Submission on *Measures for Transition to an Expanded and Highly Renewable Electricity System*

Name	
Organisation (if applicable)	solarZero
Contact details	

Release of information

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Responses to questions

Part 1: Growing Renewable Generation

Are any extra measures needed to support new renewable generation during the transition?

1. Please keep in mind existing investment incentives through the energy-only market and the ETS, and also available risk management products. Any new measures should add to (and not undermine or distort) investment that could occur without the measures.

The New Zealand economy, like all developed economies, will be electrified in the coming decades. The key question for policy makers is whether this transition will lock Aotearoa/New Zealand into a high cost traditional electricity system or a lower cost smart one. The choice and direction needs to be set right now. Demand is growing, particularly peak demand. Policy needs to get in front of this once-ever change in the electricity system.

Pricing is an excellent means of communication. Changes are needed in distribution and wholesale pricing. There needs to be three focus area:

- Distribution pricing.
- Wholesale market.
- Innovation.

First, distribution pricing. It needs a complete overhaul. The idea of cost-reflective pricing needs to be focused on future costs, not just past costs. Lines pricing should reward peak demand reduction including at times negative pricing, i.e. paying for injection of power. The aim of "cost-reflective" should be to reflect the lowest cost network in the future and the cost reflective pricing should strongly influence the pathway to get there.

Lines pricing should have three main categories for households:

- Time of use.
- Controlled, reflecting the value that lines companies place on controlling hot water cylinders.
- Virtual power plant (VPP) or "super controlled". This "super controlled" rate is for households that have devices that can be controlled and can report that control. A set of technical requirements would need to be met to enable a household to be placed on the "super controlled" rate. This rate is a 21st century version of the controlled rate.

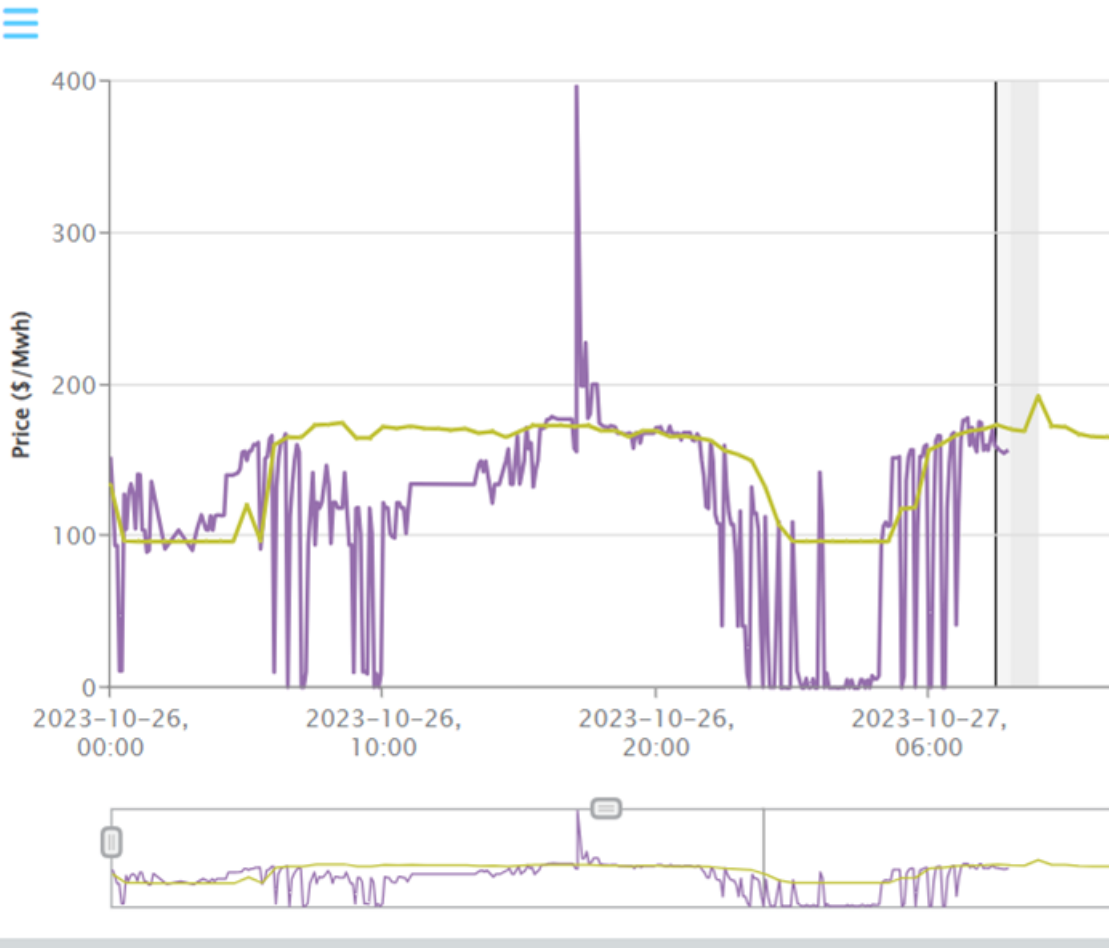
In addition, dynamic operating envelopes should be trialled and developed, quickly. These could be an element of a VPP or "super controlled", or possibly a separate (fourth) pricing cartegory.

