

2017 Pricing Policy

the lines
company



0800 367 546

15 King Street East, Te Kuiti

V1/April2017

Contents

Contents.....	2
1. About this policy	4
This policy explains our charges	4
We'll let you know if prices, plans, or charges change	4
You should let us know of any significant changes at your installation	4
Who we mean by 'you'	4
Contact us if you have any questions	4
You may like to read our other resources.....	4
2. What do you pay us for?	5
You pay us for delivering a service to you.....	5
You pay the same amount each month	5
You pay even when your installation is de-energised	5
You don't pay us when your installation is decommissioned	5
You don't pay us for electricity.....	5
3. What affects your delivery charges?	6
Which customer group you're in.....	6
What pricing plan you're on.....	6
How much electricity you need and when you use it.....	6
The type of electricity meter you have	6
4. Which customer group are you in?	7
Your region.....	7
The density of electricity demand in your area.....	8
How many installations share your transformer	8
5. What pricing plan are you on?	9
You're on one of two pricing plans.....	9
Each pricing plan is made up of a range of delivery charges	9
Distribution charges.....	10
Transmission Charge.....	12
Dedicated asset charges	13
6. How much electricity do you need and when do you use it?.....	14
Your electricity needs determine your Network Charge and your kW Load Charge.....	14
How we calculate your capacity (kVA).....	15
How we calculate your kW Load (kW)	17

7. What type of meter do you have?..... 18
You have one of three types of meters 18
We are hoping to upgrade everyone to Advanced meters..... 18
The type of meter you have affects our calculation of capacity 19
The type of meter you have affects our calculation of kW Load..... 21
8. What do the words in this policy mean? 31
9. How can you contact us?..... 33

1. About this policy

This policy explains our charges

This policy sets out how we determine what we charge you while you're connected to our electricity network.

We'll let you know if prices, plans, or charges change

If we change our prices, our pricing plans or our charges, we'll let you know at least 20 working days before the changes take place.

You should let us know of any significant changes at your installation

The times when you use electricity and the amount of electricity you use at those times affects how much we charge you for using our network. Call us on 0800 367 546 to let us know of any significant changes at your installation that affect your electricity use, for example, if you've replaced a heat pump with a wood burner.

Who we mean by 'you'

By 'you', we mean the person or people connected to our electricity network via a specific installation (such as a house or business).

At times we also talk about 'your capacity' and 'your kW Load'. This refers to the capacity or kW Load relevant to your installation. Please note that our calculations for these measures are sometimes based on the past electricity use of the previous owners or tenants who used your installation. See section 6 to find out more.

Contact us if you have any questions

If you want to know about anything that's not covered here, call us on 0800 367 546.

You may like to read our other resources

[2017 Schedule of Prices](#) (sets out the prices we apply to the various things we charge you for)

[2017 Pricing Methodology](#) (sets out how we determine our prices)

[The Lines Company Standard Terms of Service](#) (sets out the terms of our agreement with you)

2. What do you pay us for?

You pay us for delivering a service to you

The service you pay us for is providing, maintaining, and developing the network that delivers electricity to your installation (for example, your house or business). Our network includes things like power lines, power poles, and transformers. In addition we charge you for recoverable and pass-through costs, for example payments to Transpower and Electricity Authority levies.

You pay the same amount each month

We combine the separate charges into one annual delivery charge. We then break the charge into 12 equal monthly instalments for you to pay.

You pay even when your installation is de-energised

Your responsibilities under our terms of service, including your payment obligations, continue even if your installation is de-energised. (De-energisation stops the supply of electricity to your installation.) This is because our costs continue even when electricity isn't flowing. We need to maintain the network to make sure it's there for you when you need it.

You don't pay us when your installation is decommissioned

If you decide you no longer want to be connected to our network, ask us about decommissioning your installation (also called disconnection). If your installation is disconnected from our network, your payment obligations will cease in respect of the period after we have decommissioned your installation.

You don't pay us for electricity

We charge you for using the network that lets you take a supply of electricity. We don't supply the electricity itself, so our charges are different to the charges you pay to your electricity retailer.

3. What affects your delivery charges?

Delivery charges depend on the following things.

Which customer group you're in

The installation you live at, use, or own is grouped with other installations into pricing groups. This is not something you can choose. See section 4.

What pricing plan you're on

You are on either the Low Fixed Charge Pricing Plan or the Standard User Pricing Plan. See section 5.

How much electricity you need and when you use it

Two things affect the way we calculate your charges: the maximum amount of electricity you might need at any one time, and the amount you use during periods of load control. See section 6.

The type of electricity meter you have

The type of electricity meter you have also affects the way we calculate your charges. We urge you to get to know and understand your meter. See section 7.

4. Which customer group are you in?

A customer group is a group of installations we apply the same prices to. We apply different prices to each customer group to fairly cover the different costs of providing service to those different groups.

Your group depends on your region, the density of electricity demand in your area, and how many installations share the transformer you're connected to. Check your latest bill to see which group you're in.

Your region

There are six regions in our network, each with its own main electricity supply point. Hangatiki, Ohakune, Ongarue, National Park and Tokaanu each have a grid-exit supply point, and Whakamaru has major electricity generators (see Figure 1). Your installation is typically supplied by the electricity supply point in your region. If your installation could draw electricity from more than one supply point, we group you with the region you have the most in common with. We apply different prices to each region to reflect the costs of maintaining each region's assets (such as power lines, power poles, and transformers).

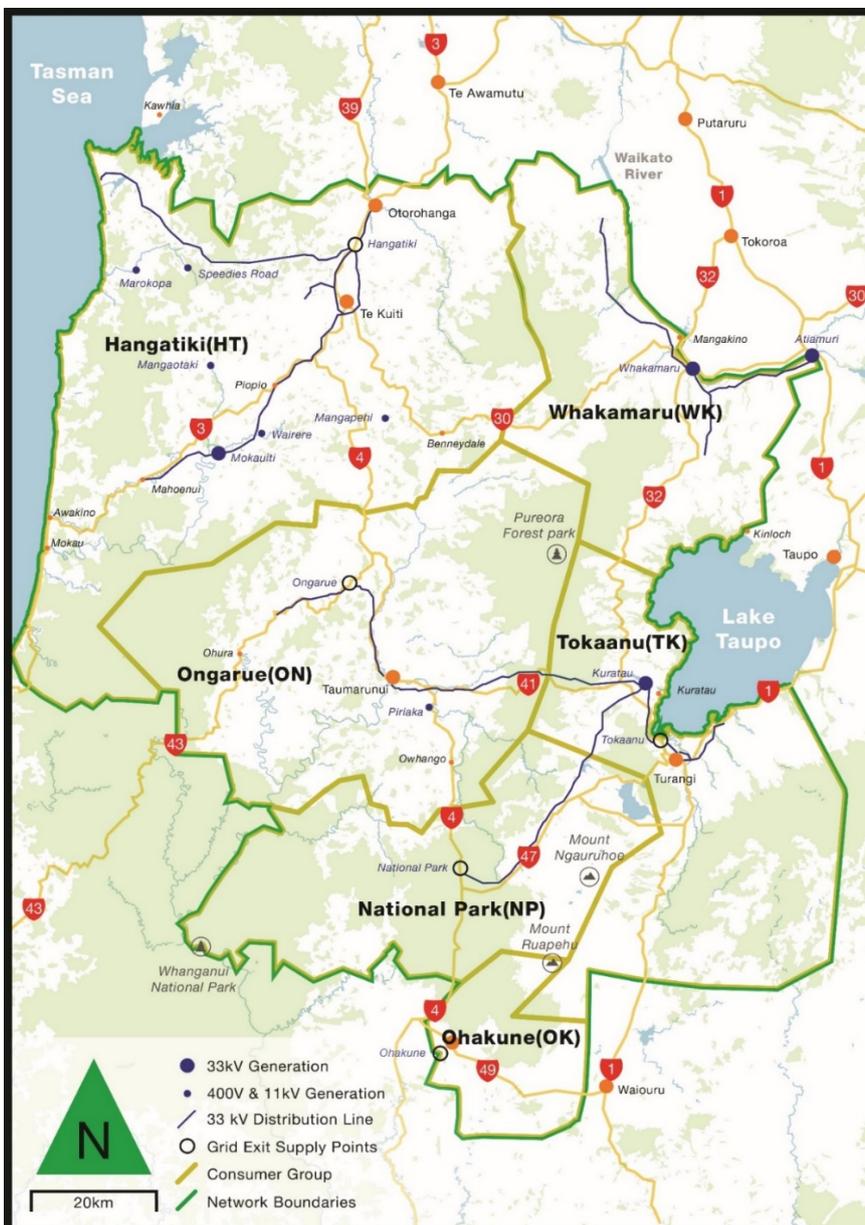


Figure 1: Regional map of our network

The density of electricity demand in your area

Density refers to the electricity demand on sections of power line. For example, power lines in urban areas usually have greater density of electricity demand than rural areas. Demand density is expressed as kilovolt-amperes per kilometre (kVA/km). It tends to be more economical to distribute electricity in high-density areas because power lines between installations are usually shorter and there are more consumers to share the costs of running the network. This is why we apply different prices to different densities.

