



Consumer Data Right in Energy

Consultation paper: data access
models for energy data

February 2019

Australian Competition and Consumer Commission

23 Marcus Clarke Street, Canberra, Australian Capital Territory, 2601

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Opportunity for comment on models for consumers to access their data in the energy sector

You are invited to examine this Consultation Paper and comment on it by written submission to the ACCC. Submissions are due by **5pm AEST Friday 22 March 2019** and can be lodged on the [ACCC's Consultation Hub](#) or by email to ACCC-CDR@acc.gov.au.

The ACCC seeks comments on the proposed models for consumers to access their data in the energy market. Specific questions are set out in section 11 of the paper. The aim of this consultation is to assist the ACCC to develop a preferred model for the application of the consumer data right in energy.

The ACCC notes that this document sets out three options for the consumer data right access model, and our views on the relevant principles and considerations for the assessment of these options. The considerations expressed in this paper may be revised, including in light of submissions received.

To foster an informed and consultative process, all submissions will be considered as public submissions and will be posted on the ACCC's website. If interested parties wish to submit commercial-in-confidence material, they should submit both a public version and commercial-in-confidence version of their submission. Any commercial-in-confidence material should be clearly identified, and the public version of the submissions should identify where commercial-in-confidence material has been removed.

Further information on the process parties should follow when submitting confidential information to the ACCC can be found in the ACCC/AER Information Policy which sets out our general policy on the collection, use and disclosure of information. A copy of the guideline and policy are available on the [ACCC's website](#).

Key dates

Friday 22 March 2019	Closing date for submissions on models for application of the Consumer Data Right in Energy
Date and location will be advised to stakeholders through the CDR newsletter	Industry forum

Further information about the ACCC's consumer data right role can be found at www.accc.gov.au/consumerdataright. Questions or queries can be directed to ACCC-CDR@acc.gov.au.

For queries about consumer data right legislation and amendments, please visit <https://treasury.gov.au/consumer-data-right/> or contact the Treasury at data@treasury.gov.au.

Contents

Opportunity for comment on models for consumers to access their data in the energy sector	2
1. Glossary.....	5
2. Purpose of this paper	7
3. Background.....	8
3.1. The consumer data right regime	8
3.1.1. Obligations under the CDR	8
3.2. The legislative framework	9
3.2.1. Rules	9
3.2.2. Standards	10
3.3. The CDR in energy	10
4. The HoustonKemp process and recommendations	11
5. Current regulatory framework for access to energy data in the NEM.....	13
5.1. Existing access to energy data by retail customers in the NEM	15
5.2. Existing access to energy data in Victoria	15
5.3. Existing obligations regarding confidentiality of data	15
6. Current regulatory framework for access to energy product data in the NEM.....	16
6.1. Generic product information data in the NEM.....	16
6.2. Retail product data - National Energy Retail Law jurisdictions.....	16
6.3. Victoria.....	18
7. Potential data sets for initial energy CDR	19
7.1. NEM priority datasets.....	19
7.1.1. Relevant NMI standing data fields.....	19
7.1.2. Metering data.....	20
7.1.3. Customer provided data.....	20
7.1.4. Billing data	20
7.1.5. Retail product data.....	20
7.1.6. Distributed energy resources register data.....	21
7.2. What electricity data sets are likely to be covered under the initial energy CDR rules?	21

7.3. Complex energy data sets for future implementation	23
8. Changes to existing regulatory frameworks to implement the CDR for energy	23
9. Data access models for CDR in the energy sector	23
9.1. AEMO as the sole data holder in the energy sector	24
9.2. AEMO as the 'gateway' to data holders in the energy sector	26
9.3. Economy-wide model.....	29
10. The assessment criteria	32
11. Stakeholder views	34

1. Glossary

ACCC	Australian Competition and Consumer Commission
ADL	Average Daily Load
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
API	Application programming interface
Bill	The Treasury Laws Amendment (Consumer Data Right) Bill 2019 introduced into Parliament on 13 February 2019
BPID	Basic Plan Information Document
CCA	<i>Competition and Consumer Act 2010 (Cth)</i>
CDR	Consumer data right
COAG EC	COAG Energy Council
Data61	The interim Data Standards Body
Designation instrument	A legislative instrument designating the energy sector issued under section 56AC of the Treasury Laws Amendment (Consumer Data Right) Bill 2019
Explanatory Memorandum	The explanatory materials to the Treasury Laws Amendment (Consumer Data Right) Bill 2019 introduced into Parliament on 13 February 2019
Electricity Industry Act	<i>Electricity Industry Act 2000 (Vic)</i>
Gas Industry Act	<i>Gas Industry Act 2001 (Vic)</i>
Gateway	A gateway as designated by a designation instrument referred to in subsection 56AC(2)(e) of the Treasury Laws Amendment (Consumer Data Right) Bill 2019
Metering Code	Electricity Customer Metering Code
NEM	National Electricity Market
NER	National Electricity Rules
NERL	National Energy Retail Law
NERR	National Energy Retail Rules
Network tariff code	A code assigned by the relevant electricity distributor to identify a network tariff
NMI	National Metering Identifier

NMI standing data	Data in respect of an electricity connection point that describes the characteristics of the connection point.
OAIC	Office of the Australian Information Commissioner
Privacy Act	<i>Privacy Act 1998 (Cth)</i>
Register	Register of Accredited Data Recipients
Retail Code	Energy Retail Code
Rules	Rules made by the ACCC under section 56BA of the Bill
Rules Framework	CDR Rules Framework published by the ACCC on 12 September 2018
Rules Outline	CDR Rules Outline published by the ACCC on 21 December 2018
Standard/s	The technical standards made by the Data Standards Chair

2. Purpose of this paper

The Government has announced its intention to include energy data in the consumer data right (CDR).¹ The COAG Energy Council supports its implementation in the energy sector and the Council's meeting communique from December 2018 notes the intention for this to commence in the first half of 2020.²

While there is likely to be commonality in the CDR rules that apply across sectors, each sector which is included in the CDR will have a range of sector-specific considerations. In energy, one relevant consideration is that energy data on an individual consumer may be held by a number of organisations and it may not be possible for a single entity to provide sufficient data alone. It may therefore be appropriate to impose obligations under the CDR on more than one entity and unlike in the banking sector, the market operator also holds some customer data.