Second, the wholesale market needs a rethink. The wholesale electricity market is based on a fossil fuel paradigm, i.e. marginal pricing. As we get closer and closer to 100% renewable generation (i.e. low marginal cost) the principles underpinning the market – marginal prices – break down. There is the possibility that the time-cost value of water (hydro generation) could act as a surrogate for marginal priced generation, but that needs further exploration. IRENA (paragraph 55) may well be right that the concept of marginal priced markets may need to be re-thought as power systems get close to 100% renewable, i.e. low marginal cost, generation. New Zealand seems well placed to lead global efforts to adjust/design a market that works at 100% renewable generation. Involving some of the leading global thinkers we should be exploring market structures at close to 100% renewable (low marginal cost) generation. The market structure may need to be different to the current one.

A key point is that as we approach 100% renewable generation, driven by economics alone, the market will operate at 100% renewable electricity generation for much of the time. We need to work

out now what changes to the market are needed for when the system operates at 100% renewable for the bulk of the time.

The graph below shows 5 minute pricing volatility at times of very high levels of renewable generation. The dispatched price is very different to the forecast price and is highly volatile.



Third: Innovation. In the electricity industry innovation and product development is almost entirely determined by policy and regulation. For example, solarZero could only participate in the reserves market following a change to the Electricity Code that enabled batteries. The pace of change and innovation therefore lies with policy makers and regulators, not with industry. Thus, the pace of the energy transition will be determined by policy makers and regulators. It is time that policy and regulation got in front of technology as it is starting to in some other jurisdictions. New Zealand needs to catch up, rapidly learn from overseas developments and apply the learnings here. The learnings apply to both the transmission (wholesale) and distribution levels.

2. If you think extra measures are needed to support renewable generation, which ones should the government prioritise developing and where and when should they be used? What are the issues and risks that should be considered in relation to such measures?

It is important that solar/battery/flexibility service providers can access the full value stack which requires changes to the Electricity Code, the dispatch system, grid and distribution pricing and associated policy settings. Key government agencies are ComCom, EA and EECA.

Further, resilience should be a focus of renewable energy policy because distributed solar and batteries can massively improve resilience.

In addition, policy needs to be directed towards rental properties in terms of solar and batteries and social housing.

3. If you don't think further measures are needed now to support new renewable generation, are there any situations which might change your mind? When and why might this be?

4. Do you think measures could be needed to support new firming/dispatchable capacity (resources reliably available when called on to generate)? If yes, which kind of measures? What needs do you think those measures could meet and why?