How many installations share your transformer

Transformers transform high-voltage power to the low-voltage power that your installation can use. Some transformers have more installations connected to them than others. You're in a 'low-voltage' customer group if more than three installations share the transformer that you're connected to. You're in a 'high-voltage' customer group if no more than three installations in total (including yours) are connected to the same transformer.

Customer group		Approximate number of installations in group
Hangatiki	High Density/Low Voltage	4,790
	High Density/High Voltage	1,407
	Low Density/Low Voltage	1,086
	Low Density/High Voltage	1,661
Whakamaru	High Density/Low Voltage	803
	High Density/High Voltage	85
	Low Density/Low Voltage	400
	Low Density/High Voltage	1,175
Ohakune	High Density/Low Voltage	1,759
	High Density/High Voltage	215
	Low Density/Low Voltage	0
	Low Density/High Voltage	0
Ongarue	High Density/Low Voltage	2,786
	High Density/High Voltage	480
	Low Density/Low Voltage	596
	Low Density/High Voltage	766
National Park	High Density/Low Voltage	388
	High Density/High Voltage	72
	Low Density/Low Voltage	190
	Low Density/High Voltage	153
Tokaanu	High Density/Low Voltage	4,496
	High Density/High Voltage	131
	Low Density/Low Voltage	43
	Low Density/High Voltage	103

Figure 2: 2017 Customer groups

5. What pricing plan are you on?

Unless you've agreed a non-standard contract with us, you're likely to be on one of the following pricing plans.

You're on one of two pricing plans

- The **Low Fixed Charge Pricing Plan** is only available if the installation is your primary place of residence (your main home). If you're in your primary place of residence we'll place you on this plan if your annual kW Load is less than 2.65kW.
- The **Standard User Pricing Plan** is available to everyone who's connected to our network under a standard agreement.

You're not eligible for the Low Fixed Charge Pricing Plan at a holiday home or business. You're also not eligible for this plan at a residential property that has no one living in it.

If we think you're eligible, we may already have put you on the Low Fixed Charge Pricing Plan. Check your latest bill to find out. If you're not on this plan and you think you should be, or you are on this plan and you don't think you should be, please contact us.

Each pricing plan is made up of a range of delivery charges

Each plan has:

- distribution charges (fixed and variable)
- a transmission charge (variable)
- dedicated asset charges (depending on the assets you need).

Some charges are the same for both plans, and some charges differ.

Distribution charges

Each pricing plan has two distribution charges.

Distribution charges for the Low Fixed Charge Pricing Plan

The two distribution charges for this plan are:

- Low Fixed Charge
- kW Load Charge

Low Fixed Charge

This charge is fixed, which means it doesn't change depending on your electricity use. This charge is set by regulation at no more than 15 cents per day (before GST and after any Prompt Payment Discount).

kW Load Charge

This charge is reset annually to the previous year's electricity use at the installation. This charge is based on your kW Load (the amount of electricity you use during periods of load control). kW Load is measured in kilowatts (kW).

To calculate your charge, we multiply your kW Load by the current price per kW (as set out in our schedule of prices).

$$\text{kW} \times \text{current price} = \text{kW Load Charge}$$

See section 6 to read about how we calculate your kW Load.

Low Fixed Charge Pricing Plan			
Consumer Group: Hangatiki/Low Density/High Voltage			
Item	Quantity	Price	Charge
Low Fixed Charge	1	\$5.07	\$5.07
kW Load	2.38 kW	\$25.01	\$59.52
Transmission	2.38 kW	\$6.40	\$15.23
Transformer	1 T5	\$27.14	\$27.14
Relay	1	\$1.79	\$1.79
Meter	1	\$5.65	\$5.65
Subtotal			\$114.40
GST			\$17.16
Total delivery and metering charges including GST			\$131.56

Figure 3: Example of monthly charges for the Low Fixed Charge Pricing Plan

Distribution charges for the Standard User Pricing Plan

The two distribution charges for this plan are:

- Network Charge
- kW Load Charge

Network Charge

This charge is based on your capacity (the maximum amount of electricity you might need at your installation at any one time). Capacity is measured in kilovolt-amperes (kVA).

To calculate your charge, we multiply your capacity by the current price per kVA (as set out in our schedule of prices).

$$\text{kVA} \times \text{current price} = \text{Network Charge}$$

This charge will increase if your maximum electricity needs increase. It's unlikely that your maximum needs will decrease, but please let us know if you make a significant change at your installation as we might need to review this charge. For example, if you shift from an electric heat pump to a wood burner. We cannot see if this happens, so it's important that you let us know.

See section 6 to read about how we calculate your capacity.

kW Load Charge

This charge is reset annually to the previous year's electricity use at the installation. This charge is based on your kW Load (the amount of electricity you use during periods of load control). kW Load is measured in kilowatts (kW).

To calculate your charge, we multiply your kW Load by the current price per kW (as set out in our schedule of prices).

$$\text{kW} \times \text{current price} = \text{kW Load Charge}$$

See section 6 to read about how we calculate your kW Load.

Standard User Pricing Plan			
Consumer Group: Hangatiki/Low Density/High Voltage			
Item	Quantity	Price	Charge
Network	5 kVA	\$4.00	\$20.00
kW Load	3.00 kW	\$19.38	\$58.14
Transmission	3.00 kW	\$6.40	\$19.20
Transformer	1 T5	\$27.14	\$27.14
Relay	1	\$1.79	\$1.79
Meter	1	\$5.65	\$5.65
Subtotal			\$131.92
GST			\$19.79
Total delivery and metering charges including GST			\$151.71

Figure 4: Examples of monthly charges on Standard User Pricing Plan

Difference between the two pricing plans

The Low Fixed Charge Pricing Plan has a low fixed charge instead of the Network Charge but a higher price per kilowatt than the Standard User Pricing Plan. This still works out to lower charges overall if your kW Load is less than 2.65kW. Above 2.65kW of kW Load, you are better off on the Standard User Pricing Plan.

Transmission Charge

The transmission charge is calculated using your kW Load. The current price for this charge reflects the recoverable and pass through costs incurred by TLC. These costs include, for example, payments to Transpower (recoverable) and Electricity Authority levies (pass-through).

See section 6 to read about how we calculate your kW Load.

To calculate your charge, we multiply your kW Load by the current price per kW (as set out in our schedule of prices).

$$\text{kW} \times \text{current price} = \text{Transmission Charge}$$

2017 Transmission prices	
Low Fixed Charge and Standard User Pricing Plans	
Region	Transmission Charge
	\$/kW/Month
Hangatiki	\$6.40
Whakamaru	\$1.05
Ohakune	\$7.46
Ongarue	\$8.94
National Park	\$11.32
Tokaanu	\$6.06

Figure 5: 2017 Transmission charge prices (from 2017 Pricing Schedule)

Dedicated asset charges

Dedicated asset charges are for the assets (transformers and metering equipment) that specifically benefit your installation.

Transformer Charge

Transformers transform high-voltage power to the low-voltage power that your installation can use. We charge you a Transformer Charge when:

- your installation is connected to one of our transformers, and
- no more than three installations in total (including yours) are connected to the transformer.

The amount we charge you usually depends on your capacity (the maximum amount of electricity you might need at your installation at any one time). If your capacity changes, your Transformer Charge may also change. Capacity is measured in kilovolt-amperes (kVA). See section 6 to read about how we calculate your capacity.

