



Promoting competition in the wholesale electricity market in the transition toward 100% renewable electricity

Contact Energy Limited Submission

14 December 2022

Executive Summary

1. Thank you for the opportunity to provide Contact Energy Limited's (Contact) views on the Electricity Authority's (Authority) consultation paper on promoting competition in the wholesale electricity market in the transition towards 100% renewable electricity.
2. We agree with the Authority that healthy competition is the best way to improve wholesale market outcomes – and we expect opportunities to improve as electricity demand grows and new generation is needed. We also agree with the Authority that fundamental structural reform is not required, but do consider some reform is necessary to support participation in all energy markets in order to meet our decarbonisation and electrification challenge.
3. We expect that the Authority will receive a range of robust submissions to this consultation paper, including from some parties that may criticise the performance of the wholesale market, and the generator's role in it.¹ We therefore request that the Authority allow for a round of cross-submissions to allow us to respond to matters raised relating to Contact Energy. This will also provide us an opportunity to support or raise concerns with alternative options proposed by other parties.

The Challenge

4. As an industry we, and all participants, have come through a period where the impact of COVID, tight supply chains, skilled labour shortages, and a turbulent geopolitical environment has placed additional pressure on key development and construction activity. These issues, coupled with low hydro inflows, gas supply constraints, regulatory uncertainty, and rising carbon prices, have all contributed to higher electricity prices.
5. More than ever, the industry needs certainty to support investment decisions, reduce regulatory barriers, and provide the right market signals to move toward 100% renewable electricity. We have seen a number of new generation announcements in solar,² and wind.³ While such developments are positive, they also necessitate the need to provide appropriate price signals for peaking capacity to support the energy system in calm, dry and cloudy conditions. Under the current market structure, running and maintaining thermal peaking plants only a few times a year won't be viable, especially as carbon prices continue to rise.
6. In addition, the flexibility required to meet peak demand is forecast to increase substantially to 2030 and beyond, and so the deployment of smart technologies will need to accelerate in the near-term to match the pace of the future system. Ensuring the industry has the right signals to attract and retain flexible capacity, as well as frameworks to enable increased demand-side participation will be critical.

¹ <https://www.nbr.co.nz/business/electricity-regulator-rejects-radical-solutions-for-power-market/>

² <https://lodestoneenergy.co.nz/farms/>.

³ <https://www.energynews.co.nz/news/wind-energy/118950/kaiwera-downs-among-80-mw-new-southland-wind>

The Way Forward

7. Contact supports a transition that enables deep, rapid decarbonisation at the lowest cost possible. This will require rapid build out of renewable generation and sees peaks and dry years supported by batteries, demand response, some renewable overbuild and a small amount of fossil fuelled generation (approximately 2% of total generation) in 2030. This pathway is supported by the Boston Consulting Group's (BCG) report *The Future is Electric*.⁴
8. At present, Contact has over \$1b of construction projects underway at Tauhara and Te Huka. We have well progressed plans for up to 5.6TWh of new renewable generation this decade. This equates to an increase in Contact's net generation output of more than 50 percent. The BCG report supports an increase of 11TWh of generation in New Zealand by 2030. Contact's current and planned investment will contribute almost half of this growth, aligning with our strategy to lead New Zealand's decarbonisation.
9. There are three key enablers to promoting competition in the wholesale electricity market in the transition that we focus on in this submission. These are:

a) Unlocking mass market demand response

Peak demand in New Zealand's electricity system is expected to reach ~7.3GW in 2030 and almost ~10GW by 2050. This will be driven by growing load volumes through widespread electrification and changing patterns in storage, supply, and demand. To meet this future peak demand, substantial flexible supply-side and demand-side capacity will need to be installed to solve the inevitable higher levels of variability with intermittent wind and solar.

Currently demand response is held back by challenges around market access, contract length (term), and a lack of standardisation between retailers. We recommend the Authority immediately begins a work programme to resolve these issues. This should include consideration of some form of wholesale demand response mechanism, like that implemented in Australia in 2021.

b) Consenting frameworks

Resource management reform, including a much more effective National Policy Statement on Renewable Electricity Generation must address potential issues associated with consenting renewable energy projects, including in relation to proposed environmental limits. Given the renewable overbuild required, such developments will be foundational in a successful transition to 100% renewable electricity, and therefore need to be reflected through the Natural and Built Environment Bill and the Spatial Planning Bill (which are set to replace the Resource Management Act 1991). The timing of these projects is of the essence, and it is critical that the new legislation make explicit and effective provision for the consenting (and re-consenting) of renewable projects if we are to meet the 100% renewable electricity challenge by 2030.

c) Upstream gas information disclosure requirements

⁴ <https://web-assets.bcg.com/18/8c/583cf435404491fdcf5614ddd415/the-future-is-electric-full-report-october-2022-new-zealand.pdf>

Improve the accuracy and reliability of upstream gas supply information both under existing and amended legislation. The current quality of upstream gas information is hindering security of supply assessments, dry year risk management, and monitoring of trading conduct. We consider this to be a very practical “low-hanging fruit” step to improve competition.