In winter 2023 solarZero tested and proved that its batteries could be dispatched via the market and SPD. Dispatch notified load was used as the means of dispatching the solarZero systems, even though it was actually distributed batteries, not load, that were being dispatched. Measures are needed to support non-traditional capacity such as behind the meter storage and flexibility services. For example, for next winter solarZero will have up to 50MW of distributed battery storage capacity available but there is no clear pathway within the market structures at present other than via hacks and goodwill (e.g. using DNL).

5. Are any measures needed to support storage (such as battery energy storage systems or BESS) during the transition? If yes, what types of measures do you think should be considered and why?

The industry does not fully understand how batteries and flexibility can work in practice. This is not a New Zealand problem – everyone around the world is learning. Pilots and innovation funding is needed to help the whole industry move up the learning curve of how to use this new technology in the power system.

Also, regulation needs to start to move ahead of the technology and focus on encouraging innovation. In the electricity industry the pace of innovation is determined by regulation and policy. Policy and regulation therefore plays a critical part in determining the pace of innovation and thus the pace of the energy transition. Policy and regulation needs to get ahead of the technology curve. At the moment it is well behind in New Zealand and we are using "hacks" to enable new technology into the market (like using DNL).

6. If you answered yes to question 4 or 5 above, should the support be limited to renewable generation and renewable storage technologies only or made available across a range of other technologies?

Keep in mind that fossil fuels are generally the cheapest option for firming, though this may change over time as renewable options (particularly batteries) become more efficient and affordable.

Policy and regulatory initiatives should focus on renewables. The aim of the policy and regulatory initiatives should be to drive innovation.

The point above about fossil fuels being the cheapest option for firming is incorrect and should be corrected. Batteries are now cheaper than peaker plants (https://www.cleanenergycouncil.org.au/resources/resources-hub/battery-storage-the-new-clean-

peaker).

LEVELISED COST OF CAPACITY (AUD$/KW/YR)	TWO-HOUR BATTERY	FOUR-HOUR BATTERY	OPEN CYCLE GAS TURBINE PEAKER
Capital cost	89	139	128
Fixed operations and maintenance	13	23	16
Variable operations and maintenance	18	35	59
TOTAL	**119**	**197**	**203**

LEVELISED COST OF ENERGY (AUD$/MWH)	TWO-HOUR BATTERY	FOUR-HOUR BATTERY	OPEN CYCLE GAS TURBINE PEAKER
Capital cost	143	117	156
Fixed operations and maintenance	26	13	13
Variable operations and maintenance	26	26	65
TOTAL	**195**	**156**	**234**

7. If you answered yes to question 6 above, what are the issues and risks with this approach? How could these risks and issues be addressed?

Innovation funding is well understood internationally used internationally. Australia and UK can provide examples. A key risk is how to deal with Code changes, quickly creating "regulatory sandboxes" and the like.

8. Are any measure(s) needed to support existing or new fossil gas fired peaking generation, so as to help keep consumer prices affordable and support new renewable investment?

Ironically, supporting fossil fuel gas fired peaking generation is likely to make consumer prices more, not less unaffordable.

9. If you answered yes to question 8 above, what measures should be considered and why? What are the possible risks and issues with these measures?

10. If you answered yes to question 8 above, what rules would be needed so that fossil gas generation remains in the electricity market only as long as needed for the transition, as part of phase down of fossil gas?

11. Are there any issues or potential issues relating to gas supply availability during electricity system transition that you would like to comment on?

12. Do you agree that specific measures could be needed to support the managed phasedown of existing fossil fuel plants, for security of supply during the transition?

13. If you answered yes to question 12 above, what measures do you think could be appropriate and why? What conditions do think you should be placed on plant operation?