The purpose of this paper is to explore the best model for consumers to access their data through the application of the CDR to the energy sector. This paper focuses on a data access model for accredited data recipients, and does not consider CDR arrangements for direct consumer access to their data. This is because there are existing arrangements in the energy sector that enable consumers to have direct access to data. These are discussed further below.

In the electricity sector, the Australian Energy Market Operator's (AEMO) functions include operating the National Electricity Market (NEM). In order to fulfil this function AEMO holds certain data, including data about each connection point in the market. AEMO also operates an e-hub for transactions between market participants and systems for participants to share information within the market. As a result of these energy market arrangements, a number of different models for providing access to consumer energy data for accredited data recipients are possible under the proposed CDR regime. The ACCC seeks views on the merits of the following three options as a precursor to determining the CDR rules that will apply with respect to the energy sector:

- 1. Model 1, the AEMO centralised model** - AEMO would be the sole data holder of a centralised data set, which includes consumer energy data that it currently does not hold under national energy legislation, and would be responsible for providing CDR data directly to accredited data recipients
- 2. Model 2, the AEMO gateway model** - AEMO would provide a gateway³ function, (acting as a pipeline for the provision of CDR data from data holders which may include retailers and potentially also distributors, to accredited data recipients) and may also be a data holder providing CDR data directly to accredited data recipients

¹ The Australian Government the Treasury, 2018, *Consumer Data Right*, <https://treasury.gov.au/consumer-data-right/>.

² COAG Energy Council, *Meeting Communique*, 19 December 2018, <http://www.coagenergycouncil.gov.au/publications/21st-energy-council-ministerial-meeting>

³ For the purposes of this consultation paper, any references to a 'gateway' mean a gateway designated by a designation instrument referred to in subsection 56AC(2)(e) of the Treasury Laws Amendment (Consumer Data Right) Bill. To be clear, we are not referring to 'gateway' in the computer networking and telecommunications context.

- 3. Model 3, the economy-wide CDR model** - existing data holders (for example, retailers) would be responsible for providing CDR data directly to accredited data recipients and/or consumers i.e. the model used for the banking sector.

These models are discussed further in section 9 below.

3. Background

3.1. The consumer data right regime

On 26 November 2017, the Australian Government announced the introduction of a consumer data right in Australia.⁴ The consumer data right will improve consumers' ability to compare and switch between products and services. It will also encourage competition between service providers, leading not only to better prices for consumers but also more innovative products and services.

The objectives of the CDR are as follows:

*The Consumer Data Right (CDR) provides individuals and businesses with a right to efficiently and conveniently access specified data in relation to them held by businesses. The CDR authorises secure access to this data by trusted and accredited third parties. The CDR requires businesses to provide public access to information on specified products they have on offer. CDR is designed to give customers more control over their information leading, for example, to more choice in where they take their business, or more convenience in managing their money and services.*⁵

The CDR will commence in the banking sector, followed by the energy and telecommunication sectors.⁶ The right will then be rolled out economy-wide on a sector-by-sector basis.⁷ Under the CDR, consumers will be able to access and safely transfer their data to trusted parties. The CDR will be introduced in phases in banking and a staged process is also likely to be adopted in others sectors including energy.

The ACCC is the lead regulator in relation to the CDR. We are supported by the Office of the Australian Information Commissioner (OAIC) and the interim Data Standards Body (Data61) as we develop the regulatory framework. We work closely with these agencies and also consult publicly with all stakeholders who have an interest in the CDR.

3.1.1. Obligations under the CDR

The CDR aims to give consumers more access to and control over their data. The core obligations of the CDR regime will be on data holders and accredited data recipients (together known as CDR participants):

1. At a consumer's direction, a data holder will be obliged to share a consumer's data with either:

⁴ The Hon A Taylor MP (the then Assistant Minister for Cities and Digital Transformation), *Australians to own their own banking, energy, phone and internet data*, media release, Parliament House, Canberra, 26 November 2017, available at <https://ministers.pmc.gov.au/taylor/2017/australians-own-their-own-banking-energy-phone-and-internet-data>.

⁵ Treasury Laws Amendment (Consumer Data Right) Bill 2019, Explanatory Memorandum, paragraph 1.1.

⁶ The Australian Government the Treasury, 2018, *Consumer Data Right*.

⁷ Ibid.

- a) an accredited data recipient to whom the consumer has provided their consent; or
 - b) the consumer themselves.
2. A data holder will also be required to make certain generic product data publicly available.

In addition to legislation and a designation instrument, consumer data right rules (see section 3.2.1 below) and technical standards (see section 3.2.2 below) will jointly provide the CDR framework, including:

- which consumers can take advantage of the CDR
- the data sets that are within scope (these data sets must be consistent with the data sets specified in the designation instrument)
- the criteria an entity must satisfy to be an ‘accredited data recipient’
- requirements for consumer consent
- requirements for authorisation and authentication
- the limits a consumer can place around the use of their data

The draft legislation imposes limitations on the scope of the consumer data right rules. The rules cannot require a data holder to disclose data before 1 July 2019 or impose a requirement that has retrospective application.⁸

3.2. The legislative framework

The legislative framework for the CDR will be set out in the *Competition and Consumer Act 2010* (Cth) (CCA) through the Treasury Laws Amendment (Consumer Data Right) Bill 2019 (the Bill). The Bill was introduced into Parliament on 13 February 2019.⁹ The current implementation timetable for CDR assumes passage of the legislation in the first half of 2019.

3.2.1. Rules

Under the legislative framework, the ACCC has a role to determine rules that will govern the application of the CDR, both in particular sectors and across the economy more generally. The Bill requires the ACCC to have regard to certain matters when making rules. These matters are discussed in section 10 of this paper.