10. We are mindful that our suggestions under both b) and c) above are not strictly within the Authority’s ambit of control, but we strongly encourage it to exert as much influence as possible to drive these changes. To this end, we are pleased to see the Authority’s engagement with MBIE and support further steps for the Authority to lead a coordinated whole-of-sector approach.

Promoting wholesale electricity market competition in the transition

11. This submission focusses on how competition in the wholesale market could be improved. We focus on the development of flexibility markets, consenting frameworks, and information disclosure requirements. Finally, we also make a factual correction regarding the hydro storage figures cited by the Authority.

Demand Flexibility

12. Demand side flexibility (DSF) will play a vital role in the future of the electricity market. Over time we expect capacity constraints to have a more significant impact on wholesale market price outcomes (as opposed to the market historically being primarily energy constrained), and this will lead to more variable and volatile prices. DSF can then step in to reduce load and provide additional competition to hydro generation during periods when intermittent generation output is reduced.

13. Given these increasing capacity risks and limited options for supply side flexibility on the horizon, we support the Authority's proposal to "investigate mechanisms to accelerate the development of the demand response market". Relative to supply-side flexibility, new sources of DSF can be developed much faster and have the potential to support winter capacity margins in the short-medium term.⁵

14. Contact's views on accelerating the development of DSF to support the energy market are informed through our experience as the owner of Simply Energy Limited (Simply), which is one of the largest commercial and industrial (C&I) retailers, and one of the largest providers of demand flexibility in New Zealand. Simply's Demand Flex programme pays businesses to switch off selected electrical equipment on-demand. Customers at over 60 predominantly industrial sites, across a range of sectors, are participating in the programme.

15. In the first instance we are targeting C&I load. While there is also some potential with smaller customers there are greater technology barriers and consumer acceptance with these customers. C&I represents a significant part of total demand and is usually where the majority of the initial uptake of DSF in a market comes from. Simply is both a C&I retailer and a flexibility trader, and hence can draw on experience in both roles when assessing the merits of various proposed mechanisms which are being considered to accelerate the development of wholesale energy market DSF. It is also worth noting that the vast majority of Simply's flexibility service customers are not also retail supply customers.

⁵ generally a 1-3 year lead time, we do not see new demand side flexibility playing a significant role in winter 2023, aside from previously developed flexibility such as resources contracted to the Transpower demand response program before it was suspended

16. We also note that not all DSF is created the same. For this paper we use the following terminology to refer to the key different types:

17. **Energy Market DSF** – demand side generation or load which can respond to external signals or prices to help manage peaks in the physical energy market, and reduces spot market costs for the energy retailer. There are broadly two different ways a consumer can be incentivised to provide forms of energy market DSF:

- a. **DSF tariffs** – involve a retailer tariff pricing structure which either requires or incentivises the customer to modify generation and or consumption patterns in exchange for lower electricity bills. DSF tariffs are in their infancy in New Zealand; a few retailers have implemented basic DSF mass market tariffs, and a small number of very large and long term bespoke contracts have been developed primarily for new electrification projects, and
- b. **Energy Market Demand Response (DR)** – involves a retailer or flexibility trader putting an agreement in place (separate to the retailer supply agreement) with the customer which either requires or incentivises the customer to modify generation and or consumption patterns in exchange for payments. There is negligible Energy Market DR in New Zealand currently.

18. **Ancillary market DSF** – demand side flexibility that offers into the reserve market. This is currently the main form of DSF in New Zealand.

19. **Other DSF** – demand side flexibility that offers into other markets, such as the Transpower DR programme or bespoke contracts with distributors. These markets are in their infancy in New Zealand.

20. In attachment 1 we provide further details on each of these types of demand response, and consider them against some of the challenges we note below.

The time has come to ramp up DSF

21. We are now starting to see the right market conditions for DSF to begin to really ramp up. DSF thrives in more volatile markets where there are opportunities to reduce load for short periods of time to take advantage of high spot market prices. As recently noted by the Authority, volatility really ramped up in September this year and looks likely to be a continuing trend.⁶

22. The key to unlocking widespread C&I demand response will be ensuring that both retailers and specialist flexibility traders are able to compete freely in the market. Enabling flexibility traders to also drive the development of energy market DSF increases the likelihood of significant uptake because:

- a. Specialist flexibility traders have specialist knowledge and systems designed for DSF. We expect that even where DSF is nominally provided

⁶ <https://www.ea.govt.nz/about-us/media-and-publications/market-commentary/market-insights/electricity-price-volatility-an-emerging-feature-in-an-increasingly-renewable-market/>

by an existing retailer, there will often be a specialist flexibility trader providing their expertise and technology platform in the background.

- b. Specialist flexibility traders have the right incentives to maximise DSF. Energy retailers may be hedged or vertically integrated, minimising their incentive to respond to high spot prices. Therefore, it is important the flexibility traders can also develop wholesale DSF in their own right rather than just as service agents for retailers.