We apply different prices to different capacity ranges. Each capacity range has a billing code.

Your capacity	Transformer billing code
0–5kVA	T5
6–10kVA	T10
11–15kVA	T15
16–30kVA	T30

Figure 6: Examples of transformer billing codes for specific capacity ranges

To calculate your charge, we apply the current price for that billing code (as set out in our schedule of prices).

If your installation is the only one using the transformer, the minimum charge is T15, no matter what your capacity is.

We may add or remove a Transformer Charge from your bill if other installations are added to or removed from the transformer. When this happens, we'll let you know 20 working days before the changes take place.

Meter Charge

Your Meter Charge depends on the type of meter you have, for example, single phase or three phase. To calculate your charge, we apply the current price for your meter type (as set out in our schedule of prices).

Relay Charge

A relay is a piece of equipment that receives the signal sent by our load control plant (see section 6 to find out about load control). Relays can be built into your meter, or they can be separate. To calculate your charge, we apply the current price for a relay (as set out in our schedule of prices).

6. How much electricity do you need and when do you use it?

Your electricity needs determine your Network Charge and your kW Load Charge

Two things affect the way we calculate your Network Charge and your kW Load Charge: the maximum amount of electricity you might need at any one time, and the amount you use during periods of load control. (Load control is when we manage electrical load on our network. See more about this later in this section.)

The maximum amount of electricity you might need (your capacity)

Capacity is a measure of the maximum amount of electricity you might need at your installation at any one time. We usually establish capacity when we connect an installation to our network, but capacity may increase or decrease over the lifetime of the connection. Capacity is measured in kilovolt-amperes (kVA).

We use your capacity to calculate your Network Charge. To do this, we multiply your capacity by the current price per kVA (as set out in our schedule of prices).

$$\mathbf{kVA \times \text{current price} = \text{Network Charge}}$$

The amount of electricity you use during periods of load control (your kW Load)

kW Load is a measure of the electrical load at your installation during periods of load control. kW Load is measured in kilowatts (kW).

We use your kW Load to calculate your kW Load Charge. To do this, we multiply your kW Load by the current price per kW (as set out in our schedule of prices).

$$\mathbf{kW \times \text{current price} = \text{kW Load Charge}}$$

How we calculate your capacity (kVA)

Your capacity (the maximum amount of electricity you might need at any one time) is usually established when your installation is first connected to our network. However, we may occasionally review your capacity (see below).

Your billed capacity is the higher of:

- the maximum kVA that we've been asked to supply (known as 'contracted capacity')
- the maximum kVA we've recorded at your installation.

For residential installations (such as houses), the minimum capacity we charge for is 5kVA. This includes holiday homes.

For all other installations, the minimum capacity we charge for is 2kVA.

How we calculate your capacity during a review depends on the meter you have. See section 7 for more about this.

When you request a new connection you're asked to identify your capacity

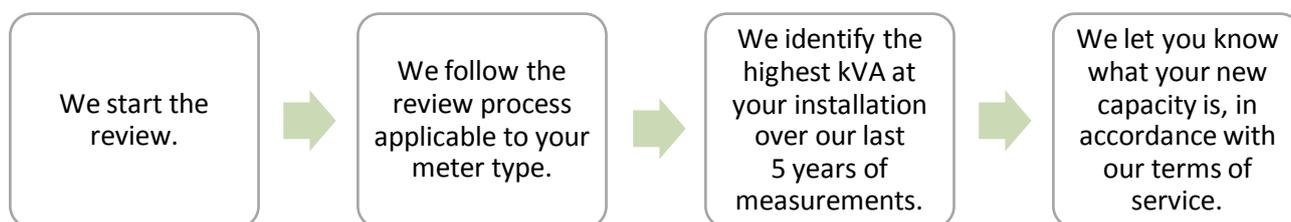
If you request a new connection (for example, if you're building a house and need to get connected to our network), you'll need to have an understanding of the likely capacity required. You tell us what capacity you think you need when you fill in an application for a new connection. This capacity is confirmed in the Connection Agreement.

We may review your capacity at your existing installation

We may occasionally review your capacity. We'll let you know 20 working days before any changes resulting from the review take effect. For example, a change may be needed if:

- You're on the Standard User Pricing Plan but we're not currently billing you for a Network Charge (which is based on your capacity).
- We become aware that your capacity has increased or your capacity was underestimated when your installation was first connected.

We'll follow the review process below.

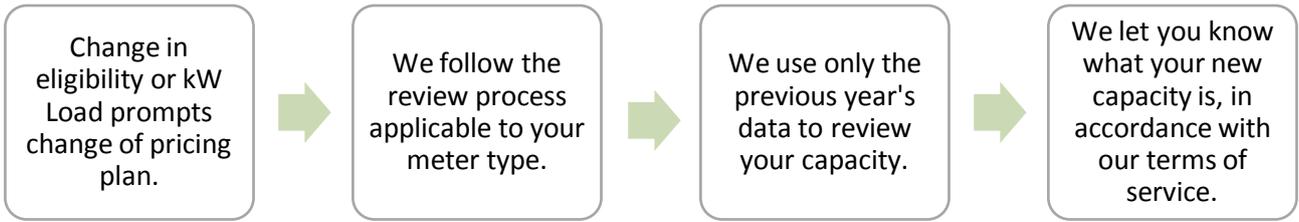


Note: If the review is needed at the same time as we reset your kW Load, we may use only the previous year's data to review your capacity.

Note: If your capacity changes, your Transformer Charge (if you have one) may also change.

If you shift from the Low Fixed Charge Pricing Plan to the Standard User Pricing Plan

If your eligibility or kW Load changes, meaning you shift from the Low Fixed Charge Pricing Plan to the Standard User Pricing Plan, we'll need to start billing you for a Network Charge. Your Transformer Charge (if you have one) may also change. If this happens, we'll review your capacity using the process below.



How we calculate your kW Load (kW)

kW Load is based on the average of six 2-hour periods recorded at an installation during periods of load control. How we calculate your kW Load depends on the meter you have. See section 7 for more about this.

We usually reset your kW Load in April of each year. We'll let you know 20 working days before the change takes effect.

How we allocate kW Load for new installations

To accurately calculate your kW Load, we need to measure your electricity use during periods of load control. When you request a new connection, we don't yet have these measurements, so we allocate a kW Load that we estimate is appropriate for your requested capacity. This usually remains in place until the following April. Please let us know if you believe that your electricity use during periods of load control will be significantly different to what we've allocated.

When we first connect your installation to our network (for example, if you're having a new house built), it may be appropriate to request a builder's temporary supply. This may also be appropriate when renovating or rebuilding.

Unless we have contracted otherwise we will allocate the following kW Loads to new installations:

- **Builder's temporary supply** — 0.4kW minimum
- **Permanent residence** — 2.65kW
- **Temporary accommodation** — 2.50kW for installations in Ohakune region or 1.90kW for the other five regions
- **Commercial** — at half of required capacity (or as contracted with you).

If you want your kW Load reassessed

Sometimes you may want the kW Load at your installation to be reassessed. For example, if there's been change of ownership or occupancy, or exceptional circumstances. Please ask us about our Customer Relief Policies.

How, why and when we carry out load control

Load control is when we manage electrical load on our network. We send a signal through the power lines to the relays at your meter. The relay, on receiving the signal will switch off any items (usually hot water cylinders) that are connected to it.

We may control the load on our network at any time and for a number of reasons. For example:

- to manage the stability and resilience of our network system
- to reduce transmission charges — by managing load during possible Lower North Island (LNI) peaks
- to optimise our network investment
- to help the national grid operator with system stability.

The periods when we load control do not necessarily equate to periods of peak demand on the network or in your region.

Actively reducing your electrical load during periods of load control can help to reduce your future kW Load charges. Call us for advice on load management and the various ways you can determine when we're load controlling.

7. What type of meter do you have?

You have one of three types of meters

It's important to know which type of meter you have, because your meter type determines how we calculate what to charge you.

