: Approach to tariff transition

Tariff Class	Tariff Code	Open New Connection	Transition approach
Low voltage - Small	RESKWTOU	Yes	Available from 2015
	RESKWTOU (transition tariff)	From 2017	Transition to cost reflective by 2020
	S1	Yes	2017 - Transition to RESKWTOU & becomes the opt out tariff 2021 - Opt out customers migrate to RESKWTOU & close
	TOD (solar)	Yes	2017 - Transition to RESKWTOU & close
	TOD9	Yes	2017 - Transition to RESKWTOU & close
	TODFLEX	Yes	Transition to cost reflective by 2020
	S2 (OffPeak)	No	2017 - Transition to RESKWTOU & close
	S1WET	No	2017 - Transition to RESKWTOU & close
	DED	Yes	2021 - Transition to RESKWTOU & close
	UNM	Yes	N/A
	LVSKW	TBA	Opt in
	LVSCAP	TBA	Opt in
Low voltage - Medium	LVMKWTOU	From 2017	Transition to cost reflective by 2020
	M1	Yes	2017 - Transition to LVMKWTOU & close
	TOU	Yes	2017 - Transition to LVMKWTOU & close
	M25	No	2017 - Transition to LVMKWTOU & close
	M27	No	2017 - Transition to LVMKWTOU & close
	KW-TOU	No	2017 - Transition to LVMKWTOU & close
	KW-TOU-HOT	No	2017 - Transition to LVMKWTOU & close

	RCAC	No	2017 - Transition to LVMKWTOU & close
	L1	No	2017 - Transition to LVMKWTOU & close
	L2	No	2017 - Transition to LVMKWTOU & close
Low voltage - Large	L2-KVA	Yes	No change to tariff components
	L2-KVA-HOT	No	2016 - Migrate to L2-KVA & remove
High voltage - Large	HV-KVA	Yes	No change to tariff components
	HV-KVA-HOT	No	2016 - Migrate to L2-KVA & remove
Subtransmission - Large	ST22-KVA	No	-

5.2 Tariff eligibility

The following section provides information on eligibility for open tariffs proposed to apply during the next regulatory period (2016-2020) :

LVS1R:

- This tariff is currently available to new connections
- Customers must consume <20 MWh/pa.
- Includes a daily standing charge.
- Includes a summer and non-summer peak energy charge.
- Customers can make savings by reducing their energy consumption during summer months. Usage during non-summer is cheaper.
- Summer is defined as 1 November to 31 March.

LVM1R:

- This tariff is available to new connections.
- Customers must consume between 20 and 400 MWh/pa.
- Includes a daily standing charge.
- Includes a summer and non-summer peak energy charge.
- Customers can make savings by reducing their energy consumption during summer months. Usage during non-summer is cheaper.
- Summer is defined as 1 November to 31 March.
- Once on this tariff, non-residential customers cannot move onto another tariff for a minimum period of 12 months.

LVDED:

- This tariff is only available in conjunction with the LVS1R tariff for new connections.

- Customer must have a dedicated circuit connected to a controlled electric hot water service and/or storage space heating.
- Requires a separately metered dedicated circuit controlled by UE by means of time switch or other means.
- Is a dedicated off peak charge that applies for a maximum of 7 hours during the off peak period.
- The Off Peak period is 11pm to 7am local time.
- All load is controlled by the meter. Note, if there are any controlled load boosts during peak periods, these will be charged the peak tariff rate.
- This tariff is not available to New Customers with embedded generation or existing customers that install embedded generation.

TIME OF DAY (TOD):

- Customers to consume <20MWh/annum
- Requires an interval meter.
- Includes a seasonal peak energy charge. Customers can make savings by reducing their energy consumption during the peak periods (3pm-11pm Local Time workdays).
- Non-Summer Peak energy charge is lower than Summer Peak energy charge to encourage heating usage.
- Includes a seasonal shoulder energy charge. Customers can make savings by reducing their energy consumption during the shoulder periods (7am-3pm Local Time workdays).
- Non-Summer shoulder energy charge is lower than Summer Shoulder energy charge to encourage heating usage.
- Off-peak energy is all day weekends and public holidays and 11pm to 7am Local Time workdays. Usage during off peak times is cheaper than peak times.
- Includes a daily Standing Charge
- Where the customer is residential with an AMI meter installed, tariff re-assignment rules apply as per section 8.2.3 and section 8.3.
- Summer is defined as 1 November to 31 March.

TIME OF DAY 9PM OFF PEAK (TOD9):

- Customers to consume <20MWh/annum
- Requires an interval meter.
- Includes a seasonal peak energy charge. Customers can make savings by reducing their energy consumption during the peak periods (3pm-9pm Local Time workdays).
- Non-Summer Peak energy charge is lower than Summer Peak energy charge to encourage heating usage.

- Includes a seasonal shoulder energy charge. Customers can make savings by reducing their energy consumption during the shoulder periods (7am-3pm Local Time workdays).
- Non-Summer shoulder energy charge is lower than Summer Shoulder energy charge to encourage heating usage.
- Off-peak energy is all day weekends and public holidays and 9pm to 7am Local Time workdays. Usage during off peak times is cheaper than peak times.
- Includes a daily Standing Charge
- Where the customer is residential with an AMI meter installed, tariff re-assignment rules apply as per section 8.2.3 and section 8.3.
- Summer is defined as 1 November to 31 March.

TIME OF DAY FLEXIBLE (TODFLEX):

- Customers must be residential.
- Requires an AMI meter.
- Includes a seasonal peak energy charge. Customers can make savings by reducing their energy consumption during the peak periods. The peak energy period is between 3pm and 9pm Local Time workdays inclusive of public holidays on weekdays.
- Non-Summer Peak energy charge is lower than Summer Peak energy charge to encourage heating usage.
- Includes a seasonal shoulder energy charge. Customers can make savings by reducing their energy consumption during the shoulder periods. Shoulder energy is 7am-3pm and 9pm-10pm Local Time workdays including public holidays, and 7am-10pm weekends.
- Non-Summer shoulder energy charge is lower than Summer Shoulder energy charge to encourage heating usage.
- Off-peak energy is 10pm to 7am Local Time workdays including public holidays and weekends. Usage during off peak times is cheaper than peak times.
- Includes a daily Standing Charge
- Tariff re-assignment rules apply as per section 8.2.3 and section 8.3.
- Summer is defined as the commencement of daylight savings (early October) to the finish of daylight savings (early April).