The ACCC released its Rules Framework for consultation on 11 September 2018, setting out how the ACCC proposes to address particular issues in the Rules.¹⁰ While the Rules Framework is banking-specific it does discuss a number of principles that will be relevant to the implementation of the CDR in other sectors.¹¹

⁸ Treasury Laws Amendment (Consumer Data Right) Bill 2019, section 56BK(1) (hereafter referred to as “The Bill”).

⁹ The Bill and Explanatory Memorandum are available at https://www.aph.gov.au/Parliamentary_Business/Bills_Legislation/Bills_Search_Results/Result?bld=r6281

¹⁰ ACCC, *Consumer Data Right: rules framework*, 11 September 2018, available at <https://www.accc.gov.au/focus-areas/consumer-data-right/accc-consultation-on-rules-framework>

¹¹ For example: the importance of consent, the need for data receivers to be accredited, making generic product data generally available, the permitted use of data, and the application of privacy safeguards.

Following consultation on the Rules Framework, the ACCC released a Rules Outline for the CDR in banking on 21 December 2018.¹² This document sets out the ACCC's position on what should be included in the Rules that will govern the CDR in banking. The Rules Outline is intended to provide guidance to stakeholders, including designated data holders, potential data recipients and consumers, on what the Rules will require of CDR participants. Draft Rules are expected to be published for consultation in the first quarter of 2019.

3.2.2. Standards

Data61 is developing open standards¹³ that enable consumers to safely access their data that is held by businesses, and to direct this data to be transferred via Application Programming Interfaces (APIs) to trusted, accredited third parties of the consumer's choice.¹⁴ While there is no one distinct definition of an API, an API is essentially a piece of software that allows two applications to talk to each other; in this case the applications in question belong to the accredited data recipient and the data holder. APIs are the standard mechanism for sharing information between software securely and efficiently. They enable interconnectivity between services, providing standardisable ways to access, interpret and present data on a server. An open API is an API that is publicly discoverable (although, in the context of the CDR, only accredited data recipients may be able to use it).

Data61 published its most recent working draft of the technical standards that banks will be required to meet for the sharing of consumers' data on 20 December 2018 for comments.¹⁵

3.3. The CDR in energy

Facilitating consumer access to their energy data to ensure they are able to choose the best energy deal and manage their bills was identified as a key issue by the Productivity Commission's report on data availability and use¹⁶, the Finkel Review¹⁷, the ACCC's Retail Electricity Pricing Inquiry¹⁸ and the Australian Energy Market Commission's (AEMC) Retail Competition Review.¹⁹ These issues were also considered recently by the COAG Energy Council (COAG EC) and its consultants, HoustonKemp. Both the HoustonKemp report²⁰

¹² ACCC, *Consumer Data Right: rules outline*, 21 December 2018, available at <https://www.accc.gov.au/focus-areas/consumer-data-right/rules-outline>

¹³ See Data61's, Consumer data standards Australia, <https://consumerdatastandardsaustralia.github.io/standards/#introduction>

¹⁴ Data61, Consumer data standards <https://www.data61.csiro.au/en/Who-we-are/Our-programs/Consumer-Data-Standards>

¹⁵ Data61, *Consumer Data Standards Christmas working draft*, 20 December 2018, <https://consumerdatastandards.org.au/standards/christmas-2018-working-draft/>

¹⁶ Productivity Commission, *Data availability and use, inquiry report*, Report No. 82, Canberra, May 2017, available at <https://www.pc.gov.au/inquiries/completed/data-access/report/data-access.pdf>

¹⁷ Dr Alan Finkel AO, Chief Scientist, Chair of the Expert Panel, *Independent review into the future security of the National Electricity Market: blueprint for the future, Final Report*, Commonwealth of Australia, 9 June 2017, available at <https://www.energy.gov.au/sites/default/files/independent-review-future-nem-blueprint-for-the-future-2017.pdf>

¹⁸ ACCC, *Restoring electricity affordability and Australia's competitive advantage: Retail Electricity Pricing Inquiry—Final Report*, Canberra, June 2018, available at https://www.accc.gov.au/system/files/Retail%20Electricity%20Pricing%20Inquiry%E2%80%94Final%20Report%20June%202018_0.pdf

¹⁹ AEMC, *2018 Retail energy competition review – Final report*, Sydney, 15 June 2018, available at <https://www.aemc.gov.au/sites/default/files/2018-06/Final%20Report.pdf>

²⁰ HoustonKemp, *Open consumer energy data: Applying a Consumer Data Right to the energy sector*, June 2018, available at <http://www.coagenergycouncil.gov.au/sites/prod.energycouncil/files/publications/documents/Consumer%20Energy%20Data%20final%20report.pdf>

and the ACCC's Retail Electricity Pricing Inquiry report recommended that consumer access to their energy data should be implemented through the CDR.

The ACCC's Retail Electricity Pricing Inquiry report identified a number of existing issues in the electricity market which may be alleviated through the implementation of the CDR in energy. In particular, market complexity was seen to hinder consumers' abilities to make informed decisions about the energy retailers and plans best suited to their needs.²¹ The report also found that, notwithstanding the increase in new entrant retailers, which are slowly gaining market share, the retail market remains heavily concentrated.²² The three largest retailers have incumbent advantages, which makes it challenging for smaller retailers to compete effectively.²³ The report considered that a CDR in energy will improve the consumer's ability to compare and switch between goods and services on offer, promoting greater competition between service providers, leading to better prices and more innovation of products and services.²⁴ This is particularly important as consumer uptake of new technologies and innovative products increases. The CDR will need to support innovative new products and the increasingly complex choices that consumers will make regarding these products.

The application of the CDR to energy will be achieved by specifying the energy data holders and data sets to which the CDR applies through a designation instrument prepared by Treasury and issued by the Minister. This will be supported through the Commonwealth CDR framework, rather than through national energy legislation. However it is likely some supporting amendments may be made to national energy legislation, to ensure clarity and consistency.

This consultation paper has been prepared having regard to work that is being undertaken by the Treasury on the potential scope and content of the initial designation instrument for the energy sector (see section 7.1 below).

Reaching a position on the data access model will enable the ACCC to commence developing energy specific rules, and for Data61 to commence developing technical standards for the energy sector. It will also provide greater clarity to industry stakeholders to plan for the building, testing and implementation of systems.