Standard meters	Electronic meters	
	Older time-of-use (TOU) meters	Advanced meters
 <p>Standard meters are also known as Legacy Meters or Dial Meters. These meters have single or multiple dials that turn over showing the rate of electrical consumption at the installation. This is similar to the odometer in your car.</p>	 <p>Older time-of-use meters are electronic meters that only record electrical consumption in 30-minute intervals.</p>	 <p>Our Advanced meters record electrical consumption in 30-minute intervals and 10-minute intervals. The 10-minute intervals are only recorded during periods of load control.</p>

We are hoping to upgrade everyone to Advanced meters

We are currently installing Advanced meters on our network. We expect that changing all existing standard meters and older time-of-use meters to Advanced meters will take another 2 to 3 years.

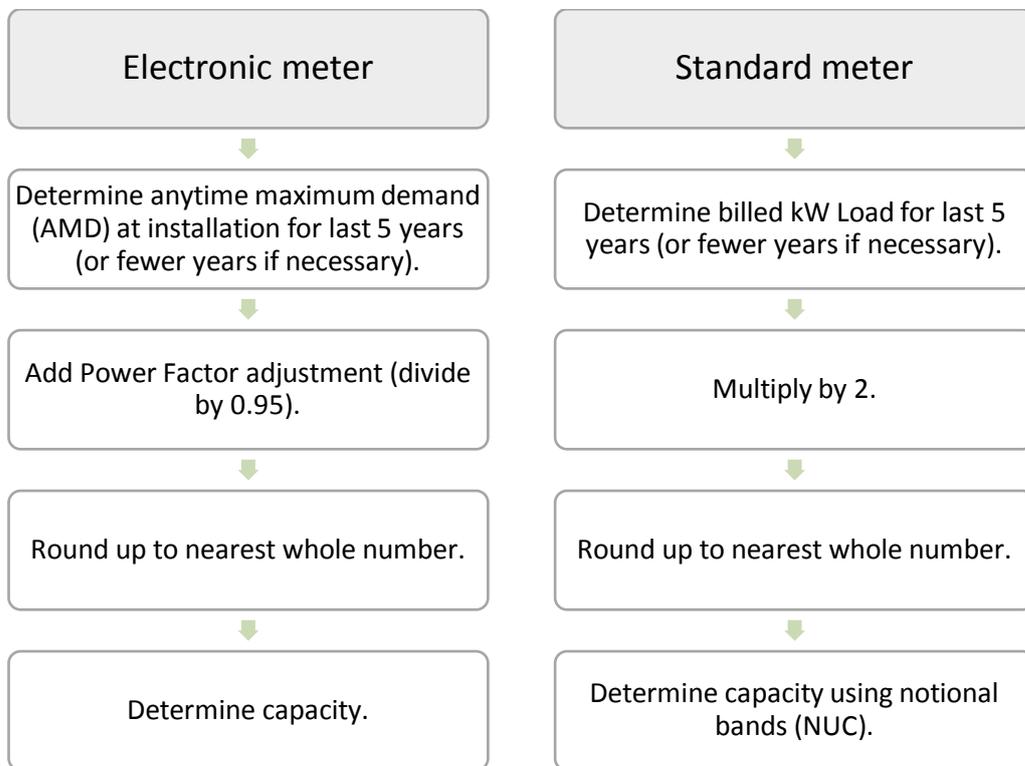
The type of meter you have affects our calculation of capacity

Electronic meters allow us to precisely measure your capacity, whereas with standard meters we have to calculate your capacity based on your kW Load.

Electronic meters record electrical consumption (kWh) in half-hour periods. This allows us to calculate electrical load (kW) which is an instantaneous measure of electricity. The highest half-hour period of electrical load allows us to calculate ‘anytime maximum demand’ (AMD), which indicates your capacity requirement.

Standard meters don’t record electrical consumption in time intervals, so we cannot calculate AMD. Instead, we use an estimation process based on kW Load to calculate your capacity.

The following illustration shows the two different processes for different meters. We use 5 years of measurements for our calculations, unless your installation has been connected to our network for less than 5 years.



Notional bands are a type of rounding we apply when we calculate your capacity with a standard meter. The table below shows the notional bands for each kW range.

2 x billed kW Load	NUC band	2x billed kW Load	NUC band
1–3kW	2 kVA	41–50 kW	50 kVA
4–6kW	5 kVA	51–56 kW	55 kVA
7–9 kW	7 kVA	57–60 kW	60 kVA
10–11 kW	10 kVA	61–70 kW	70 kVA
12–15 kW	13 kVA	71–74 kW	74 kVA
16–20 kW	18 kVA	75–80 kW	80 kVA
21–30 kW	25 kVA	81–90 kW	90 kVA
31–37 kW	37 kVA	91–100 kW	100 kVA
38–40 kW	40 kVA	101–110 kW	110 kVA

Figure 7: Notional bands of chargeable capacity (NUC)

Examples of calculations for different meter types

Electronic meters

Anytime maximum demand + Power Factor = 6.12kVA → rounded up to 7kVA

Standard meters

2 x kW Load = 6.12kW → rounded up to 7kW → included in the 7–9 notional band → 7kVA

The type of meter you have affects our calculation of kW Load

The method we use for calculating your kW Load depends on the meter you had at 31 July 2016.

We either calculate your kW Load based on exact measurements taken from your meter during periods of load control (known as TOU kW Load), or we calculate it using a statistical profile (known as Profiled kW Load).

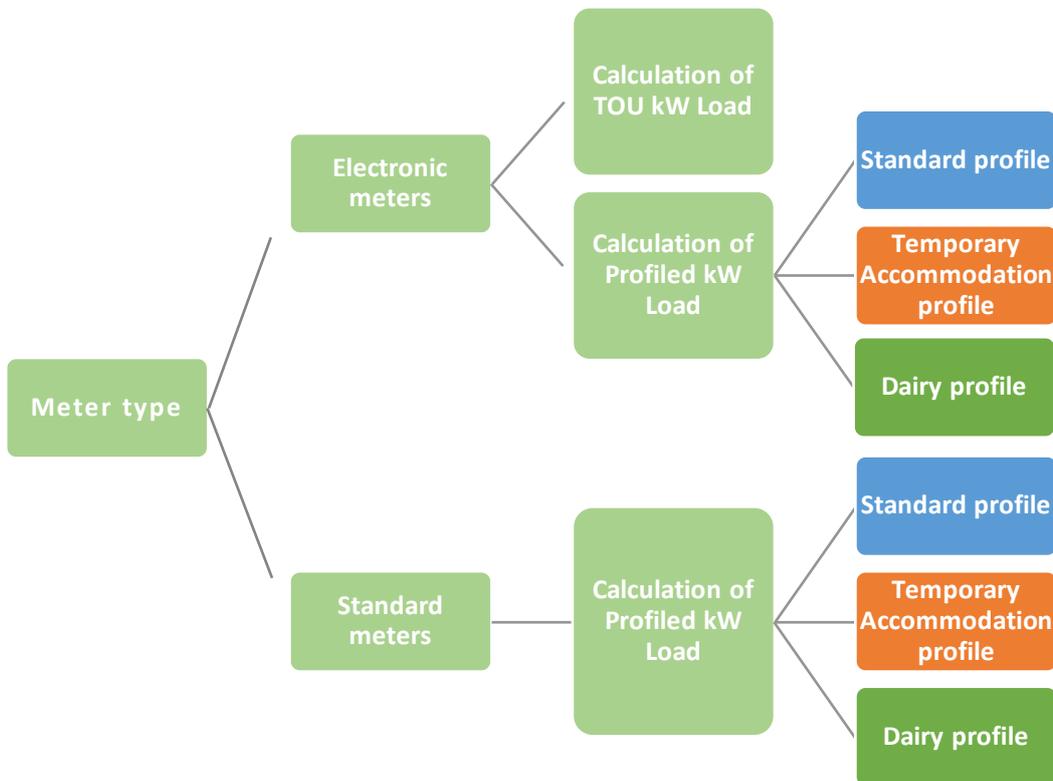


Figure 8: Processes for calculating kW Load depending on meter type at the installation

If you have an electronic meter

We calculate both the TOU kW Load and the Profiled kW Load, and then base your 2017 kW Load on the lower of the two results. This is commonly referred to as the opt-back process. While we transition our customers from standard meters to electronic meters, we offer most of those with an electronic meter the opportunity to opt-back to a Profiled kW Load (where this is the lower charge).

