

28 February 2020



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**Dear Energy Markets Policy team**

**Re: Discussion Document – Accelerating renewable energy and energy efficiency**

Flick supports the government's ambitious renewable electricity and climate change goals. We also agree achieving these goals will require significant investment and change within the electricity sector.

Fortunately, we are in a time when the economics of the electricity sector are changing due to technological improvements. The economics of decentralised generation are beginning to stack-up. Consumer choice and control over their energy use and generation is becoming a reality as EV's, control technology, batteries and small scale generation are all falling in price and becoming more accessible. The pressures of climate change and combination of technological improvements and changing economics mean that this sector should and must look fundamentally different by the time we reach the 2035 renewables target.

Flick Electric brings smart energy choices to life by offering innovative electricity products to consumers, including a product directly linked to the wholesale spot price (known as Freestyle). Our Freestyle product enables consumers to be true 'prosumers' and capture the benefits of adoption of new technology. Consumers use clear and transparent price signals to make decisions about their use and adoption of technology. Flick's world-first app, CHOICE, has always given Kiwis live updates about the carbon impact of NZ's electricity use, and sends alerts so they know when to switch things on and off. Flick Electric is a carboNZero company, offsetting our corporate emissions by investing in native plantings by Trees that Count.

New Zealand needs to be capturing the potential benefits of the digital transformation of the electricity sector now. New Zealand's regulatory settings have a critical bearing on how successful this transformation will be - including if new businesses and technology can be adopted on their merits. But settings need to change to enable this transformation. If successful, the electricity sector's transformation will have an impact on the productivity and the competitive advantage of New Zealand (and consequently our national wellbeing) - conversely, if not, it will put these in jeopardy.

In particular, a fundamental change to the current wholesale market design is required to create a level playing field for all electricity retailers. The market must reflect the actual costs of energy in a dynamic fashion (without any ability to abuse market power). All retailers must buy from the same market facing the same terms and conditions that independent retailers' face. Once all retailers face the actual cost of energy there will be transparency for consumers to make informed decisions to invest or change their behaviour to transition to a low emissions economy. Strong retail competition for customers will drive the need for innovation and value-add.

### **Affordability**

The government is focused on improving the well-being and living standards of New Zealanders with an emissions and equity focus going hand-in-hand.<sup>1</sup> We note that one of the assessment criteria relates to the energy trilemma – sustainability, security and affordability. Competition drives innovation and pressure on prices and contributes to affordability. We suggest the impact of any proposal on competition (both in the generation and retail electricity markets) should be assessed to ensure incumbent processes, approaches and players are not reinforced or perpetuated by policy initiatives that facilitate renewable energy and energy efficiency investment (eg, enhancing the market power of vertically integrated gentailers).

Flick commends the government for seeking early feedback on a wide range of possible policy interventions to accelerate renewable energy and energy efficiency.

However, in our view, there is a fundamental barrier to innovation and competition that is not discussed. A vibrant competitive electricity retailing sector is essential but cannot thrive with the current vertically integrated generators controlling the spot and hedge market prices which their retail business does not pay.

There must be a level playing field with all retailers purchasing from the same markets on the same terms – this is not the same as the current gross pool design. Independent retailers are net buyers from the hedge and spot markets and face prices in these markets when setting retail price offerings. Gentailer retailers' can price their retail offering based on a transfer price from their generation business – at a level substantially below hedge and spot market prices. With all retailers purchasing electricity at the actual energy cost this will drive innovation and support price-based decisions by consumers in alternative choices and better outcomes.

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<sup>1</sup> Annual Letter of Expectations for 2018/19 from Hon Dr Megan Woods, Minister of Energy and Resources to the Electricity Authority <https://www.ea.govt.nz/dmsdocument/26295-1-march-2018-letter-of-expectation-from-the-minister-of-energy-and-resources>

Data published by gentailers clearly shows that they match generation volumes against their retail book. If the retail book gets above ~80% of generation output the volume of CfDs offered to third parties drops markedly.