TIME OF USE (TOU):

- Customers must consume >20 and <400MWh/annum.
- Requires an interval meter.
- Includes a seasonal peak energy charge. Customers can make savings by reducing their energy consumption during the peak periods (7am-11pm Local Time workdays).
- Off-peak energy is all day weekends and public holidays and 11pm to 7am Local Time workdays. Usage during off peak times is cheaper than peak times.

- Includes a Summer Demand Incentive Charge measured at maximum kW per billing period between 2pm and 7pm local time workdays in summer. This empowers customers to make savings by altering the time of use of their consumption away from 2pm to 7pm Local Time workdays in summer.
- Once on this tariff, non-residential customers cannot move onto another tariff for a minimum period of 12 months.
- Summer is defined as 1 November to 31 March.

Seasonal Demand Time of Use Residential (LVKW TOU RES):

- Customers must be Residential.
- Requires an AMI meter.
- Available from July 2015.
- No standing charge.
- Summer demand charge (1^{st} December to 31^{st} March) based on monthly maximum demand between 3pm and 9pm. No distinction between workday and non workday. Minimum chargeable demand of 1.5KW.
- Non summer demand charge (1^{st} April to 30^{th} November) based on monthly maximum demand occurring between 3pm and 9pm. No distinction between workday and non-workday. Minimum chargeable demand of 1.5KW.
- Tariff specification makes provision for differential energy rates for peak, shoulder and off peak periods (as per TODFLEX). However, initial rate will be a single rate common to all periods.
- United Energy will seek to transition customers on this tariff to RESKWTOU in 2016.

Residential Demand (RESKWTOU):

- Customers must be <20MW/h per annum
- Requires an AMI meter.
- Available in 2016
- No standing charge.
- Summer demand charge (1^{st} December to 31^{st} March) based on monthly maximum demand between 3pm and 9pm on work days.
- Non summer demand charge (1^{st} April to 30^{th} November) based on monthly maximum demand occurring between 3pm and 9pm on work days.
- Minimum monthly chargeable demand of 1.5KW.
- Flat energy rate applies for all periods.
- Fully cost reflective demand based tariff available on opt in basis from 2016.
- Transitional (partially cost reflective) demand based tariff available on an assigned basis from 2017.

Residential Full Demand (LVSKW):

- Customers must be <20MW/h per annum
- Requires an AMI meter.
- Availability TBA
- No standing charge.
- Summer demand charge (1st December to 31st March) based on monthly maximum demand between 3pm and 9pm on work days.
- Non summer demand charge (1st April to 30th November) based on monthly maximum demand occurring between 3pm and 9pm on work days.
- Minimum monthly chargeable demand of 1.5KW.
- No charge for energy usage (i.e. 100% demand)
- Fully cost reflective demand based tariff available TBA

Residential Capacity (LVSCAP):

- Customers must be <20MW/h per annum
- Requires an AMI meter.
- Availability TBA
- No standing charge.
- Summer capacity charge (1st December to 31st March) based on an anytime contracted maximum demand.
- Non summer demand charge (1st April to 30th November) based on an anytime contracted maximum demand.
- Summer capacity over run charge (1st December to 31st March) based on demand exceeding contracted maximum demand.
- Non summer demand charge (1st April to 30th November) based on demand exceeding contracted maximum demand.
- No minimum monthly chargeable demand.
- No charge for energy usage (i.e. 100% reserved capacity tariff)
- Fully cost reflective capacity based tariff available TBA

Small Business Demand (LVMKWTOU):

- Customers must be >20 & <400 MW/h per annum
- Requires an AMI meter.
- Available in 2016

- No standing charge.
- Summer demand charge (1st December to 31st March) based on monthly maximum demand between 10am and 6pm on work days.
- Non summer demand charge (1st April to 30th November) based on monthly maximum demand occurring between 10am and 6pm on work days.
- Minimum monthly chargeable demand of 1.5KW.
- Flat energy rate applies for all periods.
- Fully cost reflective demand based tariff available on opt in basis from 2016.
- Transitional (partially cost reflective) demand based tariff available on an assigned basis from 2017.

LVkVATOU:

- Customers must be in "large" category (>400MWh and/or >150KVA).
- Must have an Interval meter measuring kW and kVar.
- Includes a seasonal peak energy charge. Customers can make savings by reducing their energy consumption during the peak periods (7am-7pm Local Time workdays).
- Includes a Summer Demand Incentive Charge (measured as kVA at maximum kW per billing period). This empowers customers to make savings by altering the time of use of their consumption away from 3pm to 6pm Local Time workdays in summer.
- Off-peak energy is all day weekends and public holidays and 7pm to 7am Local Time workdays. Usage during off peak times is cheaper than peak times.
- The peak rolling demand is 7am - 7pm Local Time workdays and is measured as kVA at maximum kW. The minimum rolling demand applicable is 150 kVA.
- Once on this tariff, customers cannot move onto another tariff for a minimum period of 12 months.
- Summer is defined as 1 November to 31 March.

HVKVATOU:

- Customers must be in "large" category (>400MWh and/or >150KVA).
- Must have an Interval meter measuring kW and kVar Includes a seasonal peak energy charge. Customers can make savings by reducing their energy consumption during the peak periods (7am-7pm Local Time workdays).
- Includes a Summer Demand Incentive Charge (measured as kVA at maximum kW per billing period). This empowers customers to make savings by altering the time of use of their consumption away from 3pm to 6pm Local Time workdays in summer.
- Off-peak energy is all day weekends and public holidays and 7pm to 7am Local Time workdays. Usage during off peak times is cheaper than peak times.

- The peak rolling demand is 7am - 7pm Local Time workdays and is measured as kVA at maximum kW. The minimum rolling demand applicable is 1150 kVA.
- Once on this tariff, customers cannot move onto another tariff for a minimum period of 12 months.
- Summer is defined as 1 November to 31 March.

6. Indicative NUoS Tariff Schedules

The following tariff schedules are based on United Energy's 20 April 2015 EDPR submission of efficient costs.