23. To date, Simply's energy market DSF activities have been limited to bespoke tariff applications for very large industrial loads which are supplied by Simply. We have not developed either DSF tariffs for our retail customer base, or an energy market DR product for our ancillary, or other DSF customer base due to the challenges discussed in the sections below.

Energy Market DSF challenges

24. In our experience we find three challenges limiting the ability of both retailer and specialist flexibility traders to develop energy market DSF:

- a) **Market access.** From a flexibility trader perspective, an energy market DSF product is reliant on establishing an agreement with the customer's energy retailer to gain access to the DSF value (given the direct beneficiary of the DSF accrues to the retailer through reduced wholesale energy purchase costs). This is in contrast to ancillary market DSF, which enables a flexibility trader to directly access value through offering load from customers with any retailer. For the development of energy market DSF, the retailer may not want to deal with the flexibility trader. The retailer may already be hedged through being vertically integrated, may consider the flex trader to be a competitor to their own retailer or energy services business, or may look to retain a significant portion of the DSF value created leaving little to share with the customer or fund the DSF setup and systems.

From a retailer perspective looking to grow DSF through the use of DSF tariffs, because under the current arrangements the energy market value is only accessible through retailer electricity supply costs, the retailers ability to grow energy market DSF is dependent on their ability to attract and retain electricity supply customers, which naturally limits the potential to grow DSF. Simply has lost electricity supply opportunities where we have offered DSF tariffs that have not been competitive with standard tariffs from other retailers, highlighting that DSF capability itself is not enough to be competitive and drive DSF uptake.

- b) **Term.** DSF setup costs (hardware, staff, electrical, automation costs etc) are often high, and the monitoring and control hardware required is tied to the flexibility providers platform.⁷. To cover these setup costs Simply's bespoke energy market DSF tariff contracts have been considerably

⁷ The flexibility equipment is generally tied to a cloud based flexibility platform and would not be useable by another retailer or flexibility provider when the customer switches retailer (unlike smart meters for example)

greater than 5 years, and our standard ancillary DSF customer contracts are 5 years. This enables a payback on the direct setup costs⁸ In contrast energy supply contract terms are generally 1-3 years. This difference in contract term provides a challenge for customers, retailers and flexibility traders.

For customers, the flexibility value is small relative to energy supply costs and they need to be able to manage energy procurement independently of flexibility arrangements. For retailers and flexibility traders, it can be difficult to justify the flexibility setup costs based on a shorter-term supply tariff. This is because when the customer switches energy supply retailer the flexibility equipment will no longer be of use for reducing wholesale purchase costs (in the case of the retailer), and access to the energy market value through the retailer will be removed (in the case of the flexibility trader).

- c) **Standardisation.** Developing an economic DSF product, especially when the flexibility value is not high, relies heavily on ensuring the product is applicable to the widest range of customers possible (as an example, the Reserves and Transpower DSF markets enable a flexibility trader to offer the same standardised DSF product to all customers in NZ). For a flexibility trader providing energy market DSF through an arrangement with the customer's retailer, when the customer inevitably switches retailer the flexibility trader will either need to terminate its DSF arrangements with the customer or engage with the new retailer and attempt to put in place suitable arrangements. The new retailer may not have interest in DSF or may have completely different requirements which would require the flexibility trader to develop more bespoke software and may be incompatible with the arrangements with the flexibility trader. It is worth noting that a more competitive and fragmented retail market over time only exacerbates this issue.

Proposed arrangements are not sufficient to support energy market DSF uptake

25. A number of mechanisms are under development have been proposed to accelerate the uptake of energy market DSF. While commendable, on their own these mechanisms do not address the challenges identified above, and are unlikely to drive a material uptake in energy market DSF.

26. **Dispatch Notifications (DNx):** From April 2023, DNx will enable retailers and flexibility traders to offer MW reductions into the wholesale market, and be dispatched like generation if the wholesale price is above the DSF offer price. This enables DSF to be involved in the price setting process. In particular it avoids the scenario where a controllable load switches off in response to a Real Time Dispatch price at the start of a trading period, only to see the impact of the load

⁸ The DR monitoring and control equipment we install would be tied to Simply's DR platform, and would not be useable by another retailer or flexibility provider when the customer switches retailer

reduction result in a lower price in minutes 5-30 of the trading period. This scenario can undermine the economic case for DSF.

27. While we commend the EA on enabling DNx, it doesn't address any of the market access, term or standardisation challenges discussed above.

28. **Demand Side Flexibility (DSF) Tariffs:** The MDAG 'Price discovery in a renewables-based electricity system' consultation released in December 2022 focuses on retailer DSF Tariffs as the key mechanism to drive the uptake of energy market DSF. However, for the reasons set out above including the term issue, we do not believe this is a practical solution for C&I customers.

