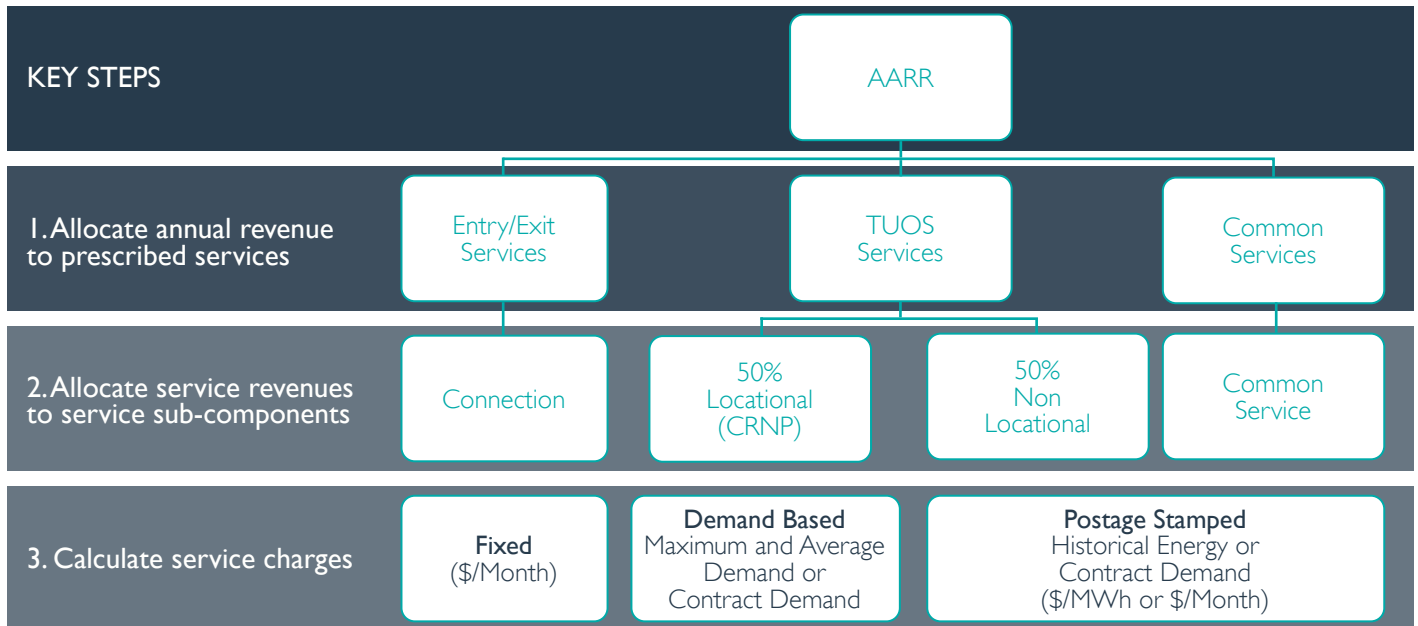


How are transmission prices calculated?

Each year Powerlink calculates transmission charges/prices in accordance with the framework set out in the National Electricity Rules (NER or Rules) and its Pricing Methodology¹. This process requires Powerlink to allocate its annual revenues using the key steps set out in the diagram below:



Key Definitions

- **AARR** (Annual Aggregate Revenue Requirement) – the maximum allowable revenue determined by the Australian Energy Regulator (AER) adjusted by the X-factor; CPI and performance incentive schemes.
- **Common Services** – provide common benefits to all customers irrespective of location (for example, voltage support).
- **CRNP** (Cost Reflective Network Pricing) – a method for calculating locational prices under the Rules, based on peak utilisation of backward-looking (or sunk) asset costs.
- **Entry/Exit Services** – services provided for connection to the shared transmission network. Entry services apply to generators. Exit services apply to DNSPs (distribution network service providers) and other directly connected customers supplied by the transmission network.
- **Locational charges** – costs to supply TUOS services at a location within the transmission network (for example, a substation). Under the Rules, locational prices must not change by more than 2% per annum relative to the load weighted average price for the region.
- **Non-Locational charges** – balance of TUOS costs that are not location-specific.
- **LRMC** (Long Run Marginal Cost) – a forward-looking method for allocating network costs, where charges are based on the cost of future investments. DNSPs are required to calculate distribution charges/prices using LRMC from 2017 onwards².
- **Postage Stamped** – where the unit price is the same for all connection points and customers.
- **TUOS** (Transmission Use of System) – prescribed (or regulated) services that provide benefits to customers or other TNSPs (transmission network service providers) based on location.
- **X-factor** – a revenue smoothing factor set by the AER to minimise price shocks.

¹ Powerlink's Pricing Methodology was approved by the Australian Energy Regulator and is available at www.powerlink.com.au
² AEMC Rule Determination, Distribution Network Pricing Arrangements, 27 November 2014

Estimates and Forecasts

The annual transmission pricing process requires TNSPs to estimate total revenue collections for the current financial year and develop forecast revenues and transmission prices for the forthcoming financial year, about 3-6 months before the start of the financial year to which the prices relate. As a result, various inputs must be estimated (for example, inter- and intra-regional settlements residues³ and CPI) or forecast (in particular, energy and demand). Given the level of uncertainty in these inputs at the time transmission charges are prepared, forecast transmission charges at individual connection points may vary from year to year.

Publication of Prices

Transmission prices for each category of transmission service are published directly to customers by 15 March each year. A schedule of shared network prices is also published on our website at the same time.

How are transmission prices passed through to end users of electricity (consumers)?

Each year, Powerlink charges (or bills) customers that are directly connected to its network. This includes the Queensland electricity DNSPs (Energex, Ergon Energy and Essential Energy) and other direct connects (for example, large loads or mines).

Most consumers of electricity (like office block tenants, small businesses and residential consumers) are billed by an electricity retailer (like AGL or Origin). Powerlink charges DNSPs for transmission services. DNSPs then charge retailers for transmission and distribution services. Retailers then bill end users of electricity in Queensland for the costs of electricity generation, transmission, distribution and retail, which includes the cost of green policies where applicable (see diagram below)⁴.



It is important to recognise that once transmission charges are calculated and passed through to DNSPs, they are 'repackaged' using a different method into distribution tariffs. Similarly, when DNSPs pass through their tariffs to retailers, they may be 'repackaged' again before ultimately being charged to end users of electricity.

Electricity retailers in Queensland currently offer two major types of contracts to end users. The first is a standard contract where customers are charged the regulated electricity price set each year by the Queensland Competition Authority. The second is a market contract where prices are negotiated between the customer and retailer⁶. In Queensland the Uniform Tariff Policy (UTP) ensures that regulated retail prices for small⁷ regional customers reflect the costs of supplying these customers in the south-east⁸.

Currently Powerlink's transmission charges send relatively strong demand signals to its directly connected customers. As a result of tariff reform, networks and retailers are in the process of restructuring tariffs to better align charges with the costs of meeting peak demand. These changes are intended to allow electricity customers and consumers to:

- see the costs associated with their demand on the electricity networks; and
- adapt their behaviour in terms of use of the networks.

³ Settlements residues are basically the total financial differences in the electricity that is bought and sold within Queensland (intra-regional) and across the Qld-NSW border (inter-regional).

⁴ AEMC 2019 Residential Electricity Price Trends Report

⁵ Includes costs associated with retail, losses and errors in the estimated value of all other supply chain cost components, the AEMC 2019 Residential Price Trends Report refers to this overall component as residual.

⁶ Department of Energy and Water Supply, Electricity Contracts, <https://www.qld.gov.au/housing/buying-owning-home/energy-water-home/electricity/electricity-prices/electricity-contract-types>

⁷ Small customers are classified as those consuming up to 100MWh pa. Large customers who consume more than 100MWh pa have tariffs based on Ergon Energy's east pricing zone (transmission zone 1).

⁸ Queensland Competition Authority, Final Regulated retail electricity prices for 2020-21, June 2020.