The exception is if you have a CT meter and aren't included in either the Temporary Accommodation Profile or Dairy Profile. In this case you're not eligible for the Profiled kW Load method. CT meters, which transform electrical current to a readable level, are usually found at sites with a large capacity requirements, such as motels, restaurants, or dairy sheds.

If the data necessary to calculate the TOU kW Load is incomplete, we may only be able to offer you a Profiled kW Load. (See 'What happens if there is a problem with the data?' on page 30.)

The periods used to calculate your TOU kW Load are not necessarily your highest peaks

TOU kW Load is the average of six 2-hour periods recorded at your installation during periods of load control. These are not necessarily the highest peaks recorded at your installation during periods of load control. There must be a minimum of 5 hours between the selected periods. This minimises the effect a single occasion will have on the following year's kW Load. The following image is an example of the range of peaks we may use in calculating your TOU kW Load.

Peaks recorded at the installation during periods of load control			
kW	2 hour period start	2 hour period end	Ranking of Peaks
1.65	10/07/2016 07:50	10/07/2016 09:50	53 rd
1.43	12/07/2016 18:00	12/07/2016 20:00	77 th
1.78	13/07/2016 07:40	13/07/2016 09:40	45 th
2.03	14/07/2016 08:00	14/07/2016 10:00	1 st
1.52	19/07/2016 17:40	19/07/2016 19:40	70 th
1.86	23/07/2016 21:20	23/07/2016 23:20	24 th

Figure 9: Example of the range of peaks we may use to calculate TOU kW Load

Process for calculating TOU kW Load using 30-minute interval data

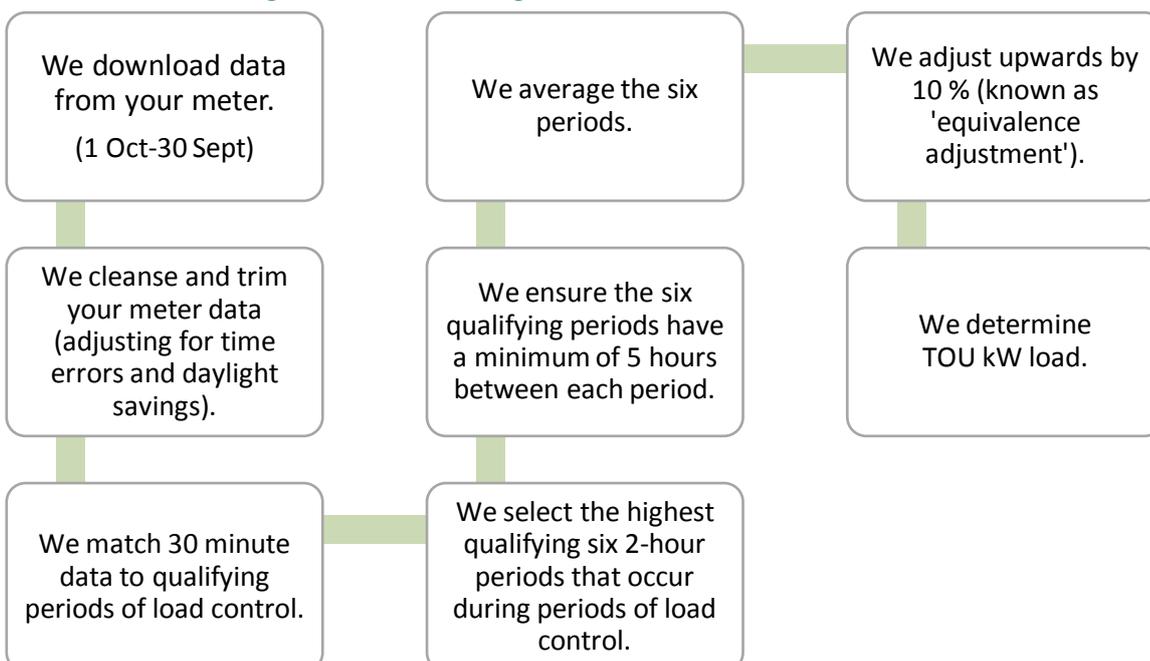


Figure 10: Process where meter data is 30-minute intervals

Process for calculating TOU kW Load using 10-minute intervals recorded during load control

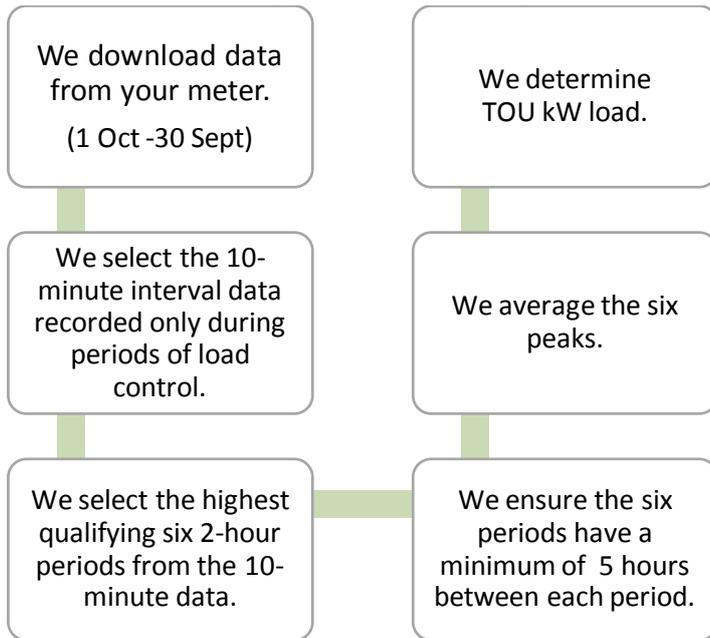


Figure 11: Process where meter data is recorded in 10-minute intervals only during load control

Process for calculating Profiled kW Load using an electronic meter

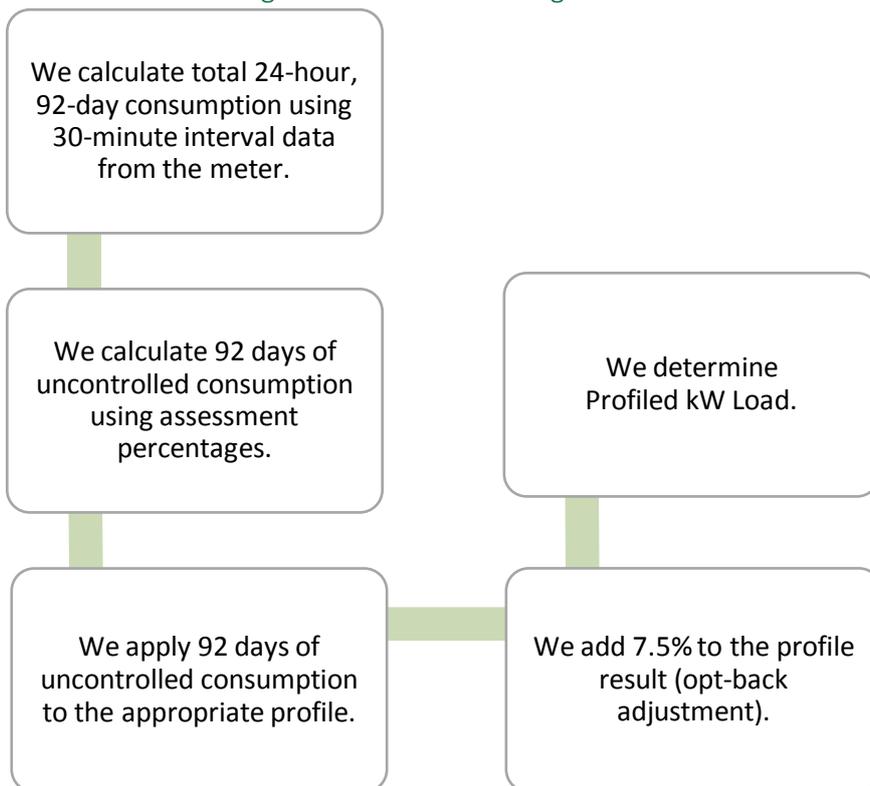


Figure 12: Process for calculating Profiled kW Load using 30-minute interval data

If you have a standard meter

We use a statistical profile to calculate your Profiled kW Load. This is necessary because standard meters do not record electrical consumption in time intervals as do electronic meters.

