Responses to questions

The Energy Use Policy team welcomes your feedback on as many sections as you wish to respond to; please note you do not need to answer every question.

Status quo and problem definition	
1.	What are your experiences of accessing consumer and product data for electricity under the status quo?
	No comment – Transpower NZ Ltd. is not a consumer.
2.	Do you agree with our summation of the status quo and problem definition? Is anything missing or incorrect in your view? And please provide any evidence you may have to support your views.

We agree with the definition of the status quo and problem definition.
There is significant value to consumers from being able to use this data to change their electricity use behaviours and the summation does well to identify what is currently blocking this at a consumer level.

However, we think there is a wider problem within the status quo that is not fully captured here. MBIE notes that "The Bill seeks to unlock the value of data for people and their businesses". But by focusing only on the ability of customers to request their data from their retailer and/or share this with third parties, the Bill focuses only on the one part of the problem; in doing so it misses an opportunity to consider more broadly how this legislation could unlock the true value of this data.

The largest source of value from data comes from resource adequacy
Research from Sapere for Transpower in 2020 and similar research conducted again by Sapere for the Electricity Authority[1] demonstrated that the vast majority of value that can be unlocked by distributed energy resources (DER, e.g. solar, batteries, smart EV charging) comes from Resource Adequacy.

Sapere quantified the value streams of DER over time as follows:

Value Stream	2020	2035	2050	2050%
Energy Arbitrage (small-scale DER)	3	21	70	7%
Resource Adequacy	24	588	861	84%
Instantaneous Reserve	0	20	20	2%
Frequency Keeping	0	1	0	0%
Voltage	0	10	14	1%
Harmonics	0	-1	-7	-1%
Simulated Inertia	0	21	85	8%
Black Start	0	0	0	0%
Total	**27**	**650**	**1029**	

According to this research, only 7% of the value of DER comes from energy arbitrage – that is, consumers being able to modify their demand to take advantage of either the wholesale price or variations in a retailers Time of Use (TOU) plan. Meanwhile, resource adequacy amounts to 84% of this value – this is mainly due to avoiding investments in gas-fired generation, transmission and distribution infrastructure that would otherwise be required to support the increase in peak demand resulting from greater electrification. Importantly, the benefits from resource adequacy are also shared across all consumers – not just the owners of DER. This is significant because it offsets some of the equity issues that arise as wealthier households are those which are typically more able to afford the DER required to translate their electricity data into actionable savings.

However, unlocking the full value of DER for resource adequacy depends on network visibility and coordination, particularly at a distribution level. Accordingly, these benefits

[1] FlexForum and Sapere, September 2021, Cost-benefit analysis of distributed energy resources in New Zealand. A report for the Electricity Authority

	may be better realised by ensuring that giving consumers greater access to their own data allows them to share it with other parties (e.g., EDBs and/or flexibility providers).
3.	Do you think that regulatory options are necessary to unlock better access to customer and product data?
	Yes. We agree with the assessment provided in the discussion document. Moreover, as per our response to Question 2, that MBIE could go further and consider a regulatory design that better supports data flows to maximise value while protecting consumer's privacy.
4.	What do you consider to be the likely outcomes for access to customer and product data in the absence of a CDR for electricity?
	The status quo continues – although this may be improved by the work being undertaken by the Authority through its Code Change Omnibus programme, which includes provisions around data access.
What a consumer data right for electricity could look like	
5.	Who else may be impacted by a designation of the electricity sector? Should particular groups or classes of entities be explicitly included or excluded from a potential designation?
	The groups of entities outlined in the discussion document makes sense.
6.	What customer data do you think is the most important? And what else (now or in the future) would be important? And why? What are the benefits from consumers having ready access to this data?
	From the point of view of consumers access, the data identified in the discussion paper is good. However, as noted in our response to Question 2, there is significant value in resource adequacy (i.e., avoid network and generation investment) – noting that network costs make up 38% of a residential consumers electricity bill according to the Electricity Authority.[2] The ability of EDBs to understand how consumers electricity usage changes can have significant value in their network planning. This highlights the importance of ensuring (a) the standards, minimum functionality, and access to data to enable this; and (b) that there are systems and requirements in place to use (without compromising consumer privacy). This information will also help Transpower in its role as System Operator and Grid Owner.

[2] Your power bill | Electricity Authority (ea.govt.nz)