Schedule of Indicative Network Use of System (NUOS) Tariffs: 1 January 2017 (GST Exclusive)

Description	Tariff Code	PFIT (F) TFIT (T)	Network Tariff Component													Eligibility (consumption/ category)		Minimum Chargeable Rolling Demand	Minimum Chargeable Demand	
			Standing Charge (c/day)	Summer Peak Energy (c/kWh)	Non Summer Peak Energy Block 1 (c/kWh)	Non Summer Peak Energy Block 2 (c/kWh)	Summer Shoulder Energy (c/kWh)	Non Summer Shoulder Energy (c/kWh)	Off Peak Energy (c/kWh)	Rolling Peak Demand c/kVA/day	Summer Demand Incentive Charge c/kW/day or c/kVA/day	Summer Demand Max kW c/KW/day	Non-summer Demand Max kW c/KW/day	Summer Demand Overrun Max kW c/KW/day	Non-summer Demand Overrun Max kW c/KW/day	kVA	MWh pa	kVA	kW	
Low voltage small 1 rate	LVS1R		7.474	11.602	7.926											NA	<20			Opt out cost reflective from 2017
Low voltage small 2 rate*	LVS2R*																			Assignment to RESKWTOU TRANS from 2017
Dedicated circuit**	LVDed**								1.774							NA	<20 (on LVS1R)			
Unmetered supplies	UnMet			13.086	9.827				1.683											
Winter Energy Tariff*	WET2Step*																			Assignment to RESKWTOU TRANS from 2017
Reverse cycle airconditioning time of use*	RCACkWTOU*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage medium 1 rate	LVM1R																			Assignment to LVMKWTOU TRANS from 2017
Low voltage medium 2 rate 5 day*	LVM2R5D*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage medium 2 rate 7 day*	LVM2R7D*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage KW time of use*	LVkWTOU*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage KW time of use - HOT*	LVkWTOUH*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage large 1 rate*	LVL1R*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage large 2 rate*	LVL2R*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage large KVA time of use	LVkVATOU			2.710	2.241				1.247	19.996	29.204					>150	>400	150		
Low voltage large KVA time of use - HOT*	LVkVATOUH*																			Assignment to LVKVATOU from 2016
High voltage KVA time of use	HVkVATOU			1.755	1.480				0.777	14.847	18.536					>150	>400	1,150		
High voltage KVA time of use - HOT*	HVkVATOUH*																			Assignment to HVKVATOU from 2016
Subtransmission KVA time of use*	SubTkVATOU*			1.091	0.865				0.344	5.007	6.300							11,100		
Time of Day	TOD																			Assignment to RESKWTOU TRANS from 2017
Time of Use	TOU																			Assignment to LVMKWTOU TRANS from 2017
Time of Day 9pm off-peak	TOD9																			Assignment to RESKWTOU TRANS from 2017
Time of Day Flexible	TODFLEX	F	7.474	22.221	14.328		7.034	6.777	4.107							Residential Customer				Transition to cost reflective by 2020
Sesonal Demand TOU RES[3, 4]	RESKWTOU[3, 4]	F		4.814	4.814		4.814	4.814	4.814			36.396	16.083			NA	<20		1.5	
Sesonal Demand TOU RES[3, 4] TRANSITIONAL	RESKWTOU[3, 4] TRANS	F		6.871	6.871		6.871	6.871	6.871			19.088	8.563			NA	<20		1.5	
Low Voltage Medium kW Time of Use	LVMKWTOU	F		4.657	4.657		4.657	4.657	4.657			48.541	32.361			NA	>20 & <400		1.5	
Low Voltage Medium kW Time of Use - TRANSITIONAL	LVMKWTOU TRANS	F		6.985	6.985		6.985	6.985	6.985			24.271	16.180			NA	>20 & <400		1.5	
Low voltage Demand Only Time of Use Residential	LVSDKWTOU	F										66.564	29.863			NA	<20		1.5	
Low voltage Capacity Time of Use Residential	LVSCKWTOU	F										63.236	28.370	73.221	32.849	NA	<20		1.5	

Advanced Metering Infrastructure

Single phase non off peak meter charge	58.750
Single phase off peak meter charge	58.750
Three phase direct connected meter	66.250
Three phase CT connected meter	70.190

PFIT Scheme

PFIT charge	17.770

* Tariff closed to premises not already taking supply under this tariff and new connections.
** Tariff only available in conjunction with the LVS1R tariff for new connections.
[3] RESKWTOU available from 1st July 2015 for premises without a dedicated circuit meter configuration.
[4] RESKWTOU available from 1st November 2015 for premises with a dedicated circuit meter configuration.
Summer peak energy rates apply for period 1st November to 31st March (except TODFLEX which follows daylight savings periods) & RESKWTOU which applies from 1st December to 31st March.
Non-summer peak energy rates apply for period 1st April to 31st October (except TODFLEX which follows non-daylight savings periods) & RESKWTOU which applies from 1st April to 30th November.
PFIT (Premium Feed-In Tariff) is defined by an "F" added to the front of an existing distribution tariff ie. FTOD. The PFIT tariffs are closed to new connections.
TFIT (Transitional Feed-In Tariff) is defined by a "T" added to the front of an existing distribution tariff ie. TTOD. The TFIT tariffs are closed to new connections.

Schedule of Indicative Network Use of System (NUOS) Tariffs: 1 January 2018 (GST Exclusive)

