

23 July 2024

s9(2)(a)

By email: s9(2)(a)

Tēnā koe s9(2)

Thank you for your request, received on 27 June 2024, under the Official Information Act 1982 (the Act) for the following information:

- *“What legislation is required to enable lines companies to use smart meters to control HW heating? If there isn't any then what is the situation regarding requiring the functionality to be implemented so they can use it now?”*
- *Mr Peleneur referred to a strategy of using Smart EV Chargers to enable EV charging times to react to market pricing signals. Therefore my questions are, given New Zealand's current electricity retailer environment,*
 - o *can EECA please provide information on how a system enabling EV Charging to reflect real-time market prices for electricity,*
 - o *what legislative and technical changes would be required to implement such a system and*
 - o *has any country implemented such a system to date?”*

What legislation is required to enable lines companies to use smart meters to control hot water heating?

There is no legislation specifically enabling, nor preventing lines companies from, using smart meters to control hot water heating. Lines companies have traditionally controlled hot water heating using a system that injects a control signal into the power lines (known as 'ripple control'). Lines companies' use of the ripple control systems is covered through the contract between lines companies and retailers, and these terms and conditions flow through to the contractual arrangements between the retailer and their customer. Some lines companies have required the ability to control hot water heating, and some offer it as an option for their customers. Lines companies that provide ripple control may 'buy' these control rights from consumers by offering a discounted lines charge that retailers pass through to the customer.

There are several different ripple systems and several different ways of wiring the control. The terms and conditions of control rights – for hot water or any other load – are covered in the distribution agreement between the distributor and retailer (which applies as part of the contract between the customer and retailer). [Part 12A of the Code](#), specifically schedule 12A.4, contains a default agreement, and section 5 (page 59) covers the rights and requirements for controlling hot water and other load.

How could a system enabling EV charging reflect real-time market pricing signals?

A smart EV charger could be programmed to respond to preferential, fixed EV time-of-use tariffs offered by retailers, for example between 9pm and midnight when electricity may be cheaper. In addition, a smart EV charger could respond dynamically to real-time, virtual signals (eg. via the internet) to adjust its charging profile in response to market signals. Examples of this include reducing charging when network prices are high, electricity has a high carbon content, and when network capacity is constrained.

What legislative and technical changes would be required to implement such a system?

No legislative change is required to implement such a system, although regulation may encourage the faster uptake of smart chargers and deliver more benefit than not regulating. Policy and economic analysis would determine whether this is the case. No technical change is required.

Has any country implemented such a system to date?

The United Kingdom has regulated smart chargers, and many other countries are considering a similar move. In New Zealand, the market is already offering benefits to owners of smart chargers.

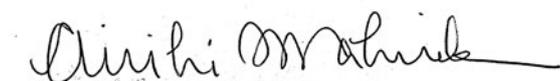
Demand-side flexibility

The Electricity Authority Te Mana Hiko is committed to enabling consumers to change the time or the amount of their electricity consumption through demand-side flexibility. By reducing or shifting demand, it reduces the amount of generation needed at the time. This can lower costs for consumers and support security of supply in the electricity market. Read more about our work on demand-side flexibility on [our website](#).

You have the right to seek an investigation and review by the Ombudsman of this decision. Information about how to make a complaint is available at www.ombudsman.parliament.nz or freephone 0800 802 602.

If you wish to discuss this decision with us, please feel free to contact us by emailing oa@ea.govt.nz.

Nāku noa, nā,



Airihi Mahuika
GM Legal, Monitoring and Compliance