	For example, do you have any views on whether there should be a minimum notice period for reductions in plant capacity, and/or for placing older fossil fuel plant in a strategic reserve?
14.	If you answered yes to question 12 above, what are the issues and risks with these measures and how do you think these could be addressed?
15.	What types of commercial arrangements for demand response are you aware of that are working well to support industrial demand response?
	This question appears to pre-suppose that only industrial demand response has the scale to be meaningful. Grid edge demand response, such as traditional hot water control and now EV charging plus batteries, are a significant source of demand response. For example, by winter next year solarZero's battery capacity will be around 50MW. By 2030 we expect to have around 400MW of capacity. As well as industrial-scale, please also focus on residential and commercial scale.
16.	What new measures could be developed to encourage large industrial users, distributors and/or retailers to support large-scale flexibility?
	As per the answer to Q15. Grid edge is a significant source of flexibility. Innovation pilots are needed together with policy changes at the distribution level and the national electricity market level. Lines companies should be strongly incentivised to explore non-network solutions (NNS) using an innovation-pilot approach where the whole industry learns. Local NNS can be aggregated to contribute to national-level flexibility. Flex is about local, be it a factory, feeder or sub-transmission solution.
17.	Do you have any views on additional mechanisms that could be developed to provide more information and certainty to industry participants?
	As above. It is not just industry. It is about grid edge also. Again, as above, funded innovation pilots are needed that also may involve relaxing regulatory requirements. Clearly, changes to the electricity market and Code are needed. Avenues need to be created wheeby flexibility services, both industrial and aggregated, can participate in the market on a five minute basis. DNL and DNG are steps in the right direction but they provide a view through a window of what could be possible at some point in the future, rather than enabling real participation. Enabling flex to fully participate in the market and at distribution level needs to be made a very high priority for policy makers and regulators. To restate a point above: Enabling new products and services is totally reliant on policy and regulation. If the market and regulation does not enable something it will not happen. Significant changes are needed to the electricity market (e.g. enabling flex participation) and lines company regulation (e.g. enabling flex) quickly.
Part 2: Competitive Markets	
18.	Do you agree that the key competition issue in the electricity market is the prospect of increased market concentration in flexible generation, as the role of fossil fuel generation reduces over time?
	This is the wrong question at the wrong time. The right question is how can flexibility be enabled. Once it is enabled then issues of market power and competition can be addressed.