The ACCC is working towards implementing the CDR in the energy sector during the first half of 2020 for priority data sets in the NEM.

4. The HoustonKemp process and recommendations

Enhancing consumers' access to their energy data²⁵ is a topic on which the COAG EC completed a body of work in 2018. On behalf of the COAG EC, consultants HoustonKemp facilitated a broad consultative process²⁶ and prepared a report to the COAG EC recommending that the Treasurer be asked to implement CDR in the energy sector. The

²¹ ACCC, *Restoring electricity affordability and Australia's competitive advantage: Retail Electricity Pricing Inquiry—Final Report*, Canberra, June 2018, p. 234.

²² *Ibid*, p. 136.

²³ *Ibid*, p. 39.

²⁴ *Ibid*, p. 255.

²⁵ For the purposes of this paper, the term 'energy data' is a reference to a consumer's energy related data in its various forms (e.g. billing data, metering data and energy consumption data), except in the case of references to existing data access requirements in section 5 of this paper, where it has the same meaning as in the National Electricity Rules.

²⁶ This included a number of discussion papers with over 70 written submissions and four rounds of workshops, with over 100 stakeholders attending.

report made some recommendations on the details of implementation and left others to be resolved by the ACCC.

Given that there is an existing access regime for some energy data in the NEM, HoustonKemp sought to identify the underlying impediments to consumer energy data being accessed by 'customer authorised representatives', which are third parties that are currently able to access consumer energy data under national energy legislation where authorised to do so by the consumer. HoustonKemp focused on third party access because there are currently a number of impediments to consumers sharing data with their chosen service provider.

The introduction of the CDR was announced in May 2018, when HoustonKemp's work was well advanced. The work stream refocused slightly to consider whether and how the CDR could be applied within the energy sector. This included consideration of which data access model was most appropriate, and thus which party or parties, would be most appropriate under the CDR regime to facilitate access to NEM metering and connection point data.

At the conclusion of its process, HoustonKemp presented a series of recommendations to the COAG EC. Key amongst those was that there be a gateway data access model in the energy sector and that AEMO should be the data provider for the first priority data sets (NEM metering data and NMI standing data).

This conclusion was supported with references to existing AEMO IT architecture, such as the B2B e-hub, and the suite of data AEMO currently manages and holds. HoustonKemp considered that whilst energy retailers or potentially distributors could be data holders for CDR purposes on a disaggregated basis, a gateway model with AEMO as the data holder was the most efficient and cost-effective for access to NEM metering and connection point data. HoustonKemp considered that using pre-existing data platforms would reduce the costs for both retailers and third party providers, and address barriers to third party providers accessing data directly from retailers. It may also help address cost and scale differentials between large and small retailers.

HoustonKemp also recommended that the CDR in the energy sector apply to other data sets such as gas metering data, electricity and gas retail product data (contract offers), and non-NEM electricity data. It suggested these should be subject to the CDR, after a 12-month delay following availability of the first priority data sets. HoustonKemp concluded that the ACCC would need to consider the organisation(s) that should be designated as data providers in relation to these data sets.²⁷

The ACCC recognises the significant consultation and stakeholder engagement undertaken by HoustonKemp in preparing its report and recommendations to COAG EC. The HoustonKemp process preceded any significant development of the CDR legislative and regulatory frameworks, and its recommendations included elements that are currently for consideration by the ACCC in the development of these frameworks. These include the use of an ex-post audit regime on acquisition of consumer consent by third-party service providers, the means by which consumers could directly access their own energy data under the CDR and the details of consumer consent and authentication processes. These, and a range of other issues, are being considered as part of the CDR development process more generally across all sectors. As draft legislation and standards have now been developed, and implementation of the CDR in the banking sector has progressed, the ACCC needs to

²⁷ HoustonKemp, p 7.

form a view on the preferred data access model for energy within the context of the broader CDR.

Drawing on the work of HoustonKemp, the ACCC considers that there are three potential data access models which could be used to implement the CDR in energy. The three models under consideration are set out in section 9 of this paper.

5. Current regulatory framework for access to energy data in the NEM

The manner and form in which a consumer's energy data is accessed in the NEM is currently governed by the National Electricity Rules (NER), the National Energy Retail Rules (NERR)²⁸ and, in the case of Victoria, the Energy Retail Code (Retail Code) and the Electricity Customer Metering Code (Metering Code). Certain procedures made under these regulations, as well as applicable privacy legislation, also regulate by whom and how data is accessed in the NEM.

The different forms of consumer related data accessible by parties in the NEM, include:

- 'Energy data' – This is the data that results from the measurement of the flow of electricity in a consumer's electricity meter. The data is recorded and held within the meter.²⁹ Once the data is collected from the meter it becomes 'metering data'.
- 'Metering data' – This is data that has been collected from a meter and is held in a metering data provider's metering data service database and in AEMO's metering database. The content of metering data for a particular connection point may differ depending on who holds the data.³⁰
- 'NMI standing data' – NMI standing data consists of a range of technical data related to each connection point in the NEM. The data includes details of the relevant National Metering Identifier (NMI), the unique number that is issued to each meter at each connection point in the NEM. NMI standing data includes any data which is required under the NMI standing data schedule developed by AEMO.³¹ In addition to the NMI, the data currently includes (but is not limited to) details of the relevant distribution or transmission network, network tariff, meter and street address for each connection point.³²

Under the NER, energy data may only be accessed locally and remotely from a meter by parties that have been allocated passwords by the relevant metering provider. The parties who may be allocated access passwords differ depending on the nature of the retail

²⁸ The NERR does not apply in Victoria.

²⁹ See the definitions of 'energy data', 'accumulated energy data' and 'interval energy data' in Chapter 10 of the NER.

³⁰ At present, the format in which metering data is provided to AEMO differs from that of other recipients. AEMO receives data in a net format, suitable for settlement purposes, whilst other recipients receive a rich format, suited to retail and network billing purposes. Also, AEMO does not currently receive data for all connection points in the NEM, due to the settlement-by-difference approach presently used to settle the wholesale market. AEMO is expected to receive all relevant data in rich data format from October 2020 as part of the move to global settlement in the NEM.