Flick, and other independent retailers, strongly submit that the gentailers' generation business must transact with their retail operation on equal terms as they would with any other third party.

This will force generators to compete, based on price, to sell electricity. All retailers can then price their retail offerings based on all having purchased electricity in the same market. Independent retailers will thrive, driving innovation and pressure on prices, contributing to affordability for all consumers.

### **New Zealand Emissions Trading Scheme (NZETS)**

Flick notes the proposals in the discussion document are complementary to the NZETS. The *'Reforming the New Zealand Emissions Trading Scheme: Proposed settings'* Consultation Document (NZETS consultation document) states "*the NZETS is our key tool to reduce emissions and meet our targets*".<sup>2</sup>

Flick supports price-based measures to drive behaviour change. For example, we provide information to our spot exposed customers on how to manage their consumption / change their behaviour to manage exposure to high spot price periods.

However, we are keen to ensure the balance is right between emission reductions expected due to the NZETS settings and the impact on emissions of these policy proposals – a bit like estimating a 'marginal abatement cost' for these complementary measures.

### **Comments on discussion document**

Flick's interest in this discussion document relates to proposals in Part B. Our comments are in priority order from our perspective, both for proposals we support and for those we do not support.

### **Policy proposals supported by Flick**

#### ***Section 7 Enabling development of renewable electricity generation under the Resource Management Act 1991***

Flick does not own generation assets but is reliant on a competitive market in both generation investment and wholesale trading of electricity by generators. A significant increase in generation capacity is required to achieve the government's ambitious renewable electricity and climate change goals. Our

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<sup>2</sup> Page 7 <https://www.mfe.govt.nz/publications/climate-change/reforming-new-zealand-emissions-trading-scheme-proposed-settings>

interest is to ensure this investment is timely (anticipating growth in electricity demand) and the lowest cost technology, taking into account capital, O&M, fuel and emissions costs.

There has been widespread public commentary in support of the need to amending the Resource Management Act framework to assist consenting for new projects, upgrades of existing assets and amending consents that have been issued but not implemented. Flick supports this work commencing in the short term. We rely on subject matter experts to identify the best options to achieve a more efficient environmental consenting regime.

### **8.1 Introduce a Power Purchase Agreement (PPA) Platform**

The problem being addressed by the proposal for a PPA Platform appears to be described in the discussion document as:

- electricity spot prices typically being too high (on average), or carrying too much volatility risk to encourage significant levels of process heat electrification
- investors in new generation seeking sustained high spot prices upfront to cover the risk that average spot prices fall during the project's operational lifetime
- leading to a gap between the electricity price that would incentivise accelerated electrification of process heat (demand-side) and the electricity price that would incentivise accelerated deployment of renewable electricity generation (supply-side)

This problem has been described in the context of a business opportunity to electrify industrial processes. However, high and volatile spot prices as well as the dominance of five vertically integrated generators in the supply of, and decision to investment in, renewable generation also has significant consequences for independent retailers who are price takers.

As evidence, the last grid-scale generation plant was commissioned in 2014; the LRMC of constructing new renewable generation is ~\$60-70/MWh – well below the thermal fuel costs published by Genesis and Contact Energy as well as recent spot and hedge prices; and yet new generation capacity is not due to be commissioned by the gentailers that dominant the generation market until late 2020.

Flick understands the PPA Platform is proposed to reduce transaction costs for smaller generators and would not be available for the large incumbent generators that have economies of scale.

We agree a PPA Platform could facilitate investment in generation by new players and strongly support initiatives that enable increased competition in investment in generation capacity. If this new generation output is offered into the wholesale market it will also widen the diversity of views underpinning offers in the wholesale market.

We see advantages in having at least some of this new generation output participating in the wholesale (spot and hedge) market, because:

- increased generation supply, diversity of investors and views, and increased demand for electricity have the potential to make the spot and hedge markets more efficient and liquid
- a PPA means a new generation investor will be less reliant on high spot prices in the medium term to underpin the investment – they could be the marginal generator setting a lower spot price for all consumers
- the LRMC of new generation is declining which should be reflected in the price of PPA underpinned output. This lower cost generation could be the marginal generator so all other consumers will benefit from the lower LRMC
- if the PPA underpinned investment is not 'in' the wholesale market, all other consumers will continue to face the status quo (ie. vertically integrated market power in generation and wholesale price control).