Description	Tariff Code	PFIT (F) TFIT (T)	Network Tariff Component: Standing Charge (c/day)	Summer Peak Energy (c/kWh)	Non Summer Peak Energy Block 1 (c/kWh)	Non Summer Peak Energy Block 2 (c/kWh)	Summer Shoulder Energy (c/kWh)	Non Summer Shoulder Energy (c/kWh)	Off Peak Energy (c/kWh)	Rolling Peak Demand c/kVA/day	Summer Demand Incentive Charge c/kW/day or c/kVA/day	Summer Demand Max kW c/KW/day	Non-summer Demand Max kW c/KW/day	Summer Demand Overrun Max kW c/KW/day	Non-summer Demand Overrun Max kW c/KW/day	Eligibility (consumption/ category): kVA	Eligibility (consumption/ category): MWh pa	Minimum Chargeable Rolling Demand: kVA	Minimum Chargeable Demand: kW	
Low voltage small 1 rate	LVS1R		7.660	11.892	8.124											NA	<20			Opt out cost reflective from 2017
Low voltage small 2 rate*	LVS2R*																			Assignment to RESKWTOU TRANS from 2017
Dedicated circuit**	LVDed**								1.818							NA	<20 (on LVS1R)			
Unmetered supplies	UnMet			13.413	10.073				1.725											
Winter Energy Tariff*	WET2Step*																			Assignment to RESKWTOU TRANS from 2017
Reverse cycle airconditioning time of use*	RCACkWTOU*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage medium 1 rate	LVM1R																			Assignment to LVMKWTOU TRANS from 2017
Low voltage medium 2 rate 5 day*	LVM2R5D*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage medium 2 rate 7 day*	LVM2R7D*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage KW time of use*	LVkWTOU*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage KW time of use - HOT*	LVkWTOUH*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage large 1 rate*	LVL1R*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage large 2 rate*	LVL2R*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage large KVA time of use	LVkVATOU			2.778	2.297				1.278	20.496	29.935					>150	>400	150		
Low voltage large KVA time of use - HOT*	LVkVATOUH*																			Assignment to LVKVATOU from 2016
High voltage KVA time of use	HVkVATOU			1.799	1.517				0.797	15.218	19.000					>150	>400	1,150		
High voltage KVA time of use - HOT*	HVkVATOUH*																			Assignment to HVKVATOU from 2016
Subtransmission KVA time of use*	SubTkVATOU*			1.118	0.886				0.353	5.133	6.458							11,100		
Time of Day	TOD																			Assignment to RESKWTOU TRANS from 2017
Time of Use	TOU																			Assignment to LVMKWTOU TRANS from 2017
Time of Day 9pm off-peak	TOD9																			Assignment to RESKWTOU TRANS from 2017
Time of Day Flexible	TODFLEX	F	7.660	22.776	14.686		7.210	6.946	4.210							Residential Customer				Transition to cost reflective by 2020
Sesonal Demand TOU RES[3, 4]	RESKWTOU[3, 4]	F		4.934	4.934		4.934	4.934	4.934			37.306	16.485			NA	<20		1.5	
Sesonal Demand TOU RES[3, 4] TRANSITIONAL	RESKWTOU[3, 4] TRANS	F		7.043	7.043		7.043	7.043	7.043			19.565	8.778			NA	<20		1.5	
Low Voltage Medium kW Time of Use	LVMKWTOU	F		4.774	4.774		4.774	4.774	4.774			49.755	33.170			NA	>20 & <400		1.5	
Low Voltage Medium kW Time of Use - TRANSITIONAL	LVMKWTOU TRANS	F		7.160	7.160		7.160	7.160	7.160			24.877	16.584			NA	>20 & <400		1.5	
Low voltage Demand Only Time of Use Residential	LVSDKWTOU	F										68.229	30.610			NA	<20		1.5	
Low voltage Capacity Time of Use Residential	LVSCKWTOU	F										64.817	29.079	75.051	33.671	NA	<20		1.5	

Advanced Metering Infrastructure

Single phase non off peak meter charge	60.219
Single phase off peak meter charge	60.219
Three phase direct connected meter	67.906
Three phase CT connected meter	71.945

PFIT Scheme

PFIT charge	18.214

* Tariff closed to premises not already taking supply under this tariff and new connections.
** Tariff only available in conjunction with the LVS1R tariff for new connections.
[3] RESKWTOU available from 1st July 2015 for premises without a dedicated circuit meter configuration.
[4] RESKWTOU available from 1st November 2015 for premises with a dedicated circuit meter configuration.
Summer peak energy rates apply for period 1st November to 31st March (except TODFLEX which follows daylight savings periods) & RESKWTOU which applies from 1st December to 31st March.
Non-summer peak energy rates apply for period 1st April to 31st October (except TODFLEX which follows non-daylight savings periods) & RESKWTOU which applies from 1st April to 30th November.
PFIT (Premium Feed-In Tariff) is defined by an "F" added to the front of an existing distribution tariff ie. FTOD. The PFIT tariffs are closed to new connections.
TFIT (Transitional Feed-In Tariff) is defined by a "T" added to the front of an existing distribution tariff ie. TTOD. The TFIT tariffs are closed to new connections.

Schedule of Indicative Network Use of System (NUOS) Tariffs: 1 January 2019 (GST Exclusive)

Description	Tariff Code	PFIT (F) TFIT (T)	Network Tariff Component														Eligibility (consumption/ category)		Minimum Chargeable Rolling Demand	Minimum Chargeable Demand	
			Standing Charge (c/day)	Summer Peak Energy (c/kWh)	Non Summer Peak Energy Block 1 (c/kWh)	Non Summer Peak Energy Block 2 (c/kWh)	Summer Shoulder Energy (c/kWh)	Non Summer Shoulder Energy (c/kWh)	Off Peak Energy (c/kWh)	Rolling Peak Demand c/kVA/day	Summer Demand Incentive Charge c/kW/day or c/kVA/day	Summer Demand Max kW c/kW/day	Non-summer Demand Max kW c/kW/day	Summer Demand Overrun Max kW c/kW/day	Non-summer Demand Overrun Max kW c/kW/day	kVA	MWh pa	kVA	kW	
Low voltage small 1 rate	LVS1R		7.852	12.189	8.327											NA	<20			Opt out cost reflective from 2017
Low voltage small 2 rate*	LVS2R*																			Assignment to RESKWTOU TRANS from 2017
Dedicated circuit**	LVDed**								1.864							NA	<20 (on LVS1R)			
Unmetered supplies	UnMet			13.749	10.324				1.769											
Winter Energy Tariff*	WET2Step*																			Assignment to RESKWTOU TRANS from 2017
Reverse cycle airconditioning time of use*	RCACkWTOU*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage medium 1 rate	LVM1R																			Assignment to LVMKWTOU TRANS from 2017
Low voltage medium 2 rate 5 day*	LVM2R5D*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage medium 2 rate 7 day*	LVM2R7D*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage KW time of use*	LVkWTOU*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage KW time of use - HOT*	LVkWTOUH*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage large 1 rate*	LVL1R*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage large 2 rate*	LVL2R*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage large KVA time of use	LVkVATOU			2.847	2.355				1.310	21.008	30.683					>150	>400	150		
Low voltage large KVA time of use - HOT*	LVkVATOUH*																			Assignment to LVKVATOU from 2016
High voltage KVA time of use	HVkVATOU			1.844	1.555				0.817	15.598	19.475					>150	>400	1,150		
High voltage KVA time of use - HOT*	HVkVATOUH*																			Assignment to HVKVATOU from 2016
Subtransmission KVA time of use*	SubTkVATOU*			1.146	0.908				0.362	5.261	6.619							11,100		
Time of Day	TOD																			Assignment to RESKWTOU TRANS from 2017
Time of Use	TOU																			Assignment to LVMKWTOU TRANS from 2017
Time of Day 9pm off-peak	TOD9																			Assignment to RESKWTOU TRANS from 2017
Time of Day Flexible	TODFLEX	F	7.852	23.346	15.053		7.390	7.120	4.315							Residential Customer				Transition to cost reflective by 2020
Sesonal Demand TOU RES[3, 4]	RESKWTOU[3, 4]	F		5.058	5.058		5.058	5.058	5.058			38.239	16.897			NA	<20		1.5	
Sesonal Demand TOU RES[3, 4] TRANSITIONAL	RESKWTOU[3, 4] TRANS	F		5.058	5.058		5.058	5.058	5.058			38.239	16.897			NA	<20		1.5	
Low Voltage Medium kW Time of Use	LVMKWTOU	F		4.893	4.893		4.893	4.893	4.893			50.998	33.999			NA	>20 & <400		1.5	
Low Voltage Medium kW Time of Use - TRANSITIONAL	LVMKWTOU TRANS	F		4.893	4.893		4.893	4.893	4.893			50.998	33.999			NA	>20 & <400		1.5	
Low voltage Demand Only Time of Use Residential	LVSDKWTOU	F										69.934	31.375			NA	<20		1.5	
Low voltage Capacity Time of Use Residential	LVSCKWTOU	F										66.438	29.806	76.928	34.512	NA	<20		1.5	