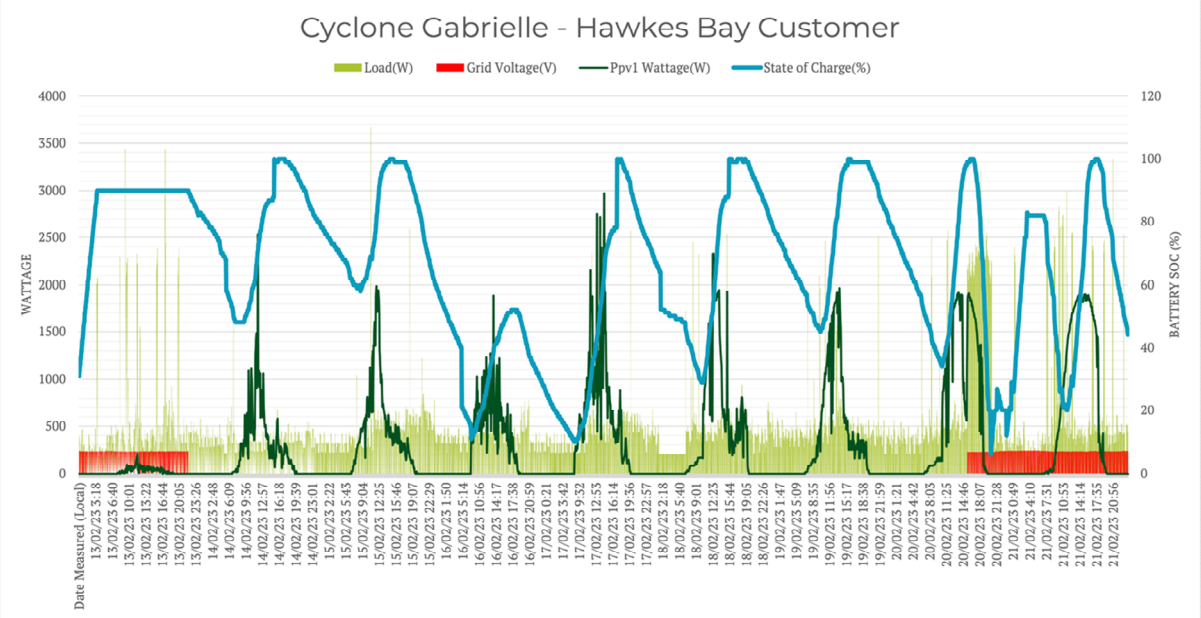
19.	Aside from increased market concentration of flexible generation, what other competition issues should be considered and why?
	Again, this question is putting the cart before the horse. Let's stand flex mechanisms up and then work through if there are any competition issues and how these might be addressed.
20.	What extra measures should or could be used to know whether the wholesale electricity market reflects workable competition, and if necessary, to identify solutions?
	New Zealand policy makers and regulators need to look around the world and constantly be on the look out for the best ideas to introduce into New Zealand. Our policy and regulatory settings are currently well behind international best practice. For example, NZ enabled batteries in the wholesale market nearly a decade after PJM enabled them. We have some catching up to do.
21.	Should structural changes be looked at now to address competition issues, in case they are needed with urgency if conduct measures prove inadequate?
22.	Is there a case for either vertical separation measures (generation from retail) or horizontal market separation measures (amending the geographic footprint of any gentailer) and, if so, what is this?
23.	Are measures needed to improve liquidity in contract markets and/or to limit generator market power being used in retail markets? If yes, what measures do you have in mind, and what would be the costs and benefits?
	Yes. The market in NZ is illiquid. Something that needs to be look at is the size of the NZ market. Could it be that a small-sized market like New Zealand's requires some design features that are different to larger markets?
24.	Should an access pricing regime be looked at more closely to improve retail competition (beyond the flexibility access code proposed by the Market Development Advisory Group or MDAG)?
25.	What extra measures around electricity market competition, if any, do you think the government should explore or develop?
26.	Do you think a single buyer model for the wholesale electricity market should be looked at further? If so, why? If not, why not?
Part 3: Networks for the Future	
27.	Do you consider that the balance of risks between investing too late and too early in electricity transmission may have changed, compared to historically? If so, why?
	Peak demand is increasing, but can be managed. Without enabling flexibility we will simply never be able to build the power system quickly enough for the energy transition. Therefore, the balance of risks comes down to the policy and regulatory settings: Either (i) enable flexibility at the national and local level, or (ii) face a massive infrastructure deficit and large expenditure. This is the choice for policy makers.
28.	Are there any additional actions needed to ensure enough focus and investment on maintaining a resilient national grid?
	The distinction between local and national blurs as behind the meter controllable technologies are increasingly adopted. So in part the resilience of the grid depends on the policies at the distribution level.

29. Do you agree we have identified the biggest issues with existing regulation of electricity distribution networks?

Yes. There is a massive change coming to the electricity system and the industry is not moving quickly enough to address it.

30. Are there pressing issues related to the electricity distribution system where you think new measures should be looked at, aside from those highlighted in this document? How would you prioritise resolving these issues to best enable the energy transition?

Resilience is also a really important issue. The graph below shows how a house with solar and batteries kept the lights on and the fridge/freezer cold for days after Cyclone Gabrielle. Lines companies should be exploring different, more cost effective ways of providing electricity services to customers.



31. Are the issues raised by electricity distributors in terms of how they are regulated real barriers to efficient network investment?

Please give reasons for your answer. Is there enough scope to address these issues with the current ways distributors are regulated? If not, what steps would you suggest to address these issues?

There needs to be incentives for innovation because a lot of innovation is needed as the power system goes through a one-off massive change. Innovation needs to be supported and encouraged because under the status quo innovation is under provided in terms of what is economically efficient. The power system is going through a one-off massive change.

32. Are there other regulatory or practical barriers to efficient network investment by electricity distributors that should be thought about for the future?

As above. Innovation and learning needs to be supported, encouraged and rewarded.