Our caution would be if the PPA Platform resulted in lower volume on the hedge markets. The alternative to a PPA Platform is for the exchange traded market to offer long-term contracts (of at least 7-10 years) with appropriate prudential arrangements.

Flick is supportive of a PPA Platform if it enables new independent generation and creates more competition in the generation market.

## Policy proposals Flick does not support

### **8.3 Deploy energy efficiency resources via retailer / distributor obligations**

Our understanding is that this proposal would place obligations on electricity retailers to deploy energy efficient technologies across their customer base by requiring retailers to invest to reduce energy costs and emissions. The cost of this investment would be passed on to customers incrementally, rather than representing a larger upfront cost. This is expected to assist consumers with the higher upfront cost of efficient equipment where it costs less over the longer term than energy supply or defers infrastructure investment.<sup>3</sup>

Flick does not agree that this type of regulatory obligation is the most effective way to deliver increased investment in energy efficient technologies across the economy, for a number of reasons: (Question 8.11)

Truly cost reflective pricing that is transparent to customers is a more effective approach to deliver consumers with better energy efficiency choices

The European Union (EU) approach to developing energy efficiency policies appears to focus on the benefits for low income households and reducing energy

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<sup>3</sup> From page 76 of discussion document

poverty as well as taking into account the multi-benefits of energy efficiency such as better health and well-being, improved property value etc.

The EU report referred to in the discussion paper makes the following conclusions:

**5. Energy efficiency policies specifically addressing low-income households could be more effective in eradicating or reducing energy poverty than using only social policies. The choice of targeted policies is best left to the Member States:**

**6. Energy efficiency improvements have positive impacts that go beyond a reduction in energy use (e.g. improvements in health and social inclusion, reduced investments in infrastructure). It is therefore recommended that Member States use infrastructure funds from other sectors benefiting from positive impacts of energy efficiency (for example health and social welfare funds) and tie their energy efficiency policies to European social funds or investment funds to enhance policy implementation in low-income households:**

Flick suggests well scoped programmes administered by EECA<sup>4</sup> targeted at low income households or households in energy poverty would be more cost effective mechanisms to achieve improvements in energy efficiency relative to implementing an entirely new regulatory mechanism. Programmes by the government's social agencies who have an established relationships with low income households could also be implemented at lower cost. These agencies are more likely to value the multi-benefits (such as better health and wellbeing) from improving energy efficiency than an electricity retailer or distributor. (Question 8.14)

#### ***8.4 Investigate regulatory and economic requirements to develop offshore wind assets in NZ***

Flick suggests development of an offshore wind market is not a priority for NZ for the medium term. New Zealand is a technology taker and the costs associated with offshore wind assets can be expected to decline. In the meantime, significant consents are held for new generation projects that should be able to meet increasing demand for electricity.

#### ***8.5 Renewable electricity certificates and portfolio standards***

Flick notes that this option is not under active consideration and we agree with this decision.

The government should rely on the private sector and consumers to drive demand for renewable energy. There are already semi-equivalent private schemes, such as carbon neutral certification of electricity, which retailers promote as a unique point of difference to potential and existing customers.

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<sup>4</sup> EECA's report 'Energy Efficiency First: The Electricity Story' (July 2019) should inform development of these programmes. <https://www.eeca.govt.nz/news-and-events/media-releases/energy-efficiency-key-action-to-meet-renewable-energy-goals/>

## **8.6 Phase down thermal baseload and place in strategic reserve**

As we understand it, the proposed strategic reserve involves regulating and restricting thermal baseload plant to accelerate replacement with renewable capacity in a managed way. Thermal baseload plant would be placed in a ring-fenced reserve that could be used in emergencies – triggers would be set. It is also intended that the strategic reserve plant be decommissioned as more renewable generation is constructed and technologies that support the management of variable renewable supply are deployed (such as batteries or demand response). A transition period of say for five years could endure. Thermal peaking facilities would not be impacted.<sup>5</sup>

Flick notes this option for a baseload thermal strategic reserve is not under active consideration and agrees this should not be considered further.