Advanced Metering Infrastructure

Single phase non off peak meter charge	61.724
Single phase off peak meter charge	61.724
Three phase direct connected meter	69.604
Three phase CT connected meter	73.743

PFIT Scheme

PFIT charge	18.670

* Tariff closed to premises not already taking supply under this tariff and new connections.
** Tariff only available in conjunction with the LVS1R tariff for new connections.
[3] RESKWTOU available from 1st July 2015 for premises without a dedicated circuit meter configuration.
[4] RESKWTOU available from 1st November 2015 for premises with a dedicated circuit meter configuration.
Summer peak energy rates apply for period 1st November to 31st March (except TODFLEX which follows daylight savings periods) & RESKWTOU which applies from 1st December to 31st March.
Non-summer peak energy rates apply for period 1st April to 31st October (except TODFLEX which follows non-daylight savings periods) & RESKWTOU which applies from 1st April to 30th November.
PFIT (Premium Feed-In Tariff) is defined by an "F" added to the front of an existing distribution tariff ie. FTOD. The PFIT tariffs are closed to new connections.
TFIT (Transitional Feed-In Tariff) is defined by a "T" added to the front of an existing distribution tariff ie. TTOD. The TFIT tariffs are closed to new connections.

Schedule of Indicative Network Use of System (NUOS) Tariffs: 1 January 2020 (GST Exclusive)

Description	Tariff Code	PFIT (F) TFIT (T)	Network Tariff Component														Eligibility (consumption/ category)		Minimum Chargeable Rolling Demand	Minimum Chargeable Demand	
			Standing Charge (c/day)	Summer Peak Energy (c/kWh)	Non Summer Peak Energy Block 1 (c/kWh)	Non Summer Peak Energy Block 2 (c/kWh)	Summer Shoulder Energy (c/kWh)	Non Summer Shoulder Energy (c/kWh)	Off Peak Energy (c/kWh)	Rolling Peak Demand c/kVA/day	Summer Demand Incentive Charge c/kW/day or c/kVA/day	Summer Demand Max kW c/KW/day	Non-summer Demand Max kW c/KW/day	Summer Demand Overrun Max kW c/KW/day	Non-summer Demand Overrun Max kW c/KW/day	kVA	MWh pa	kVA	kW	
Low voltage small 1 rate	LVS1R		8.048	12.494	8.535											NA	<20			Opt out cost reflective from 2017
Low voltage small 2 rate*	LVS2R*																			Assignment to RESKWTOU TRANS from 2017
Dedicated circuit**	LVDed**								1.910							NA	<20 (on LVS1R)			
Unmetered supplies	UnMet			14.092	10.583				1.813											
Winter Energy Tariff*	WET2Step*																			Assignment to RESKWTOU TRANS from 2017
Reverse cycle airconditioning time of use*	RCACkWTOU*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage medium 1 rate	LVM1R																			Assignment to LVMKWTOU TRANS from 2017
Low voltage medium 2 rate 5 day*	LVM2R5D*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage medium 2 rate 7 day*	LVM2R7D*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage KW time of use*	LVkWTOU*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage KW time of use - HOT*	LVkWTOUH*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage large 1 rate*	LVL1R*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage large 2 rate*	LVL2R*																			Assignment to LVMKWTOU TRANS from 2017
Low voltage large KVA time of use	LVkVATOU			2.918	2.414				1.343	21.534	31.450					>150	>400	150		
Low voltage large KVA time of use - HOT*	LVkVATOUH*																			Assignment to LVKVATOU from 2016
High voltage KVA time of use	HVkVATOU			1.890	1.594				0.837	15.988	19.962					>150	>400	1,150		
High voltage KVA time of use - HOT*	HVkVATOUH*																			Assignment to HVKVATOU from 2016
Subtransmission KVA time of use*	SubTkVATOU*			1.174	0.931				0.371	5.392	6.785							11,100		
Time of Day	TOD																			Assignment to RESKWTOU TRANS from 2017
Time of Use	TOU																			Assignment to LVMKWTOU TRANS from 2017
Time of Day 9pm off-peak	TOD9																			Assignment to RESKWTOU TRANS from 2017
Time of Day Flexible	TODFLEX	F	8.048	23.929	15.429		7.575	7.298	4.423							Residential Customer				Transition to cost reflective by 2020
Sesonal Demand TOU RES[3, 4]	RESKWTOU[3, 4]	F		5.184	5.184		5.184	5.184	5.184			39.195	17.319			NA	<20		1.5	
Sesonal Demand TOU RES[3, 4] TRANSITIONAL	RESKWTOU[3, 4] TRANS	F		5.184	5.184		5.184	5.184	5.184			39.195	17.319			NA	<20		1.5	
Low Voltage Medium kW Time of Use	LVMKWTOU	F		5.015	5.015		5.015	5.015	5.015			52.273	34.849			NA	>20 & <400		1.5	
Low Voltage Medium kW Time of Use - TRANSITIONAL	LVMKWTOU TRANS	F		5.015	5.015		5.015	5.015	5.015			52.273	34.849			NA	>20 & <400		1.5	
Low voltage Demand Only Time of Use Residential	LVSDKWTOU	F										71.683	32.159			NA	<20		1.5	
Low voltage Capacity Time of Use Residential	LVSCKWTOU	F										68.098	30.551	78.851	35.375	NA	<20		1.5	

