



## Fact Sheet: INTRODUCING THE REAL-TIME PRICING PROJECT

### What's this about?

We are changing the way spot prices for electricity are calculated and published so everything will be done in real time. It's the biggest change to the wholesale electricity market since it started in October 1996.

### Why are you making these changes?

This project will deliver a step change in the operation of the electricity market. Shifting to real-time pricing will deliver more accurate and certain wholesale pricing. That, in turn, will help New Zealand achieve its aspirations for the future of energy. The project will:

- provide more actionable information for short-term decisions about when to supply or consume electricity
- give more certainty for long-term investment decisions, as actual prices will better reflect the value of generating or using electricity
- help the transition to a low emissions economy by improving system flexibility to handle more variable types of supply, such as wind and solar
- remove major barriers to smart technologies that help consumers decide when to consume electricity
- include flexible options for generation and demand, which make it easier for smaller players.

### What happens now?

Currently the price people see when they sell or buy electricity on the wholesale market are only indicative: they get the final price two days later.

New Zealand was the first to use spot prices according to time and physical location. This pricing system was appropriate with the technology available in the mid 1990s. Most of the time, this system has worked fine, but there are certain situations where people have experienced frustration. This is typically when supply conditions are tight (that is, when demand exceeds or comes close to exceeding the available generation).

During these conditions, large commercial and industrial consumers can find the lack of price certainty means some of their consumption decisions prove to be more expensive than they want. Similarly, residential customers who want to take advantage of spot price contracts cannot be certain about when is the right time to restrict or increase their consumption.

### How will real-time pricing work?

When we shift to real-time pricing (RTP), spot price information will be updated every time it changes. At the end of each half-hour trading period a time-weighted average of these prices will be published as the final price for that trading period. This new price certainty will mean consumers can act confidently to avoid high prices. Pricing will be more dynamic: for example, if enough consumers respond to a high spot price by reducing their consumption, the spot prices would go down – resulting in a lower final price for the trading period.

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## Why are you making this change now?

The limitations of our current pricing mechanism are already significant. This will only become more pronounced with time and a major impediment to investment in the longer term.

We can now use more powerful computing and monitoring technologies both to operate the electricity market and make better use of existing generation and distribution assets.

Also, it will pave the way for technologies such as price-responsive demand systems, battery storage and electric vehicles.

## What do you actually have to do?

This is a large software development project that will also require extensive changes to operational processes. We will work closely with market participants, because they may need or want to make changes to their systems to adjust to this future environment.

## Who's doing it?

The Authority will commission and oversee this work. Transpower in its role as system operator has collaborated on developing the major design elements and will do a great deal of the work through the delivery phase. NZX will also need to make changes to some of its systems, as it runs related wholesale electricity market systems.

## Why will RTP take so long?

This is a massive change to the core system that runs the wholesale electricity market. There are many parts and we need to ensure changes are made carefully and correctly. Projects of a comparable scale in overseas electricity markets have taken a similar length of time. The first big milestone is the beginning of the delivery phase on 1 July 2019.

## How was RTP designed?

We have undertaken several rounds of consultation with the New Zealand industry to progressively develop the design. We have also engaged with overseas experts to validate our proposals. The delivery phase will initially focus on a detailed specification for market system changes and then transition to the software delivery phase. During this time the project team will continue to work with engagement groups.

## What difference will RTP make for electricity consumers?

Real-time pricing in the wholesale electricity market will help keep a lid on electricity prices in various ways.

The main way we expect this will happen is through people getting signals and as a result changing when and how they use electricity (known as 'demand response'). This can help minimise the need for construction of new generation plant, with flow-on benefits for all consumers.

Consumers such as large commercials and industrials and some home-owners, who are on plans where they buy from the spot market, will for the first time be able to make decisions based on what they will actually pay. Some spot price consumers will have smart devices that can adjust their consumption according to cost and, again, the prices they see will be what they pay.

## Who asked for RTP?

A range of electricity industry stakeholders support the real-time pricing project. An independent advisory group to the Electricity Authority recommended in 2013 that the Authority investigate this work and we began soon after.

## Who's making sure everything goes according to plan?

The Authority is leading the project to deliver this initiative. The necessary changes will be delivered by Transpower (as the system operator), NZX Limited and Energy Market Services (EMS). There will be close engagement with industry via engagement groups and public briefings throughout the project.

## How much will it cost?

Overall, the development work is budgeted to cost \$15 million over three years, and this is being funded from the electricity levy.

## Where is it up to now?

The Authority has now approved the design and this was published on the Electricity Authority website as the *Decision to implement RTP* paper on the 28 June 2019. The project enters implementation phase on 1 July 2019 and go live is expected in 2022.

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