Government needs to be clear about the problem it is trying to solve before designing a solution.

There is substantial new generation capacity that parties are committed to constructing. While a significant investment in intermittent wind generation suggests a thermal strategic reserve may be appropriate during a near-term transition period, longer term Flick believes hydro will become the primary reserve against intermittent wind. We agree the market should be relied upon to incentivise owners of thermal baseload to reduce future use of fossil fuels. Renewable generation capacity under construction now or by January 2026 is estimated<sup>6</sup> to have a LOCE of \$53 - \$67/MWh.

However, the discussion document requests feedback on:

*“the best way to meet resource adequacy whilst reducing emissions in the electricity sector, and the need for and possible design of a strategic reserve mechanism or other capacity market mechanisms”.*<sup>7</sup>

The above is a massive question. We are not in a position to comment in detail but suggest:

- Lessons from the previous reserve energy scheme, based on the Whirinaki plant, must be taken into account in any proposal to design a strategic reserve
- Note the government’s key tool to price and reduce GHG emissions is the NZ ETS – this will influence the use of fossil fuel over time. For example, decisions are being made to displace thermal generation capacity:
  - Genesis forecast contracted output from Tilt owned Waipipi wind farm will displace 20% of their thermal baseload and reduce their carbon emissions by 250,000 tonnes CO<sub>2</sub>-e<sup>8</sup>

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<sup>5</sup> From page 86-89 of the discussion document

<sup>6</sup> Source: page 5 of “NZ Electricity Generators – On the cusp of renewable supply creation, or demand destruction”, Provided by Jarden and distributed in Australia by Credit Suisse. 25 February 2020

<sup>7</sup> Page 89 of the discussion document

<sup>8</sup> Page 36 [https://gesakentico.blob.core.windows.net/sitecontent/genesis/media/new-library-\(dec-2017\)/about\\_us/investor/reports%20and%20presentations/pdfs/roadshows/genesis-energy-investor-roadshow-presentation-november2019.pdf](https://gesakentico.blob.core.windows.net/sitecontent/genesis/media/new-library-(dec-2017)/about_us/investor/reports%20and%20presentations/pdfs/roadshows/genesis-energy-investor-roadshow-presentation-november2019.pdf)

- Contact Energy's Tauhara geothermal has an LRMC of less than \$60/MWh - lower than the amount they paid for gas (including carbon) in the last two financial years - and would generate 2,050GWh per annum<sup>9</sup>
- planned investment appears to be sufficient to meet the 1,100kt CO<sub>2</sub>-e reduction in electricity sector emissions in 2025 in the government's proposed provision emissions budget<sup>10</sup>
- Officials should analyse whether traditional thermal capacity is still being used as 'baseload' before making any decisions
- Government initiated virtual asset sales between Genesis and Meridian, and the swaption, will be impacted by any change to the operation of the Huntly plant with flow-on effects on hydro storage management.

We suggest the following two pieces of work be prioritised ahead of any decision to investigate a thermal strategic reserve. In our view, these suggestions have more potential to reduce GHG emissions than supporting renewable investment with a temporary thermal strategic reserve.

- i. investigate and publish a detailed study of the future availability of gas for electricity generation – given it is easier and quicker to purchase higher emitting coal if there is an energy shortage than invest in renewables
- ii. undertake a detailed study of the wholesale market – including the existing reserves market – to determine if it is fit-for-purpose with a higher proportion of renewables. This should include analysis of possible designs for, and value of, a capacity market.

### **Other options considered**

Flick notes the range of options that officials have reviewed and propose not to investigate further.<sup>11</sup>

However, we recommend that this option "*Co-ordinated procurement of new generation (single-market buyer) – govt control of new generation investment by contracting via auctions and/or issuing licenses for new generation*" only be dismissed on the basis that work is completed to ensure and confirm there is a functioning and performing wholesale market that addresses issues we have noted elsewhere in this submission.