Advanced Metering Infrastructure

Single phase non off peak meter charge	63.267
Single phase off peak meter charge	63.267
Three phase direct connected meter	71.344
Three phase CT connected meter	75.587

PFIT Scheme

PFIT charge	19.136

* Tariff closed to premises not already taking supply under this tariff and new connections.
** Tariff only available in conjunction with the LVS1R tariff for new connections.
[3] RESKWTOU available from 1st July 2015 for premises without a dedicated circuit meter configuration.
[4] RESKWTOU available from 1st November 2015 for premises with a dedicated circuit meter configuration.
Summer peak energy rates apply for period 1st November to 31st March (except TODFLEX which follows daylight savings periods) & RESKWTOU which applies from 1st December to 31st March.
Non-summer peak energy rates apply for period 1st April to 31st October (except TODFLEX which follows non-daylight savings periods) & RESKWTOU which applies from 1st April to 30th November.
PFIT (Premium Feed-In Tariff) is defined by an "F" added to the front of an existing distribution tariff ie. FTOD. The PFIT tariffs are closed to new connections.
TFIT (Transitional Feed-In Tariff) is defined by a "T" added to the front of an existing distribution tariff ie. TTOD. The TFIT tariffs are closed to new connections.

7. Stand alone and avoidable costs

Standalone Costs:
The Standalone cost for a tariff class is the cost of supplying only the tariff class concerned, with all other tariff classes not being supplied. If customers were to pay above the standalone cost then it would be economically beneficial for customers to switch to an alternate provider and economically feasible for an alternate provider to operate. This creates the possibility of inefficient bypass/duplication of the existing infrastructure.

Standalone costs reflect underutilisation of the network in that economies of scale diminish where assets are not shared by multiple tariff classes.

Avoidable Costs:
The Avoidable cost for a tariff class represents the reduction in network cost that would take place if the tariff class were not supplied (whilst all other tariffs remained supplied). If customers were to be charged below the avoidable cost, it would be economically beneficial for the business to stop supplying the customers as the associated costs would exceed the revenue obtained from the customer.

Consistent with the definitions provided above it is expected that revenue recovered from distribution tariffs should lie between the following upper and lower bounds of standalone and avoidable cost:

- tariffs for each customer should generate revenue in excess of the avoidable cost to service the customer; and
- tariffs for each customer should generate revenue less than the cost of providing the service on a stand-alone basis to the customer.

To demonstrate that distribution tariffs fall between the avoidable cost "floor" and standalone cost "ceiling", UE applies a "cost of supply" methodology to assist in setting tariff rates. Indicatively, tariff rates are set to recover the allocated distribution revenue from that customer group. It is noted however that UE's approach to setting tariff rates is to consider all the pricing principles outlined in Section 4.1 of this document.

The critical issue from a cost of supply modelling perspective is the method by which distribution revenue is allocated across the tariff groups. As network businesses are characterised by relatively high fixed costs and significant asset-sharing between customer groups, there is no unambiguously "correct" method for allocating costs. UE's method of allocation is based on each tariff's relative usage of UE's network assets.

In the model, customers are assigned into tariff groups based on voltage and demand characteristics. The consumption and demand characteristics for each tariff group are calculated as follows:

- For asset based costs, the quantity of assets and supporting infrastructure are assigned to the tariff groups according to the combined consumption and demand characteristics of all customers using the asset, e.g. HV assets are assigned to LV and HV customers, but not to sub-transmission customers. The cost of providing the assigned assets is then calculated for each customer class.
- For operational and maintenance costs, costs are directly attributed to particular asset classes, where possible, and the remaining costs are assigned to overheads
- Attributable costs use a weighted averaging to apply to the customers in each class
- Overheads are averaged over all customers
- Combining the overhead, maintenance and infrastructure costs, the overall cost of supply for each customer is calculated.
- UE has extended its "cost of supply" methodology to assess the avoidable and standalone costs. The avoidable cost model recognises that only a proportion of total costs are avoidable. In particular, the majority of asset-related costs cannot be avoided even if a particular customer group is no longer served. Inevitably, the assessment of which costs are avoidable is a matter of judgement. It should be noted, however, that as the avoidable costs are less than the total costs, UE's cost of supply methodology will always set tariffs at a level that exceeds avoidable costs.

UE's modelling of standalone costs is similarly based on the cost of supply model. The principal differences between the "basic" cost of supply estimates and standalone costs are:

- Standalone networks to serve a particular tariff class will not enjoy the benefit of diversity in peak demand between tariff classes;
- Economies of scale may be lost in supplying a subset of existing customers or tariffs;
- Greater urban congestion may result in the optimised replacement cost exceeding UE's regulated asset value; and
- It is likely that a notional "standalone" competitor to UE may seek a rate of return that exceeds the regulated cost of capital.

These factors indicate that the standalone costs will exceed the cost of supply estimates on which UE bases its tariff design. It is important to recognise that it is difficult to determine the standalone costs with precision – inevitably a judgement must be made. The results of UE's modelling is summarised in Table 7.1 below:

Table 7-1: Comparison of 2016 Tariff Rates with Existing Estimated "Cost Window"

Tariff Code	Tariff Class	Lower Bound "Avoidable Cost" (c/kWh)	2016 Avg DUOS (Exc GST) (c/kWh)	Upper Bound "Standalone Cost" (c/kWh)
Unmet	Low Voltage Small	0.37	3.45	14.53
LVS1R			7.71	
LVS2R*			5.81	
LVDed			1.74	
WET2Step*			3.36	
TOD			6.98	
TOD9			5.45	
TODFLEX			7.71	
LVSKWTOU			7.71	
LVM1R	Low Voltage Medium	0.44	9.69	19.65
LVM2R5D*			6.37	
LVM2R7D*			7.37	
LVkWTOU*			6.86	
LVkWTOUH*			7.34	
TOU			7.31	
LVMKWTOU			7.31	
LVL2R*	Low Voltage Large	0.15	6.20	6.54
LVL1R*			5.71	
LVKVATOU			6.86	
LVKVATOUH			7.34	
HVkVATOU	High Voltage Large	0.08	1.97	3.32
SubTkVATOU*	Subtransmission Large	0.08	0.55	3.32

* Tariff closed to new connections and customers not already taking supply under this tariff

8. Compliance

Checklist of requirements for Tariff Structure Statement

Version 72 of Chapter 6 [current at 14 June 2015], and clause 11.76.2 of the National Electricity Rules

For information:

Clause 6.12.3(k) states:

The *AER* must approve a *Distribution Network Service Provider's* proposed *tariff structure statement* unless the *AER* is reasonably satisfied that the proposed *tariff structure statement* does not comply with the *pricing principles for direct control services* or other applicable requirements of the *Rules*.

Clause	Provision	Location within UE documents
6.8.2(c)(7)	A proposed TSS must be accompanied by information that contains a description (with supporting materials) of how the proposal complies with the pricing principles for direct control services.	The pricing principles are discussed in section 4.2 and Appendix 8 provides detail on how we comply with the principles
6.8.2(c1a) & 11.76.2	The overview paper must also include a description of how we have engaged with *retail customers* and *retailers* in developing the proposed TSS and has sought to address any relevant concerns identified as a result of that engagement.	Our approach to stakeholder consultation, the feedback and how we incorporate this into the TSS is detailed in the Stakeholder Engagement, Initiatives and Outcomes overview document.
6.8.2(d1) & 6.18.1A(e)	The proposed TSS must be accompanied by an indicative pricing schedule	The schedule is attached in Appendix 6 and the impact to customers is discussed in section 6.3
6.18.1A(a)(1) 6.18.3(b) & (d)	The TSS must include the tariff classes into which retail customers for direct control services will be divided during the regulatory control period	Section 7
6.18.1A(a)(2) 6.18.4(a)	The TSS must include the policies and procedures the Distribution Network Service Provider will apply for assigning retail customers to tariffs or reassigning retail customers from one tariff to another (including any applicable restrictions)	Section 7.2 discusses our requirement for assigning customers and our policy is in Appendix 9
6.18.1A(a)(3)	The TSS must include the structures for each proposed tariff	The structures are displayed in in Section 7.3 and discussed further in Appendix 2, 5 and 6
6.18.1A(a)(4)	The TSS must include the charging parameters for each proposed tariff	The charging parameters for each tariff are displayed in Section 7.3 and further in detail in Appendix 2, 5 and 6
6.18.1A(a)(5)	The TSS must include a description of the approach we will take in setting each tariff in each pricing proposal during the regulatory control period	Sections 5.2 to 5.7 and Section 7.4

Clause	Pricing Principle Provision	Location within UE documents
6.18.5(a)	**Network pricing objective** The *network pricing objective* is that the tariffs that a *Distribution Network Service Provider* charges in respect of its provision of *direct control services* to a *retail customer* should reflect the *Distribution Network Service Provider's* efficient costs of providing those services to the *retail customer*.	Sections 4, 5 and 6 as well as Appendices 1 to 4 explain how we have exercised judgement in relation to the setting of each tariff, having regard to the network pricing objective and pricing principles
6.18.5(b),(c) & (d)	**Application of the pricing principles** (b) Subject to paragraph (c), a *Distribution Network Service Provider's* tariffs must comply with the pricing principles set out in paragraphs (e) to (j). (c) A *Distribution Network Service Provider's* tariffs may vary from tariffs which would result from complying with the pricing principles set out in paragraphs (e) to (g) only: (1) to the extent permitted under paragraph (h); and (2) to the extent necessary to give effect to the pricing principles set out in paragraphs (i) to (j). (d) A *Distribution Network Service Provider* must comply with paragraph (b) in a manner that will contribute to the achievement of the *network pricing objective*.	Section 4 explains how we have use objectives to give effect to these principles. Sections 5, 6 and 7 detail how we have applied these principles Appendices 1 to 4 explain how we have exercised judgement in relation to the setting of each tariff, having regard to the network pricing objective and pricing principles
6.18.5(e)	**Pricing principles** (e) For each *tariff class*, the revenue expected to be recovered must lie on or between: (1) an upper bound representing the stand alone cost of serving the *retail customers* who belong to that class; and (2) a lower bound representing the avoidable cost of not serving those retail customers.	Our standalone and avoidable costs are set out in Appendix 7
6.18.5(f)	Each tariff must be based on the *long run marginal cost* of providing the service to which it relates to the *retail customers* assigned to that tariff with the method of calculating such cost and the manner in which that method is applied to be determined having regard to: (1) the costs and benefits associated with calculating, implementing and applying that method as proposed; (2) the additional costs likely to be associated with meeting demand from *retail customers* that are assigned to that tariff at times of greatest utilisation of the relevant part of the *distribution network*; and (3) the location of *retail customers* that are assigned to that tariff and the extent to which costs vary between different locations in the *distribution network*.	Our LRMC and its application in tariff and parameter setting is detailed in Appendices 1 to 4