³¹ In Victoria, the authority responsible for administering Victorian electricity legislation may determine and provide the NMI standing data schedule to AEMO for the purposes of defining NMI Standing Data in Victoria (see cl 3.13.12 of the NER).

³² See clauses 3.13.12 and 3.13.12A of the NER and <https://aemo.com.au/Stakeholder-Consultation/Consultations/Notice-of-Final-Determination---NMI-Standing-Data-Schedule>.

customer at the premises, but in all circumstances include the relevant metering coordinator, metering data provider and AEMO.³³

The parties that may access or receive metering data and NMI standing data in the NEM, include the following:

- registered participants with a financial interest in the meter or the energy measured by that meter (this includes the retailer);
- the metering coordinator (and previous metering coordinator at the site in certain circumstances);
- the metering provider;
- the metering data provider (and previous metering data provider at the site in certain circumstances);
- AEMO and its authorised agents;
- in relation to a meter at a 'child connection point'³⁴ on an embedded network, the relevant embedded network manager; and
- the Australian Energy Regulator (AER) or jurisdictional regulators in certain circumstances.

In addition, the following persons may access or receive metering data for a connection point:³⁵

- the retail customer at the connection point or its authorised representative upon request to that customer's retailer or distributor;
- a person with the relevant small customer's consent³⁶;
- the large customer at the connection point or its authorised representative³⁷;
- an exempt embedded network service provider in relation to a child connection point on its network; and
- an energy ombudsman (e.g. the Energy & Water Ombudsman NSW) in certain circumstances.

AEMO maintains the metering data provision procedures under the NER, which establish minimum requirements for the manner and form in which retailers and distributors must provide metering data to retail customers and their authorised representatives in response to

³³ See clauses 7.15.3 and 7.15.4 of the NER. Under clause 7.15.4, additional restrictions apply to metering installations located at the connection point of a 'small customer' (as that term is defined in the NER). In practice, in addition to holding relevant passwords in order to access energy data a party often requires access to a metering data provider's proprietary software (on-site) or data management system (remote). There are also specific requirements associated with the communications network the installation is connected to.

³⁴ In general terms, the child connection point is the agreed point of supply between an embedded network and another network connected to that embedded network. See the definition of child connection point in chapter 10 of the NER. In practice, a child connection point is a customer in an embedded network that has decided to choose their own retailer rather than purchase from the embedded network. These 'children' will be able to access their data through the CDR because they are on market.

³⁵ See clause 7.15.5(d) of the NER.

³⁶ This refers to 'small customers' as defined in the NERL, being a residential customer or a business customer that consumes energy below the upper consumption threshold (100 MWh per annum). Some jurisdictions have set a different threshold.

³⁷ This refers to 'large customers' as defined in the NERL, being a business customer that consumes energy at a business premises at or above the upper consumption threshold (100 MWh per annum). Some jurisdictions have set a different threshold.

a request for data from either of those parties. The procedures include requirements as to the timeframes in which data must be provided and requirements to publish the information that a distributor or retailer will require from a customer or their authorised representative in order to verify identity and consent.³⁸

5.1. Existing access to energy data by retail customers in the NEM

Under the NERR (which applies in NEM jurisdictions other than Victoria), retailers must, on request from a small customer, provide historical billing data for that customer for the previous two years. Retailers must also provide, on request by a small customer or its authorised representative, information about that customer's energy consumption (i.e. metering data and settlements ready data) for the previous two years in the manner and form required under the metering data provision procedures.³⁹ A similar requirement also applies to a small customer's distributor in respect of a request from the customer or its authorised representative for energy consumption information or the distributor's applicable charges. Where the request relates to one customer, the data provider has ten business days to fulfil that request.

5.2. Existing access to energy data in Victoria

In Victoria, the Retail Code, the Electricity Distribution Code and the Metering Code include provisions regarding access to, and provision of, historical billing data and a retail customer's consumption data that are similar to the requirements under the NERR. For example, a retailer must, on request, use its best endeavours to provide historical billing and metering data to small customers for the previous two years⁴⁰ and distributors and retailers must, on request from retail customers, provide access to energy data and metering data in respect of the customer's meter, subject to certain requirements.⁴¹

5.3. Existing obligations regarding confidentiality of data

Retailers and distributors also have obligations under the NER and the Victorian Codes to keep a retail customer's billing and consumption data confidential. Similarly, they must comply with relevant privacy legislation in relation to a customer's personal information (e.g. they must comply with the *Privacy Act 1988* (Cth) to extent any such data contains personal information).⁴²

³⁸ See Rule 7.14(c)(4) of the NER.

³⁹ See Rule 28 and 56A of the NERR. If a small customer or its authorised representative requests from the retail customer's previous retailer historical billing or energy consumption information for a period within two years prior to the date of the request then, even though the small customer's contract with the previous retailer may have ended, the previous retailer must provide the information (if available) to extent the information relates to the period in which the small customer was a customer of that retailer (see rule 56B of the NERR).

⁴⁰ See rule 28 of the Energy Retail Code.

⁴¹ See rule 7 of the Electricity Customer Metering Code.

⁴² See rule 7.15 of the NER, rule 7.2 of the Electricity Customer Metering Code and the *Privacy Act 1988* (Cth).

6. Current regulatory framework for access to energy product data in the NEM

6.1. Generic product information data in the NEM

The consumer data right will enable consumers to access generic product information data, such as information contained in a product disclosure statement.⁴³ This information does not relate to an identifiable or reasonably identifiable person. Data holders will be obliged to make this data available, and it will not be subject to privacy safeguards. Data holders will be required to provide access to information that they have on offer, in a timely manner and in a useful digital format. This product information is currently generally only held by retailers, and some product information is held by relevant government agencies.

Generic product information in the energy sector, both for electricity and gas, which is likely to be covered by the CDR includes retail product data. Retail product data will include general energy retail product information, which does not relate to a particular CDR consumer. This data will be made available under the CDR, as it does not require consumer consent for its release.

The current publication and presentation requirements for how retailers must present their prices and product information to small customers differ within the national energy market. Queensland, New South Wales, the Australian Capital Territory, South Australia and Tasmania have adopted the national regime contained in the National Energy Retail Law (NERL), whereas Victoria has retained its own regulatory arrangements for energy retailing.

6.2. Retail product data - National Energy Retail Law jurisdictions

Retail product data for generally available retail plans for small customers⁴⁴ in NERL jurisdictions is currently subject to publication requirements set out in the NERL and the AER's Retail Pricing Information Guidelines. These requirements apply to standing and market offer prices that are generally available to classes of small customers. This information must be submitted to the AER in the manner and form required by the Retail Pricing Information Guidelines.⁴⁵ Retailers must present standing and market offer prices in accordance with the Retail Pricing Information Guidelines including when publishing, advertising or notifying the AER of those prices or any variation.⁴⁶ The NERL also requires retailers to publish standing and market offer prices for small customers prominently on their websites, and in any other relevant material provided by the retailer in accordance with the Retail Pricing Information Guidelines.⁴⁷

The AER uses the information obtained under the guidelines to provide a website price comparator, Energy Made Easy⁴⁸, to assist small customers to compare the energy plans available to them.⁴⁹ Retailers provide information about their energy plans to the retailer

⁴³ See section 56BE of the Bill.

⁴⁴ This refers to 'small customers' as defined in the NERL, being a residential customer or a business customer that consumes energy below the upper consumption threshold (100MWh per annum). Some jurisdictions have set a different threshold.

⁴⁵ NERL section 63. This section is a civil penalty provision.

⁴⁶ NERL sections 24(1) and 37(1).

⁴⁷ NERL sections 24(2) and 37(2).

⁴⁸ Australian Energy Regulator, <https://www.energymadeeasy.gov.au/>.

⁴⁹ NERL section 62.

secure area of the Energy Made Easy website. This information is then displayed to consumers when they search for available energy plans.

As the information is obtained by the AER through its compulsory powers, there are limitations under section 44AAF of the *Competition and Consumer Act 2010* on the ability of the AER to disclose this information (notwithstanding that the information is in the public domain). However, some disclosures are expressly permitted under section 44AAF, and other disclosures can be authorised by regulation. There are no limitations on the ability of individual retailers to disclose their retail product information.

The Retail Pricing Information Guidelines⁵⁰ require retailers to provide all required inputs for a retail product, to enable Energy Made Easy to generate a 'Basic Plan Information Document' for their plans, which contains key information on the relevant standing offer plan contract or market offer plan contract.⁵¹ Retailers are not permitted to generate these information documents themselves. Energy Made Easy generates a unique identification number for each plan published on the website.⁵² Retailers are responsible for ensuring that the data and information published on Energy Made Easy and retailer websites is accurate and up-to-date.⁵³ Information on generally available plans must be submitted to Energy Made Easy within two business days of becoming available to customers.⁵⁴

Retailers must upload every small customer plan to Energy Made Easy, even if the plan is not generally available⁵⁵, so that they can provide the Basic Plan Information Document to customers. For each generally available plan, retailers must publish a link to the Basic Plan Information Document in a prominent position on their website.

New requirements for retailers to refer to the Energy Made Easy generated plan ID in communications with customers and be able to identify the plan based only on the plan ID took effect on 1 January 2019.⁵⁶ Energy Made Easy now enables retailers and customers to search using plan ID numbers and obtain the Basic Plan Information Document (BPID) for a retail product.

⁵⁰ Version 5.0 of the AER Retail Pricing Information Guidelines was released in April 2018, with a phased commencement for various obligations in the revised Guidelines.

⁵¹ Clauses 33 to 61 of the RPIG specify what information must be provided to EME by a retailer, and includes:

- The unit price for electricity and/or gas, expressed in cents per kWh or cents per MJ
- Any demand changes (where relevant), labelled as cents per kW, per kVA or per kVAR
- Any fixed or standing charges, expressed in 'cents per day' and labelled as a 'daily supply charge'.
- For any plans that include a discount, certain information on discounts⁵¹
- Details of incentives
- Key fees that are applicable (eg for connection, disconnection, late payment, metering etc)
- Details of key contract terms (eg billing period, payment methods, etc)
- Eligibility restrictions
- Solar and GreenPower options, including solar feed-in tariffs
- Whether the plan's availability is limited to properties with a particular metering system or configuration

⁵² Clause 29 of the Retail Pricing Information Guidelines (v5.0).

⁵³ Clause 25 and 28 of the Retail Pricing Information Guidelines (v5.0).

⁵⁴ The Guidelines also expand the definition of 'generally available', and obligations relating to plans in the expanded definition commenced on 1 October 2018

⁵⁵ Restricted plans include staff plans, plans restricted to concession customers, plans restricted to hardship customers and 'save' and 'win-back' plans.

⁵⁶ Clause 104 and 105 of the Retail Pricing Information Guidelines (v5.0).

In addition, a requirement for retailers and third party market agents to advise the customer when conducting marketing that a BPID is available took effect on 1 January 2019. Price comparison websites and third party sales agents are now required to provide a link to the BPID on their websites.

6.3. Victoria

In Victoria, electricity retailers are required to present electricity retail product information for standing offer and market offer in accordance with requirements of the Energy Retail Code issued by the Essential Services Commission under the *Electricity Industry Act 2000 (Vic)* and the *Gas Industry Act 2001 (Vic)*.

Retailers must publish on their internet site details of standing offers in the manner set out in the Energy Retail Code, and input all relevant electricity standing and market offers onto an internet site nominated by the Victorian Energy Minister.⁵⁷ The nominated website is Victorian Energy Compare.⁵⁸ The home page of the retailer's internet site must have a link that allows consumers to access the retailer's relevant offers and Price and Product Information Statements. The retailer's website must include links from Victorian Energy Compare so that the customer can easily view the retailer's offers.

Each Price and Product Information Statement must include certain information, including:

- All fees and charges separately disclosed, including the tariff and early termination fees (if applicable)
- The terms of the contract and the termination notification required
- For a flexible retail tariff designed for smart meter customers, whether there is a right to revert, and the rights of the customer to opt out,
- Details of rebates, non-price incentives, whether different tariffs apply at different times, and how to get information on the terms and conditions.

Each Price and Product Information Statement⁵⁹ must be allocated a unique name or reference code (or both). Requirements apply with respect to how monetary amounts, variable fees and charges, and fixed fees and charges must be expressed. A Price and Product Information Statement must be updated within five business days of any change to the information.

Retailers are required to provide an 'offer summary'⁶⁰ or a Disclosure Statement in writing to a small retail customer in certain circumstances.

As an alternative, an Energy Price Fact Sheet may be prepared in accordance with the requirements of the AER's 'AER Retail Pricing Information Guideline Version 3.0'.

⁵⁷ Sections 35A and 36A of the *Electricity Industry Act 2000 (Vic)*

⁵⁸ Victorian State Government, <https://compare.energy.vic.gov.au/>

⁵⁹ A 'Price and Product Information Statement' means a statement prepared by a *specified retailer* pursuant to its obligations under section 36A of the *Electricity Industry Act* or under section 43A of the *Gas Industry Act*.

⁶⁰ An 'offer summary' is a statement prepared by a retailer under clause 15C of the Energy Retail Code.

7. Potential data sets for initial energy CDR

7.1. NEM priority datasets

The initial data sets for the CDR in energy have not yet been determined. The ACCC has prepared this paper in consultation with the Treasury in relation to the potential scope of the data sets that the Treasury is considering for inclusion in the designation instrument. This work has been informed by HoustonKemp's recommendations on priority NEM data sets that should be subject to the CDR, and takes into account recent changes to the NER to establish a register of distributed energy resources, and the potential use case for the CDR to extend to distributed energy resources information.

The datasets listed in this section are provided to assist stakeholders to assess the costs and benefits of the different data access models outlined in this paper. A future Treasury consultation process is likely to focus on the specific data sets that may be subject to the Treasurer's designation (pursuant to s56AC of the Bill) and may also seek stakeholder views on the use cases that may be supported by designation of those data sets.

7.1.1. Relevant NMI standing data fields

HoustonKemp recommended that NMI standing data be subject to the CDR in energy due to its value to a consumer in contextualising their usage data and providing detail of the static features of their connection point. Given the breadth of data fields which constitute NMI standing data, and that not all are mandatorily populated and are thus often blank, there is little value in all fields being subject to the CDR. At a minimum, fields that are of value to consumers in understanding and managing their energy use are:

- Average daily load (ADL)
- Network tariff code⁶¹
- The presence of a controlled load
- Metering installation type

Access to the information set out above facilitates engagement on potential tariff changes, metering upgrades and change of supplier. Access to a customer's network tariff code is critical to determining the retail products available to that customer.

The ACCC notes that AEMO has initiated a review of NMI standing data, which will impact on NMI standing data fields.⁶² The proposal set out in the consultation paper is for the fields which are returned under a NMI Discovery Search 2 of CATS Standing Data be subject to the CDR in the first instance.⁶³ The fields available through NMI Discovery Search 2 are designed to be sufficient to assist retailers to prepare quotations for customers. It is possible that additional NMI standing data fields would support further use cases.

⁶¹ In electricity, each network tariff has an identifier, the 'network tariff code', which is contained in NMI standing data. The relevant distributor is required to keep the network tariff code up-to-date. The network tariff code can be used to obtain the details of the network tariff from the distributor.

⁶² See AEMO, MSATS NMI standing data consultation, <http://www.aemo.com.au/Stakeholder-Consultation/Consultations/MSATS-NMI-Standing-Data-Consultation>

⁶³ See section 42.3.2 of the AEMO MSATS Procedures for definition of data delivered under a NMI Discovery 2 Search of CATS Standing Data.

7.1.2. Metering data

Metering data is currently not part of NMI standing data and is provided by Metering Data Providers to retailers, distributors and any generator at a connection point. This data is provided in a rich data format, the Meter Data File Format.⁶⁴

Currently, AEMO receives some metering data in aggregated net format for connection points which are not serviced by the local retailer. However, recent changes to the NER mean that AEMO will need to receive metering data in the same format that is provided to retailers and distributors. This is expected to occur by October 2020 as part of the move to global settlement of the NEM. AEMO also receives interval metering data for all connection points that have an interval meter. Within the NEM, interval metering data is available for larger commercial and industrial customers, some customers with manually read interval meters, and residential and small business customers that have received a smart meter.⁶⁵

7.1.3. Customer provided data

Customer provided data is information that identifies, describes, details, or is about the account holder. This includes a customer's personal address and contact details (including postal address), information regarding the customer's energy consumption behaviour or electrical appliances (if provided), information that has been provided for the purpose of making payments, information regarding authorisation for the transfer of information, and the time period of the account. This data can be complicated by multiple occupants in a home who may seek data access in circumstances where there is only one account holder. This data is currently held only by retailers.

7.1.4. Billing data

Small customers in NERL jurisdictions can access up to two years' of historical billing information from their retailer, and may access further historical billing information for a charge.⁶⁶ In Victoria, small customers can also access two years' of historical information from their retailer, and may access further historical billing information for a charge.⁶⁷ This data is currently held only by retailers.

7.1.5. Retail product data

Product data encompasses information that identifies, describes or details products, including information such as tariffs, usage charges and applicable discounts where these products involve the supply of electricity to a customer. Product data may extend to products on offer, products that customers have taken up that are no longer on offer, and individually tailored products. Retail product data, including data sets held by government agencies for the purpose of providing web-based comparison services, is discussed in sections 6.2 and 6.3 above. Only retailers can link tailored product data to identifiable customers, noting that the AER also holds these tailored product data sets but cannot attribute them to individual customers.