The profile is based on consumption data from a sample of similar installations. See pages 25 to 29 for a fuller description of the profiles we use.

We will use one of three profiles:

1. Standard Profile
2. Dairy Profile
3. Temporary Accommodation Profile

The profile we apply at your installation relates to the end use we've recorded for the installation. The Dairy Profile applies if the end use we've recorded for your installation is 'dairy cattle milking shed'. The Temporary Accommodation Profile applies if the end use we've recorded for your installation is 'holiday home' or 'accommodation'. Please call us on 0800 367 546 if you're not sure which profile applies to you.

Process for calculating Profiled kW Load using start and end meter reads

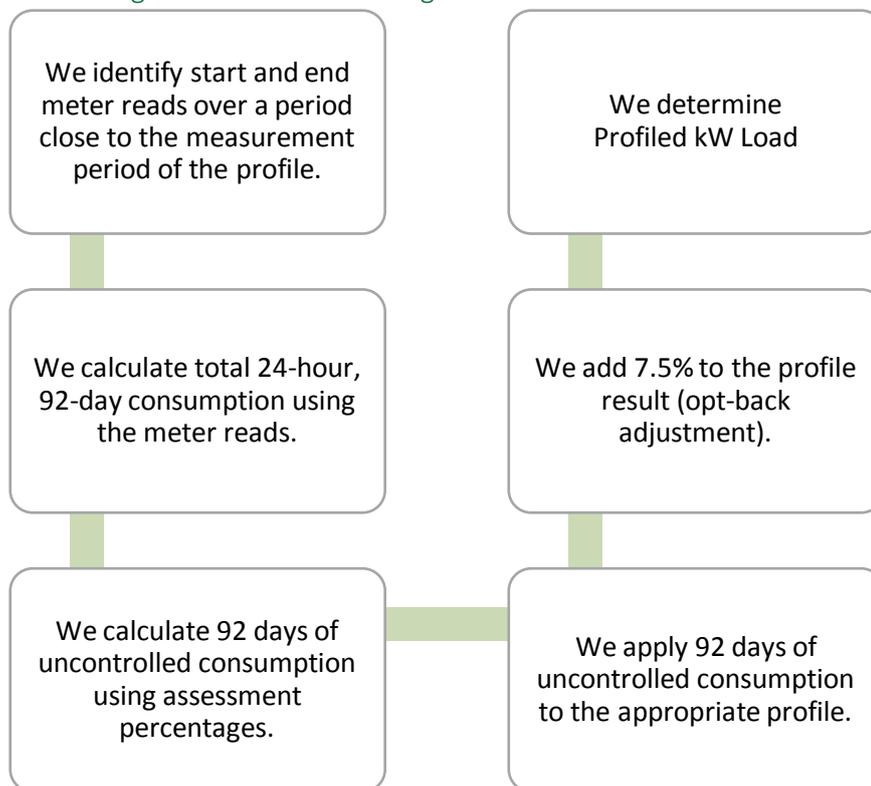


Figure 13: Process for calculating Profiled kW Load using start and end meter reads

The 'opt-back adjustment' referred to in the process above is part of the opt-back process. While we transition our customers from standard meters to electronic meters, we have included an adjustment to each of the three profiles. This adjustment contributes to the kW Load quantity lost due to the opt-back process.

Standard Profile

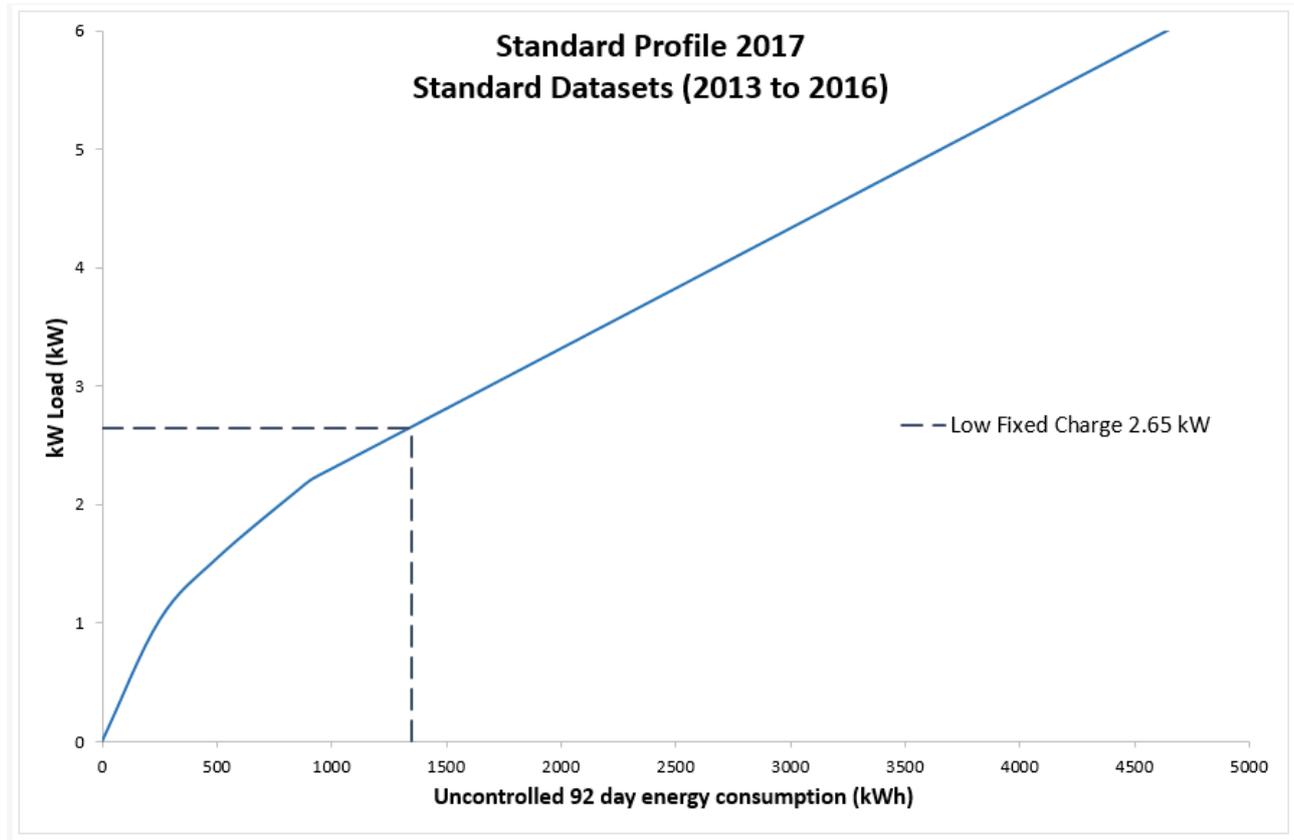


Figure 14: 2017 Standard Profile

Standard Profile 2017

When: $0 \text{ kWh} \leq \text{uncontrolled 92 day energy consumption} < 918 \text{ kWh}$:

$$\text{kW Load 2017} = \left(0.07083 \times \text{uncontrolled 92 day energy consumption}^{0.5956} \times \frac{1}{2} \right) \times 107.5\%$$

When: $\text{Uncontrolled 92 day energy consumption} \geq 918 \text{ kWh}$:

$$\text{kW Load 2017} = \left((0.001889 \times \text{uncontrolled 92 day energy consumption} + 2.386) \times \frac{1}{2} \right) \times 107.5\%$$

Points to note about this profile

We developed the 2017 Standard Profile from a representative sample of residential installations, using an aggregate of the data from 2013 to 2016 (inclusive).

The period of uncontrolled energy consumption we measure is: 20/06/2016 to 19/09/2016.

We add a 7.5% opt-back adjustment to this profile.