Flick agrees further work on these options is not warranted (question 8.30):

- Government-sponsored storage facility for firming hedge products – eg govt investment in batteries
- State-owned enterprise for renewable investments – could be a developer or contract (PPA) new renewable investment and sign off-take contracts with new or existing load that is electrifying
- Tax incentives for renewable electricity generation

<sup>9</sup> Page 33 <https://contact.co.nz/-/media/contact/mediacentre/presentations/23102019-international-investor-roadshow-presentation.ashx?la=en>

<sup>10</sup> Page 28 <https://www.mfe.govt.nz/sites/default/files/media/Climate%20Change/reforming-the-ets-proposed-settings-consultation.pdf>

<sup>11</sup> Pages 90 – 92 of the discussion document



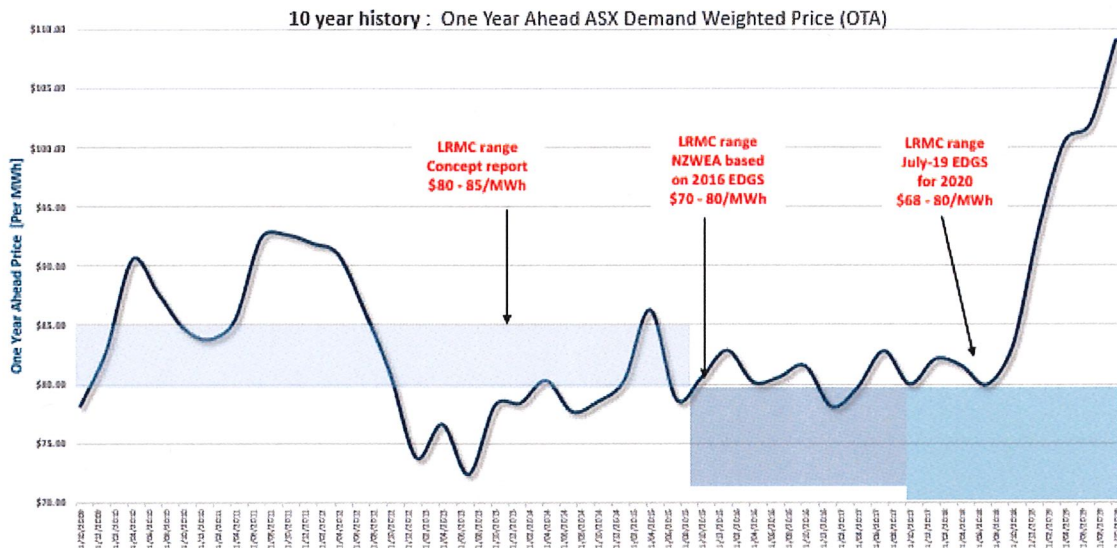
- Provision of subsidies via auction (one-off or in rounds ie. biennially) – eg feed-in-tariffs or CfDs awarded to new generation. However, new renewable generation is economic at current LOCE.

We disagree with the statement:

*"Under the current market structure there is diversity of views regarding future supply needs."*<sup>12</sup>

In our view, there is not much diversity in views as three companies announced at about the same time that they had decided to invest in (or were investigating) new generation capacity after no grid-connected investment has been made since 2014 and a considerably long period of high wholesale prices. Independent retailers, and businesses exposed to the wholesale market, have been financially exposed to these high prices. High hedge prices have been well above the LRMC of this new generation for many months.

## LRMC falling and futures increasing



Officials could usefully study if the dominance of vertically integrated gentailers in both the generation investment and wholesale markets is in the best interests of consumers and if this market structure can be relied on to achieve the government's ambitious renewables and climate change targets.

We welcome the opportunity to discuss our submission with you in more detail.

Yours

**Steve O'Connor**  
Chief Executive

<sup>12</sup> 4<sup>th</sup> paragraph page 91 of discussion document