Additionally, MDAG's proposed DSF Tariff pilot funding places all our eggs in the retailer basket. It is unclear whether the majority of retailers have interest or are well positioned to develop the complex DSF tariffs and billing systems required (in addition to the actual DSF requirements). We believe there is merit in incentivising and enabling a broader range of parties beyond retailers to develop energy market DSF (through both pilot funding and market settings).

29. MDAG has already noted that "*vertically integrated generator-retailers have dampened incentives to utilise DSF*". That MDAG has already raised the potential need to mandate adoption of DSF tariffs goes to show that we should think carefully about whether retailer-led DSF Tariffs are the solution to driving energy market DSF uptake.

30. **Multiple Trading Relationships (MTR):** MTR has been proposed as a method of enabling, for example, one party to retail electricity for the controllable refrigeration load at a large meat processing site, and another party to retail electricity for the rest of the load behind the same ICP. This would enable the retailer to build a portfolio of controllable load on FPVV supply contracts, with their ability to control the load making it more economic to hedge and manage their wholesale exposure.

31. For retailers, being able to control part of the load doesn't overcome the term issue to implement an energy market DSF product with DSF equipment discussed above. For specialist flexibility traders, MTR relies on them also becoming retailers in order to access the wholesale value. In a small market like New Zealand this requires significant investment from a flexibility trader in an area where it may have no existing business systems. This is likely a barrier to entry for the large majority of specialist flexibility traders.

Exploring other mechanisms to support energy market DSF uptake

32. We encourage the Authority to explore other mechanisms which can address the market access, term and standardisation considerations above. One mechanism which we believe is worth further consideration is a 'Negawatt' scheme. As an example we have provided an overview below of the Wholesale Demand Response Mechanism (DRM) introduced in the National Energy Market in Australia for commercial and industrial customers in 2021.

33. The Australian DRM works by enabling flexibility traders to contract with any customer, regardless of who their electricity retailer is, and offer DR directly into the

wholesale market. The offers and dispatch are similar to the DNx product discussed above. Flexibility traders can offer 'Negawatts' at various price tranches into the wholesale market, and be dispatched based on the combined bid stack with generation. However, rather than requiring the flexibility trader to develop bespoke arrangements with the retailer to access the energy market value, the DRM centralises the market arrangements including the use of meter data, baseline methodologies and a settlement mechanism. For each DR period the retailer will be charged by the Australian Energy Market Operator (AEMO) for both the customers' actual metered (post DR) consumption and the DR costs, and the flexibility trader receives from AEMO the DR value (which can then be passed on to the DR customer based on the commercial arrangements in place with the flexibility trader).

34. The DRM resolves the key barriers to energy market DSF uptake identified above. Market access is facilitated by enabling both retailers and independent flexibility traders to access the energy market value through the DRM. Standardisation is achieved through the central market mechanism. And the term issue is solved as the flexibility arrangements are not reliant in any way upon the retail supply relationship. We believe this approach of separating the flexibility provision from retail electricity supply maximises the prospect of strong competitive markets existing with specialist providers on both fronts. Customers can switch retailers independently of their flexibility arrangements and vice versa.
35. MDAG has not supported a DRM type scheme. One of the reasons is because of the complexity of setting up such a scheme, including setting baselines to estimate the customers load in absence of the DSF being provided. We do not consider this to be a material concern. Setting baselines is a standard part of a DSF service. If we implemented a DR program with a Simply electricity supply customer (as opposed to a DSF tariff) we would use a baseline methodology to calculate DR payments to the customer. If we put in place arrangements with customers whose physical electricity is supplied by another retailer, we would need to agree a baseline methodology to calculate DR payments payable from the other retailer to Simply. A DRM centralises these arrangements across the marketplace reducing complexity, not increasing it.

Consenting Frameworks

36. It's established that renewable overbuild, gas-fired generation, and largescale demand response will be required to meet future peak demand, and energy needs in drier than average seasonal conditions. There is a need to develop, with speed, a significant portion of the wind and solar capacity that is currently unconsented. It is critical that future spatial planning and consenting frameworks are fit for purpose and allow the industry to expedite the delivery of renewable generation developments.

37. The sheer scale of new renewable generation required by 2030 is daunting. Of the estimated 10.9GW in the pipeline to 2030, BCG estimates 8.2GW^[1] of that is *unconsented* generation (early, concept-stage developments) that will need to be developed. That represents a significant proportion of the generation required; a huge amount is contingent on timely approval. Given the scale, and need for speed, there is a real risk that the new planning and environmental legislation, including the vitally important transitional provisions from the existing RMA, will not be able to cope or may even create a temporary consenting vacuum or paralysis which will put the industry (and therefore the country) at serious risk of being too slow to meet our demand and decarbonisation targets.
38. For example, one of the key issues is that hard, immutable limits are proposed to be set for the use of natural resources such as freshwater takes, water quality, biodiversity, indigenous flora and fauna, and rural land (which we support). However, these limits are at risk of being delivered in “black and white” or “pass or fail” terms, whereby “no loss of XYZ” is the threshold that must not be exceeded, whether or not there is a demonstrable, overall environmental benefit, including through environmental compensation, offset or redress; or the benefits in relation to climate change. Large-scale wind farm developments, for example, will always be located near the resource (i.e. a windy, usually visible location at altitude), and on many sites it is near impossible to completely avoid any loss of indigenous vegetation, birdlife, landscape or visual amenity value, despite significant environmental benefits through environmental offsetting, compensation, remediation or redress, as well as the obvious emissions reduction benefits.
39. We urge the Authority to engage with the Natural and Built Environment Bill and the Spatial Planning Bill (which are set to replace the RMA) to ensure renewable energy interests are addressed in a meaningful, effective way. At this point we need a pragmatic rather than purist approach through coordination between, and within, government agencies to ensure that no unnecessary constraints will prevent the consenting and development of the unconsented renewable pipeline.