Cost-reflective pricing needs to reflect *future* costs, not past costs. The reason is that the power system is going through a once ever step change. Either New Zealand develops a very expensive power system or a very cost effective, smart power system.

33.	What are your views on the connection costs electricity distributors charge for accessing their networks? Are connection costs unnecessarily high and not reflective of underlying costs, or not? If they are, why do you think this is occurring?
	In our experience these are reasonable and to date we have not had issues of concern.
34.	If you think there are issues with the cost of connecting to distribution networks, how can government deliver solutions to these issues?
35.	Would applying the pricing principles in Part 6 of the Code to new load connections help with any connection challenges faced by public EV chargers and process heat customers? Are there other approaches that could be better?
36.	Are there any challenges with connecting distributed generation (rather than load customers) to distribution networks?
37.	Are there different cost allocation models addressing first mover disadvantage (when connecting to distribution networks) which the Electricity Authority should explore, potentially in conjunction with the Commerce Commission?
38.	Should the Electricity Authority look at more prescriptive regulation of electricity distributors' pricing? What key things would need to be looked at and included in more prescriptive pricing regulation?
39.	Do current arrangements support enough co-ordination between the Electricity Authority and the Commerce Commission when regulating electricity distributors? If not, what actions do you think should be taken to provide appropriate co-ordination?
	An integrated model is needed first and then a coordinated approach. What we currently see is that the starting point is the agencies' roles. We don't see a coherent plan. Coordination between ComCom and EA has improved in recent years but still does not fill us with confidence that the two agencies are working well together on a coordinated plan.
40.	Will the existing statutory objectives of the Electricity Authority and Commerce Commission adequately support key objectives for the energy transition?
	If boards and staff are willing to make it work then it can work. I suspect we don't know what the right objectives are given the massive transition that the industry is going through. So the boards need to ensure that the staff are working well together and that there is a coherent plan that has good buy in from both agencies (at board and staff levels). Sector/industry buy in is more tricky because parts of the sector may not support parts of the coherent plan because of the large changes the sector is going through could be seen as threatening to existing business models.
41.	Should the Electricity Authority and/or the Commerce Commission have explicit objectives relating to emissions reduction targets and plans set out in law? If so, • should those objectives be required to have equal weight to their existing objectives set in law? Why and how might those objectives affect the regulators' activities?
	Yes. Explicit objectives will influence the focus of the two agencies and their priorities.

42.	Should the Electricity Authority and/or the Commerce Commission have other new objectives set out in law and, if so, which and why?
	Yes. There needs to be an objective to drive innovation in the power system. The electricity market has driven efficiency but enabled much innovation. The reason for the lack of innovation is that Innovation is enabled via new products and services in the market. Put another way, innovation is limited by the range of electricity market products and services. An explicit objective on innovation would, for example, encourage more products and services to be developed in the wholesale electricity market as compared to the EA focusing on just improving existing products and services. An example is reserves, where batteries could not participate in the market until the rules were changed to enable batteries.
43.	Is there a case for central government to direct the Commerce Commission, when dealing with Electricity Distributors and Transpower, to take account of climate change objectives by amending the Commerce Act and/or through a Government Policy Statement (GPS)?
	Possibly. We need to be clear that better technology likely means that the economy will be electrified *anyway*. But we need to ensure that existing regulations and policies do not stand in the way of new technologies, for example, parts of the Electricity Code. Central government needs to direct both the Commerce Commission, EA and Transpower in relation to enabling new technology. We do not have a view on the actual mechanism(s) for this.
44.	If you answered yes to question 43, please explain why and indicate: • What measures should be used to provide direction to the Commerce Commission and what specific issues should be addressed? How would investment in electricity networks be impacted by a direction requiring more explicit consideration of climate change objectives? Please provide evidence.
	Firstly, how could investment in electricity networks be impacted by increased direction in relation to climate change? An example is resilience in the face of climate change. Should lines companies massively strengthen networks in some areas or should networks be encouraged to innovate with new technologies and different business models, for example, working with third parties to deploy solar and batteries in key areas? We think the latter, which would result in a more cost-effective solution that increases resilience and reliability. Second, lines companies need to have stronger direction around efficiency of investment and innovation. Again, exactly what form that direction should take and what mechanisms needs further work. For example, effective rewards for innovation could be a mechanism.
Part 4: Responsive Demand and Smarter Systems	
45.	Would government setting out the future structure of a common digital energy infrastructure (to allow trading of distributed flexibility) support co-ordinated action to increase use of distributed flexibility?
	Likely to be driven internationally. There are some really simple things that government can do, e.g. standardised forms.
46.	Should central government see how demonstrations and innovation to help inform how trade of flexibility evolves in the New Zealand context, before providing direction to support trade of distributed flexibility? If yes, how else could government support the sector to collaborate and invest in digitalisation now?

