Our network is designed and maintained to reliably supply the peak power demands of all of our customers. The cost of providing our network service is driven by the demand that each customer makes on it, particularly during peak periods.

Ergon Energy has embarked upon a program of network tariff reforms with the objective of making our network tariffs more cost reflective and fairer, ultimately reducing network charges for all customers. The measures that we intend to progressively implement are described in companion guides, our Pricing Proposal and the brochures and material prepared for public consultation.

The network charges for our major customers are progressively being altered to match the demand supplied by the network.

Ergon Energy introduced demand charges based on Total power rather than Real power for Individually Calculated Customers (ICC) in 2014–15, and Connection Asset Customers (CAC) in 2015–16. The monthly demand charge is now based on the maximum number of kilovolt amperes (kVA), rather than kilowatts (kW) consumed.

The second initiative that Ergon Energy introduced from 2015-16 for the ICC customers and has proposed for the CAC customers in 2017-18 is an excess kVAr demand charge.
Power factor load is required to comply with the standards below. These are drawn from the automatic access standards in the National Electricity Rules and the Queensland Electricity Regulation (2006).

<table>
<thead>
<tr>
<th>Supply voltage (nominal)</th>
<th>Power factor range</th>
</tr>
</thead>
<tbody>
<tr>
<td>132kV and 66kV</td>
<td>0.95 lagging to unity</td>
</tr>
<tr>
<td>33kV, 22kV and 11kV</td>
<td>0.90 lagging to 0.90 leading</td>
</tr>
<tr>
<td>&lt;1kV</td>
<td>0.80 lagging to unity</td>
</tr>
</tbody>
</table>

To ensure the quality of supply to the community is not compromised, as well as to reduce the cost of supply to the community, Ergon Energy is obliged to ensure its customers comply with this standard. Some of our customers premises’ connections do not currently meet this standard.

Ergon Energy currently applies a charge for excess kVAR demand for ICC customers and will extend application to CAC customers from 1 July 2017.

The excess kVAR demand charge is calculated monthly based on the kVAR level at the time of each customer’s individual monthly kVA peak. To the extent the actual kVAR exceeds the customer’s permissible kVAR quantity (the permissible quantity - determined by the customer’s authorised demand and the customer’s compliant power factor), excess kVAR charges are applied.

Each ICC and CAC customer will have their own permissible quantity (kVAR demand) calculated by Ergon Energy based on contractual arrangements, authorised demand and compliant power factor. This value is advised to the customer as part of the annual advice to customers and retailers.

There will be no excess kVAR demand charge in a month where the kVAR demand at the time of a customer’s monthly kVA peak is less than the permissible quantity.

### Current customer class

<table>
<thead>
<tr>
<th>Current customer class</th>
<th>Demand charges in kVA</th>
<th>Excess demand charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individually calculated</td>
<td>2014–15 (now in place)</td>
<td>2015–16</td>
</tr>
<tr>
<td>Connection asset</td>
<td>2015–16</td>
<td>2017–18</td>
</tr>
</tbody>
</table>

### Excess demand rate

In 2016–17 a monthly excess kVAR demand charge of $4.00/kVAR (pre GST) for kVAR demand in excess of the permissible quantity will apply. This rate has been set to reflect the additional cost that Ergon Energy incurs in supplying poor power factor loads.
If a site’s power factor is currently not compliant Ergon Energy understands customers may need technical advice and assistance. Often compliance can be achieved by installing capacitors, although depending on the electrical installation there may also be other solutions. Ergon Energy has a range of information, case studies and links to potential suppliers of energy management and power factor correction equipment on our website – see address below for further information.

Only electrical contractors licensed by the Electrical Safety Office in Queensland are permitted to install power factor correction equipment. Improvement in power factor can, in addition to reducing kVA and excess kVAr charges, also improve equipment life and efficiency, free up site electrical capacity, reduce carbon footprint and achieve contractual and National Electricity Rules compliance.

It has been noted, that for ICC or CAC sites with both load side and generation, that generator start up and shut down can contribute to lagging load kVAr. This can result in impacting Distribution Use of System kVA and excess kVAr demand quantities.

Accordingly, Ergon Energy has adopted the following policy to apply from July 2016 and as outlined in our Pricing Proposal 2016-17. ‘To avoid inadvertent impacts on measurement of kVA and kVAr quantities where a customer has both load and generation, for the purposes of load side network charging, the lagging kVAr is set to zero in any interval where the generator is enabling energy to be imported to the network’.

How can I find out more?

Regarding network tariff changes:
Please go to www.ergon.com.au/futurenetworktariffs
Email: futurenetworktariffs@ergon.com.au

Regarding options to improve power factor through energy management:
Please go to www.ergon.com.au/network/manage-your-energy
Email: demandmanagement@ergon.com.au