Proposed disclosure requirements

40. Contact agrees that incomplete, unreliable information about upstream gas supply is hindering security of supply assessments, dry year risk management, and monitoring of trading conduct. To this end, we note that MBIE could and, in our view should, disclose more upstream gas market data on a more regular basis than what it currently does.
41. MBIE could disclose the following information with no legislative or regulatory change, all of which would give more insight into the availability of gas:
- a. **Monthly gas production by field.** This information is currently collected under the Gas Act 1992 and its subsidiary regulations the Gas (Statistics)

^[1] Above n 4, p 120.

Regulation 1997. At present, MBIE only publishes gas production by field on an annual basis. There is no reason why MBIE can't publish this information more frequently. Comprehensive monthly production numbers by field would provide a complete national perspective of the upstream gas market which would supplement daily gas injection and export data available through OATIS and which gives an accurate picture of production by field for some, but not all, fields.

- b. **Earlier disclosure of reserves and forward production profiles.** Under the Crown Minerals (Petroleum) Regulations 2007, MBIE collects information on the proposed production profile for the life of the field. This information represents the field operator's best estimate as of 1 January each year. MBIE collects this data by 31 March each year but only discloses it in July at the earliest (by which time it is at least 7 months out of date).
- c. **Daily well, reservoir, and field production:** As part of the 2013 amendments to the Crown Minerals Act 1991 regime, the Crown Minerals (Petroleum) Regulations 2007 now allows, but does not oblige, MBIE to publish each year and for each well, reservoir and field, the calculated and measured daily production rates for oil, condensate (C5+), liquefied petroleum gas (propane and butane), gas (methane and ethane), and water. The introduction of this information disclosure provision in 2013 was intended to allow an informed observer sufficient information to understand how a field was performing and might perform in future. Unfortunately, MBIE does not proactively disclose this information (although it does release it when an Official Information Act request is submitted).

42. There are other areas which would require legislative and/or regulatory changes. These include:

- a. **Updated field production outlook.** Major downstream participants with multi-year contracts benefit from periodic updates from gas producers on a field's production outlook where contracted supply may be at risk. This information is sufficiently important to both the gas and electricity markets that it should, in our view, be publicly available.
- b. **Internal transfer pricing arrangements.** Electricity generator/retailers are actively encouraged to disclose internal transfer prices. There are no similar arrangements in the upstream gas market even though the impact on wholesale electricity prices is arguably the same.
- c. **Major contract disclosure.** We are uncertain as to whether a change to section 46 of the Electricity Industry Act 2010 is preferable to a change to section 41B of the Crown Minerals Act 1991. Section 41B of the Crown Minerals Act 1991 requires that permit participants apply for consent to any agreement where the term of the agreement is 12 months or longer. We think this section could be amended such that all gas sales agreements that have a term of 6 months or longer are required to be submitted to MBIE for

approval, with either full disclosure or at least key elements such as contracted parties, term, volume, and price publicly disclosed.

43. We encourage the Authority to engage with MBIE on how it can support disclosure requirements that will improve competition in the wholesale electricity market.

Consultation paper overstates Contact's stored hydro capacity

44. We agree with the Authority on the increasing importance of stored hydro, particularly during extended periods of low wind and cloud. However, the figures in Table 2 do not align with stored hydro capacity levels published by Transpower⁹, NZX Hydro¹⁰, and various Contact Energy investor presentations¹¹. Specifically, Table 2 significantly overstates the stored hydro capacity of Contact Energy (286 GWh pa rather than 760 GWh pa) and Mercury (572 GWh pa rather than 1,105 GWh pa).

45. Contact's stored hydro capacity is small (3%) in the context of the quantum of electricity we generate and acquire from third parties. Any inference that Contact can exert any market dominance from our relatively small hydro storage capacity is simply incorrect.

46. Noting the importance of stored hydro capacity both now and into the future, we support regulatory reforms that would reduce the barriers to entry of developing additional stored hydro. Specifically, we support initiatives that strengthen national direction for renewable generation **and hydro storage** [emphasis added] to inform local planning and resource management consenting.