International developments are likely to be important drivers for the direction NZ takes on technical issues. Government and industry should work together to identify the jurisdictions we would like to keep track of. For example, the consultation document identifies activities in the UK.

The government should support pilots, innovation and demonstration projects to help the industry move up the learning curve more quickly.

47. Aside from work already underway, are there other areas where government should support collaboration to help grow and develop flexibility markets and improve outcomes? If yes, what areas and actions are a priority?

The government should develop an innovation package for the industry comprising:

- Innovation funding for pilots.
- International speakers coming to NZ.
- Missions to other jurisdictions to learn what is going on.
- Funding support for industry bodies, such as the Flex Forum.
- Rapid policy development at the wholesale level and the distribution level also.

48. Could co-funding for procurement of non-network services help address barriers to uptake of non-network solutions (NNS) by electricity distributors?

The industry is going through a step change – the first change since the electricity was established. That step change is the development of distributed energy resources which is occurring at the same time as the electrification of the economy.

A step change by definition requires substantial learning. In a step-change situation the government has a role to play in helping the whole industry move up the learning more quickly than might otherwise be the case. Some kind of piloting/co-funding would help industry move up the learning curve and is consistent with standard economic theory around the under provision of innovation in an economy/industry.

49. Would measures to maximise existing distribution network use and provide system reliability (such as dynamic operating envelopes) help in New Zealand? If yes, what actions should be taken to support this?

Yes. Other international examples need to be looked at together with reviews, for example, from the US research laboratories (e.g. National Renewable Energy Laboratory).

Measures such as dynamic operating envelopes need to be looked at, both from a theoretical and practical perspective. They need to be trialled but in a way that provides certainty and invest-ability for those involved in the trial. Innovation funding would help with driving industry more quickly up the learning curve. The EA and ComCom need to be supportive of new, innovative approaches. What that support looks like in practice needs to be worked through.

50. What do you think of the approaches to smart device standards and cyber security outlined in this document? Are there other issues or options that should be looked at?

51. Do you think government should provide innovation funding for automated device registration? If not, what would best ensure smart devices are made visible?

This needs careful thought. The question is what kind of involvement should government have versus the private sector being incentivised? This is an area where a close watch on different international initiatives would be a good option.