7.	If access to customer data is designated for all consumers (residential, small business, large business and large consumers) what are the potential benefits, risks or costs associated with each type of customer? And why?
	No comment.
8.	What product data do you think is the most important? And what else (now or in the future) could be important? And why? What are the benefits from this data?
	No comment.
9.	Are there any other issues with product data we should be aware of? And why? Please provide examples.
	No comment.
10.	What factors should be considered when identifying who the best data holder is under a potential CDR regime? And how might contracting agreements affect the application of a CDR in regard to data holders? (e.g., contracts between metering equipment providers and retailers to share data).
	MBIE could considered the following factor: • Security – The data holder should have robust measures in place to protect the privacy of the consumer data. • Infrastructure and operations – the data holder should have the ability to store and share the data in line with standards that allow easy sharing with consumers and parties that have approved access. • Access to the source of data – The data holder should be able to directly access the source of the data to ensure accuracy and timely provision. One option that MBIE should consider is a centralised data holder instead of retailers. There are many international examples of this. For instance, in the UK, the DCC (a regulated entity) was established for this purpose.[3] We understand this system was quite expensive, but the costs came largely from setting up an entirely separate digital infrastructure system. This would not be necessary, and the model of a centralised hub for electricity data could be adapted for NZ. In another example, Energinet, the TSO in Denmark, owns and operates the centralised hub, which is known as datahub.[4] DataHub is an IT system, owned and operated by Energinet. In addition to storing vast volumes of information about customers, consumption and prices, DataHub handles all data communication between market participants in the electricity market.

[3] https://www.smartdcc.co.uk
[4] https://en.energinet.dk

	We still envisage customers wanting to have only one point of relationship with the sector and this could continue to be their retailer. But the retailer could play the role of a portal for data access requests to be made to the ultimate data holder (perhaps the Authority); in many instances they already are not the actual physical holder of the data anyway – this is held by their Metering Equipment Provider (MEP) and so this doesn't amount to a significant change in principle. A centralised model should be subject to a benefits and regulatory impact assessment and considered as a means of enabling the data access needed by the future power system. However, if a centralised model does not emerge, then we consider that the EDB should be enabled by default to have access to the data. The reasons for this is that (a) as noted in Question 2 above, a significant portion of the value to be unlocked comes from network deferral, which requires network visibility of the data; and (b) the EDB holds an enduring relationship with an ICP whereas retailers can (and by design, should) change frequently.
11.	Do you agree with our initial framework for how to identify/designate data holders? Why or why not?
	Yes, it is logical.
12.	What actions could be designated for electricity under a CDR? And why? What are the potential benefits from these? Please provide examples.
	No comment.
Potential benefits and risks	
13.	What are your thoughts on the potential impacts of a designation on the interests of consumers? Are there any specific benefits that are likely to be enabled with designation? What is the likely scale of the benefits, and over what timeframe would they occur?
	No comment.
14.	Do you have any comments on the specific interests of different types of consumers, such as, residential, business, industrial, rural, Māori, or other groups of consumers?
	No comment.

15.	What are your views on the nature and scale of costs/benefits? Who would these costs/benefits apply to and when?
	As noted in Question 2, we consider that there are potentially significant avoided or deferral benefits from electricity network operators having better access to data.
16.	Would you be able to quantify potential additional costs to your organisation associated with designation under the Bill?
	Not applicable.
17.	Do you have any comments on the benefits and risks to security, privacy, confidentiality, or other sensitivity or customer data and product data?
	No comment.
18.	Are there any risks from the designation to intellectual property rights in relation to customer data or product data?
	No comment.
Other aspects of a potential designation	
19.	What do you consider to be important if designing an accreditation regime for the sector?
	No comment.
20.	What are your views on fees for requests for customer electricity data under the Bill? If fees are charged, what limits or restrictions should be placed on fees? Do you have any comments on the costs and benefits of the various options?
	We consider that data access should be free at the point of access, as proposed. In terms of accredited parties, and EDBs in particular, fees for access should be kept low or be regulated as cost is a key barrier to unlocking the full benefits of this data for consumers. Once again, a centralised data holder would simplify these exchanges considerably.
21.	Are there any particular considerations for electricity that should be taken into account for a consumer consenting process?

	It is important that consumers give informed consent to their data being used by third parties, and the Bill as proposed appears to consider this appropriately. However, as noted throughout, a considerable source of benefit from electricity data comes from lines companies (distribution and, in aggregation transmission and system operation) – but this value is only realised at scale. Therefore, if consent must be individually granted to EDBs with the default being no access, then this value won't be realised. It is important therefore that the CDR does not remove existing EDB access to data.
22.	Do you think that standards should be led by industry, by government or co-led? What is the role of industry in developing standards? And why?
	An important aspect to consider is the standardisation of data formats to ensure that those working with the data can work across datasets without rework. Clear standards not just on the timing and cost of access, but also on the format of data is essential. Industry should be consulted on this process to find a format that makes the most sense for the usages envisaged. Format here means the way it is accessed (e.g. API) but also the actual data itself (e.g. structure of data and columns, data formats, time periods, granularity, etc).
23.	How do you believe a CDR and the Code could/could not work together?
	We consider that the Code covers a smaller subset of policy setting (e.g. how long the retailer has to respond) whereas the CDR appears to be aimed more fundamentally at providing a framework for different kinds of entities and relationships and rights within the electricity data system. They are somewhat complementary; however, neither of these is addressed to the aspects of the problem that are needed to really shift the status quo.

General Comments:
Transpower welcomes the opportunity to submit on this Bill. We agree with the underlying principles behind this Bill, and especially with its goal to unlock the enormous potential value from a much more well-designed, secure, and efficient electricity data ecosystem.

Thank you

We appreciate you sharing your thoughts with us. Please find all instructions for how to return this form to us on the first page.