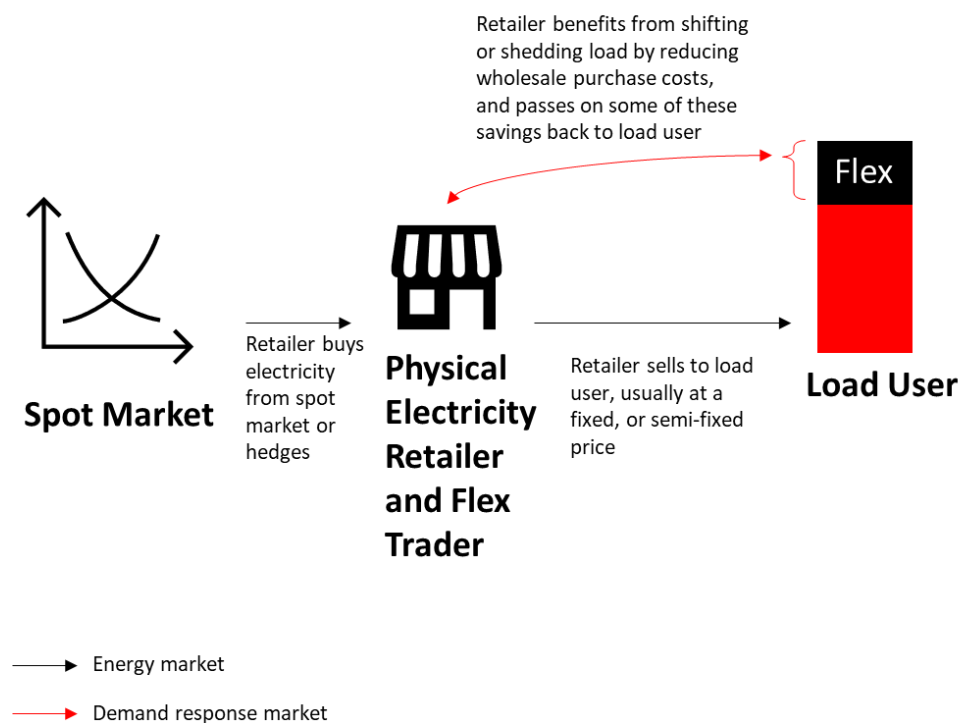
⁹ <https://www.transpower.co.nz/system-operator/notices-and-reporting/weekly-reporting/hydro-information>.

¹⁰ https://energy.nzx.com/secure/help/stored_energy.

¹¹ <https://contact.co.nz/-/media/contact/mediacentre/presentations/2022-international-roadshow-presentation.ashx?la=en>.

Attachment 1: Four types of DSF arrangements

Type 1: Energy market DSF with integrated retailer and flex trader



Assessment

There are two forms of this type of DSF

Bespoke retailer tariffs

Bespoke tariffs typically relate to very large industrial loads. Simply has a small number of these types of contracts, generally related to new electrification projects, but they are a very small segment of the overall market and not in themselves going to drive widespread DSF uptake.

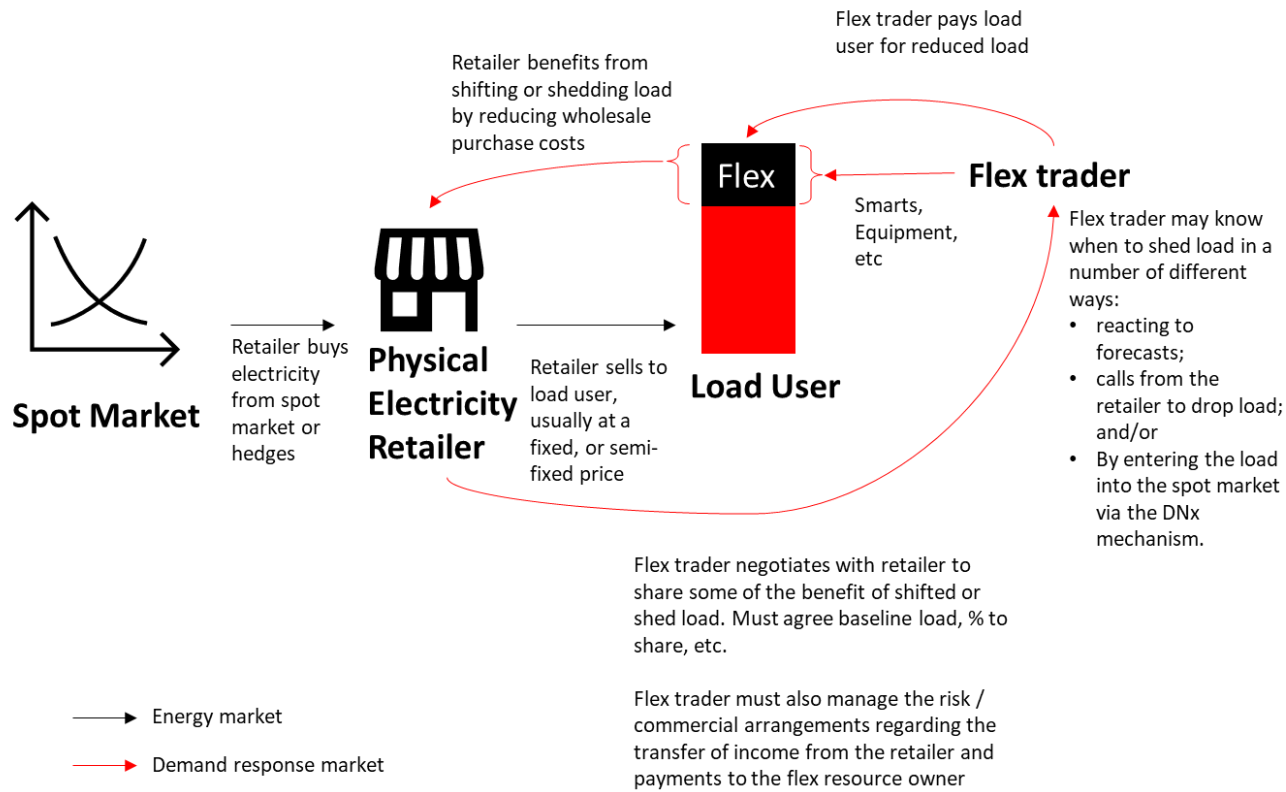
Incentives to offer	✓	Can be good incentives to offer given the size of the load
Market access	✓	Vertical integration of retailer and flex trader
Term	✓	Typically a longer term deal
Standardisation	✓	Projects are usually large enough to justify a level of bespoke development.