52.	Are extra measures needed to grow use of retail tariffs that reward flexibility, so as to support investment in CER and improved consumer choice and affordability?
	Yes. But not sure what these are. Maybe it is up to the aggregator to select the retailer that has the best tariffs or suggest to the consumer the most suitable tariff/retailer.
53.	Should the government consider ways to create more investment certainty for local battery storage? If so, what technology should be looked at for this?
	Yes. Measures should include: • Pilots, innovation etc. Support for lines companies to go up the learning curve quicker etc. • Govt housing. It is absurd that Kainga Ora installs solar without batteries. • Resilience support for impacted communities/communities that have unreliable power supplies. • Policy settings for Transpower and lines companies to encourage non-network solutions using batteries.
54.	Should further thought be given to making upfront money accessible to all household types, at all income levels, for household battery storage or other types of CER?
	Firstly, a much higher priority is batteries for schools and resilience centres. Often schools are either formal or informal resilience centres. A solar and battery system would provide some level of resilience for the school and therefore the community, and in extreme cases reduce the amount of generator fuel that needs to be flown around. In some rural schools when the power goes off the water goes off and the school needs to be closed. In these cases batteries could help ensure the water stays on and the school stay open, as well as providing resilience during a natural hazard event. Second, in terms of households rules should apply, e.g. battery able to be part of a VPP if government funding is secured. In addition, companies, such as solarZero, have developed innovative financing models and any government funding needs to take account of these and ensure that it works with these existing models, not against them.
55.	Should government think about ways to reduce 'soft costs' (like the cost of regulations, sourcing products, and upskilling supplier staff) for installing local battery storage with solar and other forms of CER/DER storage? If so, what technology should be looked at?
	Two aspects here (both very different): • Encourage pre-wiring of houses for solar and EV charging. Via what route this could be encouraged I am not sure. • Increase the capacity of the industry in terms of skills and training.
56.	Is a regulatory review of critical data availability needed? If so, what issues should be looked at in the review?
	Consideration of data needs be much broader than just the ICP data. How can inverter data, smart EV charger data be used in the power system? Should the power system move to 5 minute data for settlement, but the data able to come from different sources in addition to the ICP such as EV chargers and inverters? New products and services could also be needed that do not necessarily involve the ICP. For example, demand response using EV chargers. Multiple traders through an ICP should also be enabled. That way a household could provide a range of services and receive services without being constrained by any particular retailer.

Part 5: Whole-of-system considerations	
57.	What measures do you consider the government should prioritise to support the transition?
	• New products and services in the electricity market that reflect the new technology now available. • Encouraging innovation. • Direction to lines companies on innovation, efficient investment etc ensuring that NZ has a cost-effective, innovative power system for the future. A particular issue that has not featured strongly in the consultation is multiple trading relationships via an ICP. This is an important opportunity also.
58.	Are there gaps in terms of information co-ordination or direction for decision-making as we transition towards an expanded and more highly renewable electricity system and meeting our emissions goals? Please provide examples of what you'd like to see in this area.
	A whole electricity system (and possibly energy system) plan is needed. Australia and the UK seem have developed these. New Zealand needs to learn from these other jurisdictions and develop something similar.
59.	Are there significant advantages in adopting a REZ model, or a central planning model (like the NSW EnergyCo), to coordinate electricity transmission investment in New Zealand? Would a REZ model for local electricity distribution be an effective means of addressing first mover disadvantage with connecting to electricity distribution networks?
	The concept outlined in paragraph 376 is interesting and needs to be explored further. A regional system planner has the potential for being an excellent mechanism for encouraging and delivering innovation at the distribution level.
60.	Should MBIE regularly publish opportunities for generation investment to enable informed market decision-making?
61.	How should the government balance the aims of sustainability, reliability and affordability as we transition to a renewable electricity system?
	• A retailer of last resort needs to be established. • There should be a programme to install solar and batteries on social housing. Batteries are critical in terms of maximising the benefits of solar and from a resilience perspective. Installing solar only makes no sense.
62.	To what extent should wholesale, transmission, distribution or retail electricity pricing be influenced by objectives beyond the (affordability-related) efficiencies achieved by cost-reflective pricing, such as sustainability, or equity?
	Cost reflective pricing needs to be carefully thought through in a time of transition. Pricing will influence customer behaviour which will determine the amount of investment needed, in terms of impact on peak and the need to build for peak. If peak grows and the power system is built to support those peaks then we are locked into a high cost power system forever. Cost reflective needs to be about future costs – what is a pricing regime that results in a highly efficient and reliable power system?

63.	Are the current objectives for the system's regulators set in law (generally focusing on economic efficiency) appropriate, or should these also include more focussed objectives of equity and/or affordability?
	Affordability into the future needs to be a key aspect. As the power system goes through a step change we need to ensure that it is done efficiently and affordably. We need to ensure that the energy transition does not result in a lock in of high ongoing costs for infrastructure.

General Comments: