Short guide to the TPM

Most of New Zealand's electricity is generated a long way from where it is used. A national transmission grid transports electricity around the country to local distributors and industrial consumers. Transmission charges pay for the national grid and make up approximately 10% of a total power bill.

The national grid is owned and managed by Transpower. The Commerce Commission limits how much Transpower can charge for the grid, and the way it then calculates customer charges is set by the Transmission Pricing Methodology (TPM). Transpower develops a TPM that is consistent with guidelines determined by the Authority. It is the Authority's role to make the final decision on implementing a new TPM.

The proposed new TPM better positions New Zealand for a transition to a low-emissions economy by ensuring the best use of existing and future infrastructure. It also supports the right investments being made at the right time and in the right places, ultimately lowering the cost of the electricity system to New Zealand consumers.

While the TPM has been contentious since long before the Electricity Authority was established in 2010 - and there is likely no single option that will deliver industry consensus - it is widely agreed the current TPM is no longer fit for purpose.

Since the project was reset in 2017, the Authority has made good progress on getting it to this point. The current consultation signals that we are now in the final phase of the TPM's development. While the Authority is proposing a 1 April 2023 implementation, we are seeking comprehensive feedback from stakeholders before making any final decisions.

Why a new TPM is important

For nearly 20 years, much of the annual transmission bill has been spread across the entire country. This has meant that some generators and consumers in certain regions have benefited from large and costly grid upgrades, with a more reliable service and cheaper wholesale electricity prices, while consumers in other regions do not receive these benefits but still contribute to the cost of the grid upgrades.

The current TPM, through the peak pricing signal, ultimately discourages consumption at times when consumers most want to use the network, even when there is no network congestion. This means New Zealand families and businesses don't get the value out of the electricity system that they should.

The same peak signal also encourages some parties to make business decisions to avoid or reduce transmission charges for themselves or their clients, without reducing transmission costs. All this does is shift charges to other customers. Over time this leads to other consumers paying more than they need to for electricity – this will only get worse as new technology gets cheaper and more people are able to use it to shift charges to others.

In addition, South Island generators have been paying the full cost of the high voltage direct current (HVDC) link between the North and South Islands, while consumers in the North Island benefit from lower prices. Yet customers in both islands benefit from being able to have electricity flowing between the islands.

By reforming the TPM, the aim is to make this system as efficient as possible, keeping prices down, and getting the right signals for the right investment in the right place. Reforming the TPM will make sure consumers and generators get important signals about the cost of using the grid which is crucial to supporting New Zealand's transition to a low-emissions economy, where we will need to generate and transport a lot more electricity.

Key changes in the new TPM

If the core problems of the current TPM are amended by a new TPM, the Authority estimates that will deliver New Zealand consumers a net quantified benefit of $1.25 billion over 28 years. This is due to the current main peak charge (the regional coincident peak demand or RCPD charge) and the HVDC charge - both of which are distortionary - being replaced and the introduction of a new benefit-based approach.

At the heart of the proposed new TPM is a benefit-based approach - those who are expected to benefit from transmission investments will pay for them. Benefit-based charges will replace the main charges under the existing TPM - the RCPD charge and the HVDC charge. The benefit-based charges will cover the remaining costs of seven recent major grid investments, and grid investments made from July 2019.

A neutral residual charge for all customers that take power from the grid will recover some unallocated costs, and as a transitional measure, the remaining costs of all other historical transmission investments currently in place. The residual charge is expected to reduce over time as new grid investments are captured in benefit-based charges and as the costs of existing transmission assets are recovered.

Wholesale market electricity prices will work alongside the new charges to manage congestion as a more accurate, responsive and targeted signal of the cost of using the grid. Emerging technologies, real-time pricing and new business models are expected to make this an increasingly effective and efficient way to manage grid congestion.

Other changes include those to connection charges, and a stand-alone cost test for the prudent discount policy.

Changing the TPM as the Authority proposes will re-balance charges, including between the regions – some will pay more, some will pay less. While those who will be paying more have likely been undercharged for years, the Authority wants to minimise any price shock on household and business consumers. The proposed TPM includes a 3.5% cap on the amount total electricity bills may increase for household consumers and larger industrial customers as a direct result of the change (after inflation and volume growth).