Standardised retailer tariffs

Off the shelf standardized demand response tariff, similar to that considered by MDAG

Incentives to offer	×	Retailers spot market incentives are minimised by their own hedges and generation capacity
Market access	✓	Vertical integration of retailer and flex trader
Term	×	Term usually not long enough to pay off DSF equipment
Standardisation	×	Churn between retailers will result in different standards being applied

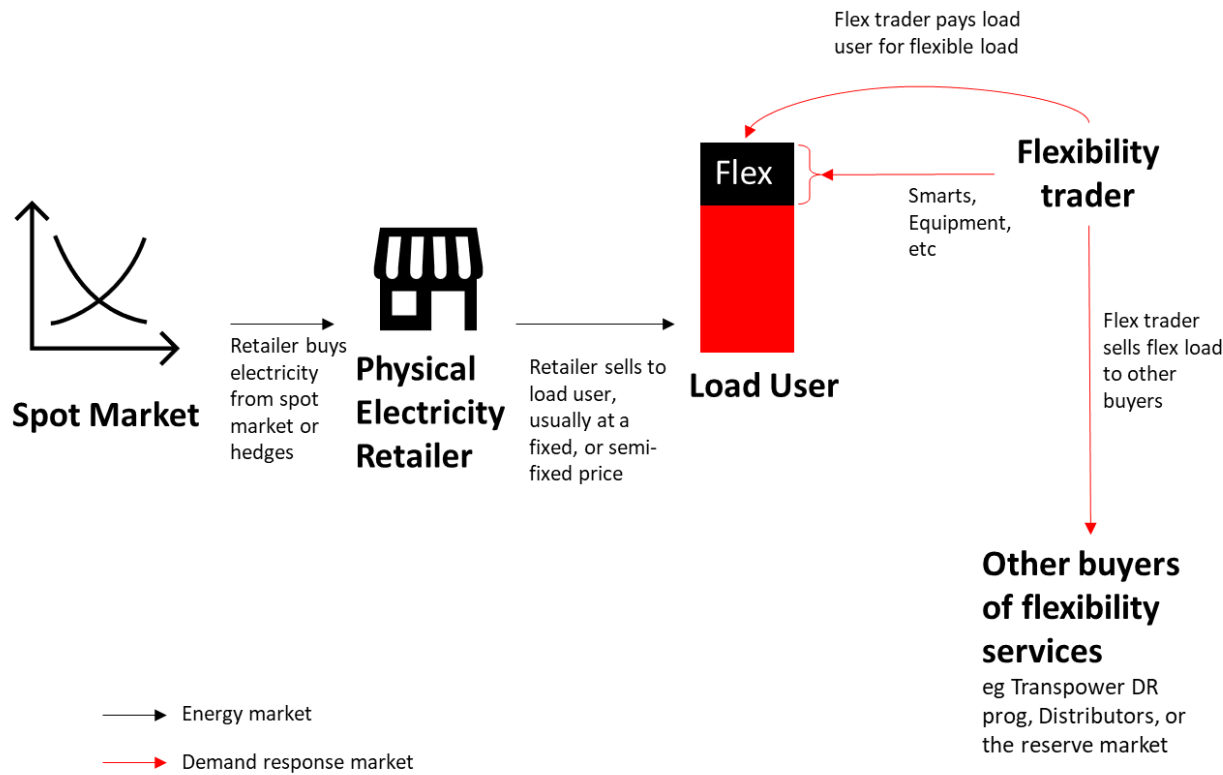
Type 2: Energy market DSF with independent flexibility trader