Clause	Pricing Principle Provision	Location within UE documents
6.18.5(g)	The revenue expected to be recovered from each tariff must: (1) reflect the *Distribution Network Service Provider's* total efficient costs of serving the *retail customers* that are assigned to that tariff; (2) when summed with the revenue expected to be received from all other tariffs, permit the *Distribution Network Service Provider* to recover the expected revenue for the relevant services in accordance with the applicable distribution determination for the *Distribution Network Service Provider*; and (3) comply with sub-paragraphs (1) and (2) in a way that minimises distortions to the price signals for efficient usage that would result from tariffs that comply with the pricing principle set out in paragraph (f).	Section 5 discusses our approach to recovering the total efficient costs
6.18.5(h)	A *Distribution Network Service Provider* must consider the impact on *retail customers* of changes in tariffs from the previous *regulatory year* and may vary tariffs from those that comply with paragraphs (e) to (g) to the extent the *Distribution Network Service Provider* considers reasonably necessary having regard to: (1) the desirability for tariffs to comply with the pricing principles referred to in paragraphs (f) and (g), albeit after a reasonable period of transition (which may extend over more than one *regulatory control period*); (2) the extent to which *retail customers* can choose the tariff to which they are assigned; and (3) the extent to which *retail customers* are able to mitigate the impact of changes in tariffs through their usage decisions.	Section 4 shows our objectives in managing the customer impacts. Section 6 and appendix 4 show our customer impacts. Section 6 shows our approach to transition Section 5 shows the choice of tariffs available to customers Our Tariff Structures Statement: Stakeholder Engagement, Initiatives and Outcomes overview paper shows how customers believe they can mitigate the impact of changes through their decisions
6.18.5(i)	The structure of each tariff must be reasonably capable of being understood by *retail customers* that are assigned to that tariff, having regard to: (1) the type and nature of those *retail customers*; and (2) the information provided to, and the consultation undertaken with, those *retail customers*.	Our approach to retail customer consultation, the feedback and how we incorporate this into the TSS is detailed in the Tariff Structures Statement: Stakeholder Engagement, Initiatives and Outcomes overview paper and in Section 6.3
6.18.5(j)	A tariff must comply with the *Rules* and all *applicable regulatory instruments*.	Appendix 8

9. Tariff class assignment and tariff review process 2016-2020

9.1 Assigning customers to tariff classes

United Energy's procedures for assigning or reassigning customers to tariff classes are set out in paragraphs 1 to 11 below.

Assignment of existing customers to tariff classes at the commencement of the 2016-20 regulatory control period

1. Each customer who was a customer of United Energy prior to 1 January 2016, and who continues to be a customer of a United Energy as at 1 January 2016, will be taken to be "assigned" to the tariff class under which United Energy was charging that customer immediately prior to 1 January 2016.

Assignment of new customers to a tariff class during the 2016-20 regulatory control period

2. If, after 1 January 2016, United Energy becomes aware that a person will become a customer, then United Energy must determine the tariff class to which the new customer will be assigned.
3. In determining the tariff class to which a customer or potential customer will be assigned, or reassigned, in accordance with paragraphs 2 or 5 of this appendix, United Energy must take into account one or more of the following factors:
   (a) the nature and extent of the customer's usage
   (b) the nature of the customer's connection to the network
   (c) whether remotely-read interval metering or other similar metering technology has been installed at the customer's premises as a result of a regulatory obligation or requirement.
4. In addition to the requirements under paragraph 3 of this appendix, United Energy, when assigning or reassigning a customer to a tariff class, must ensure the following:
   (a) that customers with similar connection and usage profiles are treated equally
   (b) that customers which have micro–generation facilities are not treated less favourably than customers with similar load profiles without such facilities.

Reassignment of existing customers to another existing or a new tariff class during the 2016-20 regulatory control period

5. If United Energy believes that an existing customer's load characteristics or connection characteristics (or both) have changed such that it is no longer appropriate for that customer to be assigned to the tariff class to which the customer is currently assigned or a customer no longer has the same or materially similar load or connection characteristics as other customers in the customer's existing tariff class, then it may reassign that customer to another tariff class. In determining the tariff class to which a customer will be reassigned, United Energy must take into account paragraphs 3 and 4 of this appendix.

Objections to proposed tariff class assignments and reassignments

6. United Energy must notify the customer concerned in writing of the tariff class to which the customer has been reassigned by it, prior to the reassignment occurring.
7. A notice under paragraph 6 must include advice that the customer may request further information from the DNSP and that the customer may object to the proposed reassignment. This notice must specifically include:
   (a) either a copy of United Energy's internal procedures for reviewing objections or the link to where such information is available on United Energy's website

(b) that if the objection is not resolved to the satisfaction of the customer under United Energy's internal review system, then to the extent that resolution of such disputes are within the jurisdiction of the Energy and Water Ombudsman (Victoria) the customer is entitled to escalate the matter to such a body

(c) that if the objection is not resolved to the satisfaction of the customer under United Energy's internal review system and the ombudsman scheme noted in paragraph 7.b., then the customer is entitled to seek a decision of the AER through the dispute resolution process available under Part 10 of the NEL.

8. If, in response to a notice issued in accordance with paragraph 7, United Energy receives a request for further information from a customer, then it must provide such information. If any of the information requested by the customer is confidential then United Energy is not required to provide that information to the customer.

9. If, in response to a notice issued in accordance with paragraph 7, a customer makes an objection to United Energy about the proposed reassignment, United Energy must reconsider the proposed reassignment, taking into consideration the factors in paragraphs 3 and 4 of this appendix, and notify the customer in writing of its decision and the reasons for that decision.

10. If a customer's objection to a tariff class reassignment is upheld by the relevant body noted in paragraphs 7 b and c, then any adjustment which needs to be made to tariffs will be done by United Energy as part of the next annual review of prices.

11. If a customer objects to United Energy about a tariff class assignment, United Energy must provide the information set out in paragraph 7 of this appendix and adopt and comply with the arrangements set out in paragraphs 8, 9 and 10 in respect of requests for further information by the customer and resolution of the objection.

9.2 System of assessment and review of the basis on which a customer is charged

United Energy's system of assessment and review involves the following three-step process:

- Step 1: United Energy critically examines its draft annual tariff changes to identify customers that are likely to experience price changes that are materially different to the tariff average. It is noted that such variations may occur if a customer's load profile contrasts sharply with that of a typical tariff customer, and where tariff changes differ across tariff components. United Energy will amend its draft tariff proposals where appropriate, having regard to the principles that guide tariff prices.
- Step 2: Following United Energy's annual tariff review, United Energy contacts customers where the current tariff is inappropriate for the customer's load profile or would be likely to result in a substantial increase in network charges. United Energy would identify alternative network options for the customer's consideration or measures to assist the customer in reducing its network charges.
- Step 3: Where a customer or customer's retailer contacts United Energy regarding the basis on which a customer is charged, United Energy will identify alternative network options or measures to assist the customer in reducing network charges. However, United Energy notes that steps 1 and 2 properly executed should minimise, if not eliminate, the number of contacts from customers and retailers regarding inappropriately high network charges.

In addition to the above steps, United Energy will monitor its system of assessment and review it in light of experience.