We adjust the total 92-day consumption by using the percentages shown below. This gives us the uncontrolled 92-day energy consumption needed for the profile. The percentages indicate the probable effect of load control at your installation:

% uncontrolled	Description	Register content of standard meters	Applied to electronic meters
100%	Uncontrolled	UN	Yes
76%	Mixed North	MI	Yes
65%	Mixed South	MI	Yes
55%	Limited Off-Peak	LOP	No
0%	Off-Peak	OP	No
0%	Night	NI	No

Figure 15: Assessment percentages used to calculate uncontrolled 92-day energy consumption

Dairy Profile

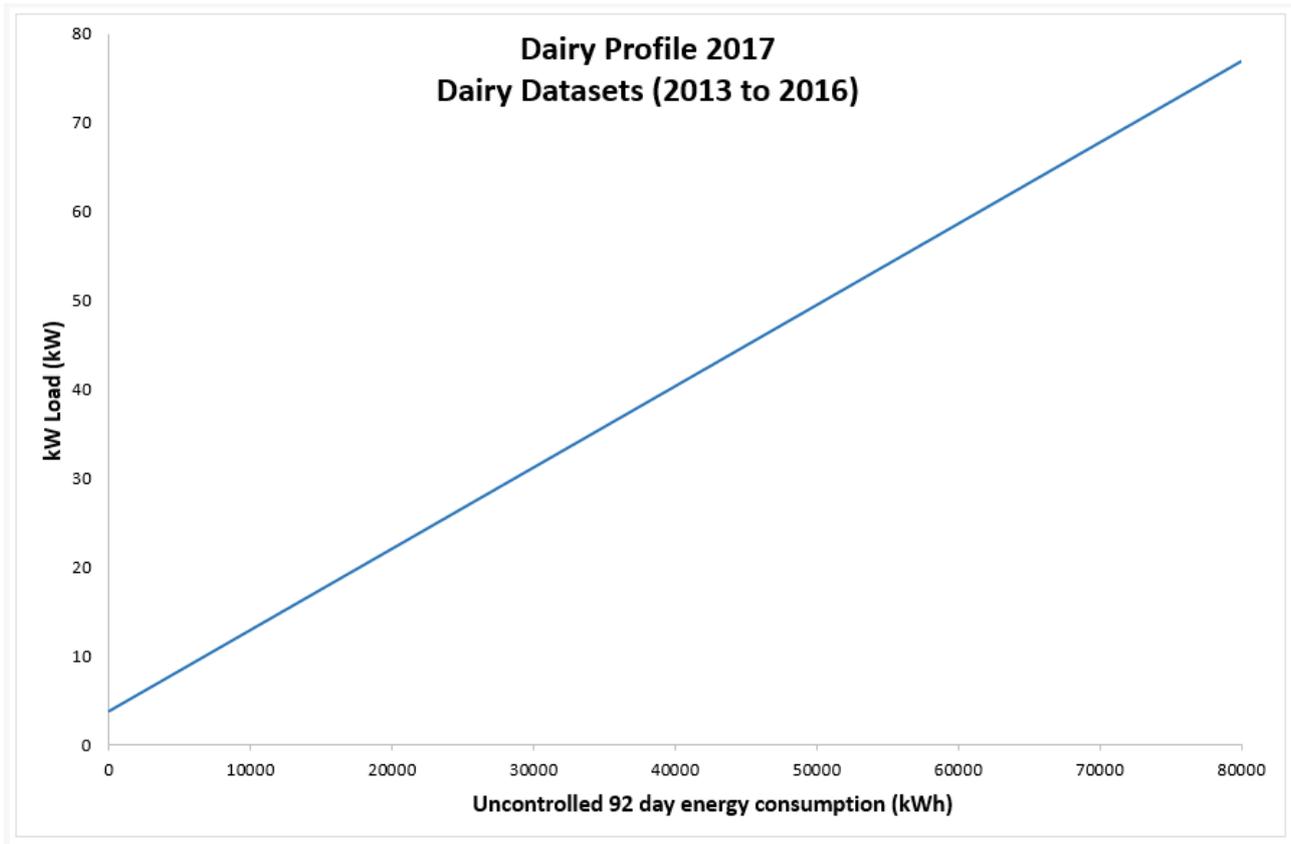


Figure 16: 2017 Dairy Profile

Dairy Profile 2017

$$kW \text{ Load } 2017 = \left((0.0017 \times \text{uncontrolled 92 day energy consumption} + 7.0585) \times \frac{1}{2} \right) \times 107.5\%$$

Points to note about this profile

We developed the 2017 Dairy Profile from a representative sample of installations for dairy cattle milking sheds, using an aggregate of the data from 2013 to 2016 (inclusive).

The period of uncontrolled energy consumption we measure is: 20/08/2016 to 19/11/2016

We add a 7.5% opt-back adjustment to this profile.

We adjust the total 92-day consumption by using the percentages shown below. This gives us the uncontrolled 92-day energy consumption needed for the profile. The percentages indicate the probable effect of load control at your installation:

Single-rate meters

% uncontrolled	Description	Register content of standard meters	Applied to electronic meters
100%	Uncontrolled	UN	Yes
76%	Mixed North	MI	Yes
65%	Mixed South	MI	Yes
55%	Limited Off-Peak	LOP	No
0%	Off-Peak	OP	No
0%	Night	NI	No

Figure 17: Assessment percentages used to calculate uncontrolled 92-day energy consumption

Two-rate meters

% uncontrolled	Description	Register content of standard meters	Applied to electronic meters
100%	Uncontrolled	UN/UN	Yes
100%	Uncontrolled	UN/NI	No
76%	Mixed North	MI/MI	Yes
76%	Mixed/Night North	MI/NI	No
65%	Mixed South	MI/MI	Yes
65%	Mixed/Night South	MI/NI	No
55%	Limited Off-Peak	LOP/LOP	No
0%	Off-Peak/Night	OP/NI	No

Figure 18: Assessment percentages used to calculate uncontrolled 92-day energy consumption (dairy profile)

Temporary Accommodation Profile

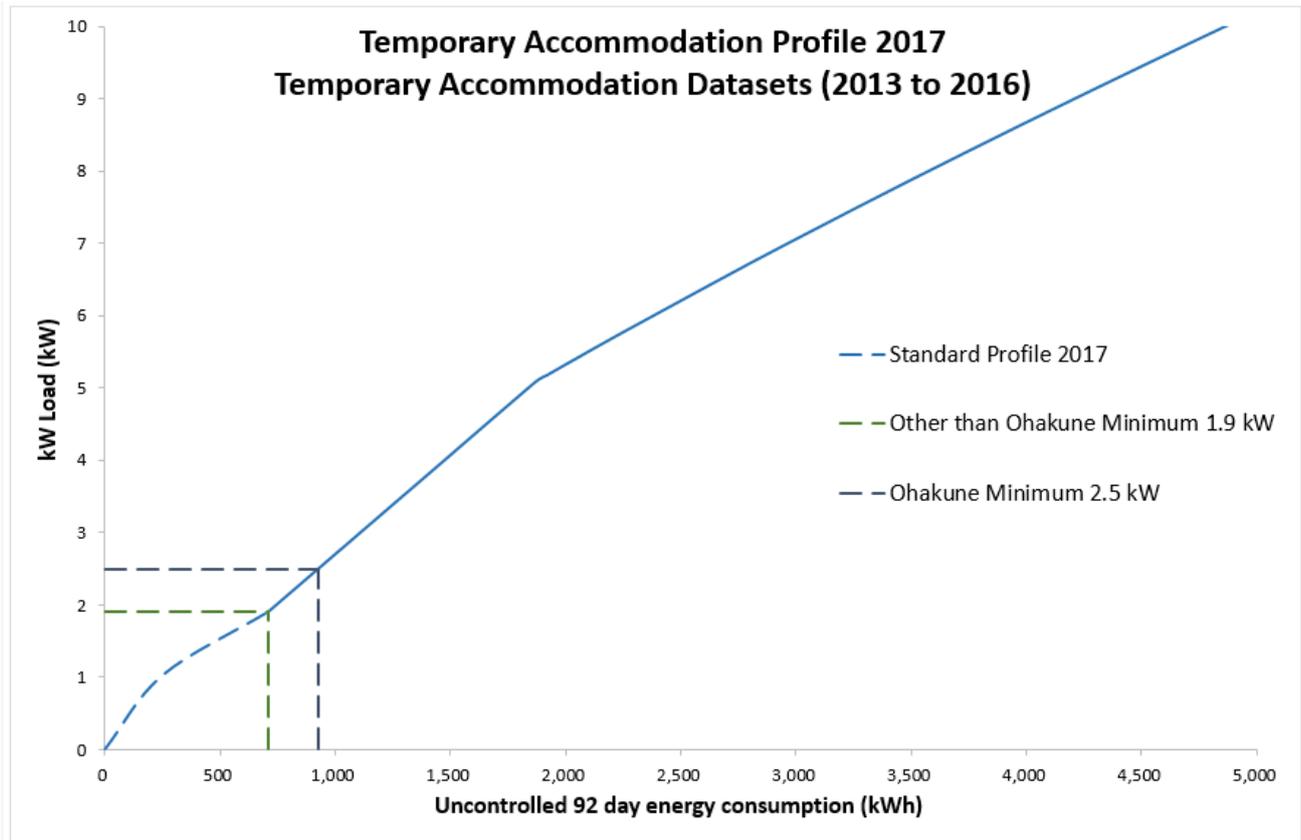


Figure 19: 2017 Temporary Accommodation Profile

Temporary Accommodation Profile 2017:

For regions other than Ohakune:

When $0 \text{ kWh} \leq \text{uncontrolled 92 day energy consumption} < 710 \text{ kWh}$:

kW Load 2017 = Temporary Accommodation Minimum 1.90 kW

When $709.8 \text{ kWh} \leq \text{uncontrolled 92 day energy consumption} < 1,871 \text{ kWh}$:

kW Load 2017 = $0.00274 \times \text{uncontrolled 92 day energy consumption} - 0.0447$

When $\text{Uncontrolled 92 day energy consumption} \geq 1,871 \text{ kWh}$:

kW Load 2017

$$= \left((0.02109 \times \text{uncontrolled 92 day energy consumption}^{0.79} + 1.343) \times \frac{1}{2} \right) \times 107.5\%$$

For Ohakune:

When $0 \text{ kWh} \leq \text{uncontrolled 92 day energy consumption} < 929 \text{ kWh}$:

kW Load 2017 = Temporary Accommodation Minimum 2.50 kW

When $928.8 \text{ kWh} \leq \text{uncontrolled 92 day energy consumption} < 1,871 \text{ kWh}$:

kW Load 2017 = $0.00274 \times \text{uncontrolled 92 day energy consumption} - 0.0447$

When $\text{Uncontrolled 92 day energy consumption} \geq 1,871 \text{ kWh}$:

kW Load 2017

$$= \left((0.02109 \times \text{uncontrolled 92 day energy consumption}^{0.79} + 1.343) \times \frac{1}{2} \right) \times 107.5\%$$

Points to note about this profile

We developed the 2017 Temporary Accommodation Profile from a representative sample of accommodation and holiday home installations, using an aggregate of the data from 2013 to 2016 (inclusive).

The period of uncontrolled energy consumption we measure is: 20/06/2016 to 19/09/2016.

We add a 7.5% opt-back adjustment to this profile.

The Temporary Accommodation Profile includes a minimum kW Load when the 92-day uncontrolled consumption at the installation is less than 710kWh for all regions excluding Ohakune or 929kWh for Ohakune. The minimum kW Loads are:

- 1.90kW for other than Ohakune
- 2.50kW for Ohakune

We adjust the total 92-day consumption by using the percentages shown below. This gives us the uncontrolled 92-day energy consumption needed for the profile. The percentages indicate the probable effect of load control at your installation:

% uncontrolled	Description	Register content of standard meters	Applied to electronic meters
100%	Uncontrolled	UN	Yes
76%	Mixed North	MI	Yes
65%	Mixed South	MI	Yes
55%	Limited Off-Peak	LOP	No
0%	Off-Peak	OP	No
0%	Night	NI	No

Figure 20: Assessment percentages used to calculate uncontrolled 92-day energy consumption

If you've upgraded from a standard meter to an electronic meter

For installations that have upgraded from a standard meter to an electronic meter, our default method of calculating kW Load is in most cases based on the meter in place at 31 July 2016.

If you have a meter for solar or other small-scale electricity generation

If you have an import/export register meter (used when you're generating electricity), we use the import register to calculate your kW Load. Please contact us if you have any questions about solar or other types of alternative energy.

What happens if there is a problem with the data?

Sometimes we can't get actual meter reads (from a standard meter), sufficient interval data or enough qualifying load control periods. If this happens, we may do any of the following things.

- For electronic meters, we may use meter reads to calculate the Profiled kW Load.
- We may carry the 2016 kW Load forward to 2017. We'll let you know if we do this on your kW Load reset notice.
- We may estimate the 2017 kW Load. We'll let you know if we do this on your kW Load reset notice.

8. What do the words in this policy mean?

AMD (anytime maximum demand) is the highest half-hour peak recorded by electronic meters at an installation.

Assessment percentages are the percentages we use to adjust total 92-day consumption at your installation. This gives us the uncontrolled 92-day energy consumption needed for calculating Profiled kW Load. The percentages indicate the probable effect of load control at your installation.

Capacity: for the purposes of this document means the maximum amount of electricity you might need at your installation at any one time.

Capacity is measured in kilovolt-amperes (kVA).

Connection agreement is a signed agreement between a customer and us that sets out the point of connection and the capacity required by an installation.

Contracted capacity means the capacity (kVA) agreed to by a customer and us, as set out in the connection agreement at the initial connection of the installation.

Customer group is a group of customers/installations sharing the same network assets (such as lines and transformers) and types of costs.

CT meter is metering equipment that transforms electrical current to a level readable by the meter on site. These are usually installed at sites with a large capacity requirement, such as motels, restaurants, or dairy sheds.

Delivery charges are the sum of distribution, transmission, and dedicated asset charges.

Electrical load is an appliance or group of appliances that consume electrical power. Electrical load is measured in kVA or kW.

End use is the use we've recorded for an installation (for example, 'house' or 'dairy milking shed') — we refer to the end use when calculating Profiled kW Load.

Equivalence adjustment is a 10% upwards adjustment to the TOU kW Load. We only add this

when we have used 30-minute interval data to calculate the TOU kW Load.

Installation means a building or equipment capable of receiving service from our network (for example, a house, pump, or dairy shed).

Interval data is electrical consumption (kWh or Wh) recorded by an electronic meter.

kVA means kilovolt-ampere

kW means kilowatt

kWh means kilowatt-hour

kW Load is based on the average of six 2-hour periods recorded at an installation during periods of load control. kW Load is measured in kilowatts (kW).

kW Load Charge is based on kW Load. This charge is variable, which means it is reset annually and will change in response to the previous year's electricity use.

Load control is the process of managing electrical load on our network.

Low Fixed Charge Pricing Plan is for customers who use the average electricity load (2.65kW) or less in their primary place of residence (main home).

Meter Charge is based on the meter type at an installation.

Meter reads are the displays on your meter. Meter reads allow us to determine consumption over a period of days by subtracting the end read from the start read.

Network Charge is based on your capacity. This charge will increase if your maximum electricity needs increase.

Notional bands (NUC) are a type of rounding we apply when we review capacity at an installation with a standard meter.

Opt-back process is a process we're applying while we transition our customers from standard meters to electronic meters. We offer most of those with an electronic meter the opportunity to opt-back to a Profiled kW Load (where this is the lower charge).

Power Factor is the difference between the kilowatt rating of an electrical device and the kilovolt-ampere rating. This is a measure of how efficiently a device uses electricity.

Profile is a statistical representation of kW Load used when there is a standard meter at the installation or as part of the opt-back process. There are three profiles: Standard, Dairy, and Temporary Accommodation.

Profiled kW Load is kW Load calculated using one of three statistical profiles and the uncontrolled energy consumption at your installation.

TOU kW Load is kW Load calculated using electrical load downloaded from electronic meters.

Transformer Charge applies when we own the distribution transformer and it's shared by three or fewer installations.

Transmission Charge is calculated using your kW Load. The current price for this charge reflects the recoverable and pass through costs incurred by TLC. These costs include, for example, payments to Transpower (recoverable) and Electricity Authority levies (pass-through).

Uncontrolled consumption is the electrical consumption at your installation multiplied by the relevant assessment percentage, which we use for calculating Profiled kW Load

You means the person or people using our electricity network via a specific installation (such as a house or business).

9. How can you contact us?

Office: The Lines Company
15 King Street East
Te Kuiti

Post: The Lines Company
PO Box 281
Te Kuiti 3941

Email: queries@thelines.co.nz

Phone: 0800 367 546 (listen to the voice prompts and choose option 1)