Assessment

Incentives to offer	✓	Flex trader is focussed on the ability to maximise DR
Market access	✗	Can be difficult to reach agreement with retailer. The retailer may already be hedged through being vertically integrated, or may consider the flex provider to be a competitor, or may simply not want the complexity.
Term	✗	Retail term usually not long enough to pay off DSF equipment, and a risk that on churn the new retailer will not want to work with flex trader.
Standardisation	✗	When the customer switches retailer the flex trader will have to engage with the new retailer who may have completely different requirements, adding cost and complexity.

Type 3: Ancillary and other market DSF



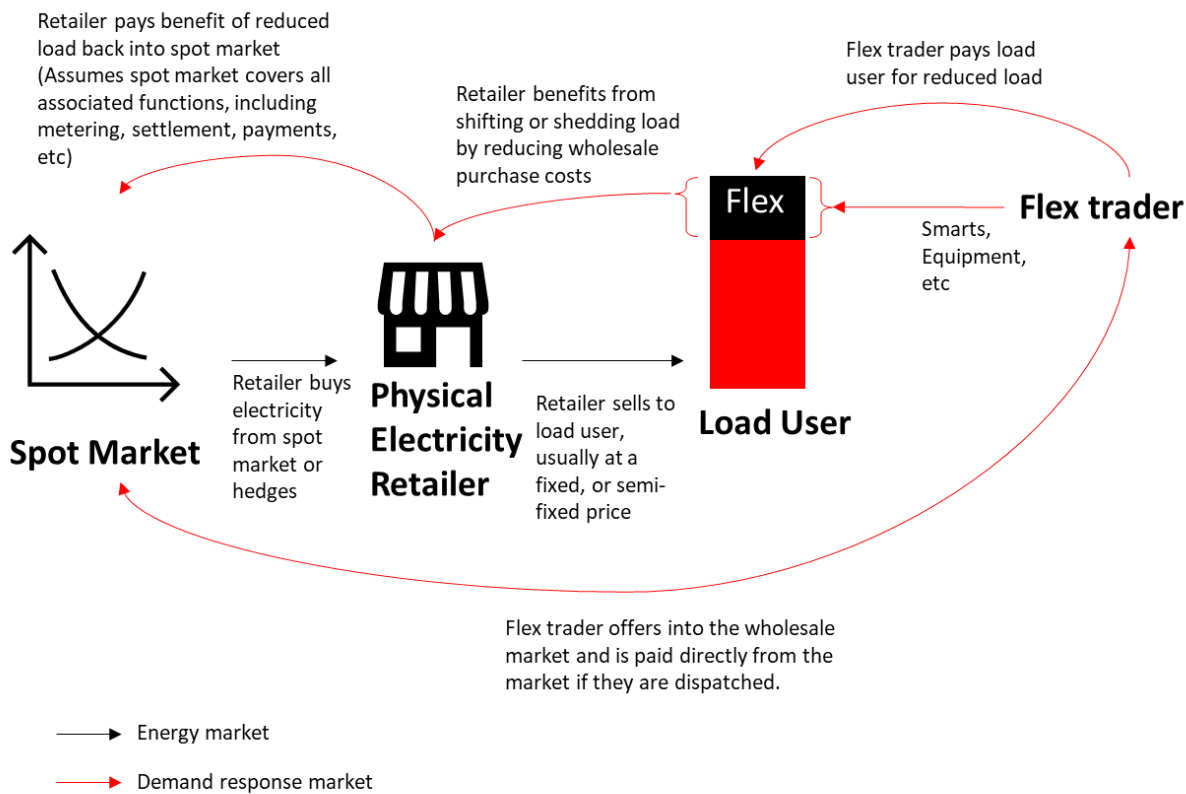
Assessment

This is the most common type of demand response approach taken by Simply However, there are challenges to applying this model in the energy market

Often these demand response customers are not Simply energy retail customers. These customers are a significant opportunity for expansion into types 2 or 4 if market arrangements are improved.

Incentives to offer	✓	Flex trader is focussed on the ability to maximise DR
Market access	✓	Can be done outside of retail energy arrangements
Term	✓	Not related to retail term
Standardisation	✓	Can keep same arrangements when customer switches energy retailer.

Type 4: Wholesale flex market (Negawatts / DRM mechanism)



Assessment

We consider that some form of wholesale energy flex market should be considered in NZ. We provide a summary of the scheme established in Australia in the main body of the paper.

This would provide a significantly larger amount of flexibility than the current arrangements under Type 3

Incentives to offer	✓	Flex trader is focussed on the ability to maximise DR
Market access	✓	Can be done outside of retail energy arrangements
Term	✓	Not related to retail term
Standardisation	✓	Can keep same arrangements when customer switches energy retailer.