⁶⁴ MDFF is contained in http://www.aemo.com.au/-/media/Files/Electricity/NEM/Retail_and_Metering/Metering-Procedures/2018/MDFF-Specification-NEM12--NEM13-v106.pdf

⁶⁵ Since 1 December 2017, new and replacement meters in the NEM for small customers must be type 4 meters unless the customer refuses remote communications capability (in which case they must be type 4A meters. Smart meters rolled out as part of Victoria's advanced metering infrastructure rollout are classified as type 5 meters.

⁶⁶ Rule 28 of the National Energy Retail Rules.

⁶⁷ Clause 28 of the Energy Retail Code.

7.1.6. Distributed energy resources register data

Distributed energy resources register data is register data that AEMO will be required to establish following recent changes to the NER.⁶⁸ The rule changes require AEMO to establish a register of distributed energy resources in the NEM, for information on small generating units and information on demand side participation. The register will include information on matters such as whether a household has a small scale battery storage system, rooftop photovoltaics or other small scale generation systems.

The register aims to give network businesses and AEMO visibility of where distributed energy resources are connected to help in planning and operating the power system. There may be a use case to make this information available under the CDR to enable product comparisons and to facilitate the uptake of distributed energy resources.

7.2. What electricity data sets are likely to be covered under the initial energy CDR rules?

The table below was provided by the Treasury, and outlines data sets that are being considered for inclusion under the initial CDR framework in the energy sector, and the entities that currently hold these data sets in the NEM. The exact nature of the data may vary depending on which entity holds the data.

The Treasury will conduct formal consultation on the data sets to be designated in the initial designation instrument under section 56AC of the Bill. The table is provided for guidance only, to aid in the consideration of the model for data access in the energy sector.

Types of data that may be subject to the initial CDR in the energy sector	Who currently holds these data sets in the NEM?				
	Note: the exact nature of the data may vary depending on which entity holds the data. ⁶⁹				
	AEMO	AER/Victoria Energy Compare	Retailers	Metering Data Providers	Distributors
<i>NMI Standing data</i>	✓		✓	✓	✓
Connection point information					
<i>Customer provided data</i>			✓		
Name of account holder, contact details including billing address/postal address, information provided re customer appliances, etc.					

⁶⁸ National Electricity Amendment (Register of distributed energy resources) Rule 2018.

⁶⁹ Different levels of access to NMI standing data are permitted, and AEMO is the only entity with access to all NMI standing data. In relation to metering data, AEMO currently receives this data from Metering Data Providers in a different format to the metering data received by retailers and distributors. The Global Settlement Rule Change will also see AEMO be the only entity in receipt of metering data for all NEM connection points.

<i>Metering data</i> Data collected by metering data providers or otherwise estimated or substituted by Metering Data Providers	✓*		✓	✓	✓
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*AEMO does not currently hold all metering data. The extent of AEMO's current metering data holdings is discussed in section 7.1.2 above.

Types of data that may be subject to the initial CDR in the energy sector	Who currently holds these data sets in the NEM?				
	Note: the exact nature of the data may vary depending on which entity holds the data. ⁷⁰				
	AEMO	AER/Victoria Energy Compare	Retailers	Metering Data Providers	Distributors
<i>Billing data</i> Historical billing information for each connection point to which they have delivered electricity			✓		
<i>Product data - generic</i> Retail tariffs, usage charges, applicable discounts for the supply of electricity to consumers		✓	✓		
<i>Product data – individually tailored</i> Retail tariffs, usage charges, applicable discounts for the supply of electricity, specific to a consumer			✓		
<i>Distributed Energy Resource Register</i>	✓				

Source: The Treasury, February 2019.

⁷⁰ Different levels of access to NMI standing data are permitted, and AEMO is the only entity with access to all NMI standing data. In relation to metering data, AEMO currently receives this data from Metering Data Providers in a different format to the metering data received by retailers and distributors. The Global Settlement Rule Change will also see AEMO be the only entity in receipt of metering data for all NEM connection points.

7.3. Complex energy data sets for future implementation

HoustonKemp recommended that the CDR in the energy sector apply to other data sets such as gas metering data, non-NEM electricity metering data, non-NEM electricity connection point data, electricity and gas retail product data (contract offers), and non-NEM electricity data.

Electricity data for off-market customers in embedded networks could also be considered for future inclusion in the CDR.⁷¹

8. Changes to existing regulatory frameworks to implement the CDR for energy

As noted above, the legislative framework for the CDR will be set out in the *Competition and Consumer Act 2010* (Cth) with the ACCC determining rules that will govern the application of the CDR in the energy sector.

Amendments to the current regulatory framework for energy are likely to have to be made to ensure consistency between the new CDR framework and existing arrangements regarding access to, and provision of, a consumer's energy data. For example, in the NEM, HoustonKemp noted that changes will need to be made to existing arrangements for accessing metering data under Chapter 7 of the NER⁷² and, potentially, changes to the NERR, that provide small customers and their authorised representatives access to consumption and billing data. Changes may also be required to Victorian energy regulations (such as the Retail Code and Metering Code).

9. Data access models for CDR in the energy sector

Drawing on the work of HoustonKemp, the ACCC is considering three data access models for accredited data recipients to access data in the energy sector. These are detailed below:

- i. **Model 1, the AEMO centralised model** - AEMO would be the sole data holder of a centralised data set, which includes consumer energy data that it currently does not hold under national energy legislation, and would be responsible for providing CDR data directly to accredited data recipients
- ii. **Model 2, the AEMO gateway model** - AEMO would provide a gateway function (acting as a pipeline for the provision of CDR data from data holders which may include retailers and potentially also distributors, to accredited data recipients) and may also be a data holder providing CDR data directly to accredited data recipients
- iii. **Model 3, the economy-wide CDR model** - existing data holders (for example, retailers) would be responsible for providing CDR data directly to accredited data recipients and/or consumers i.e. the model used for the banking sector.

Model 1, the AEMO centralised model, would require energy data holders (which the Bill contemplates may include energy retailers, distributors, AEMO, and potentially also

⁷¹ The Australian Energy Market Commission is reviewing regulatory arrangements for embedded networks in the NEM. On 31 January 2019, the AEMC released a draft report on updating the regulatory framework for embedded networks. Its proposals include extending NEM metering arrangements to embedded networks.

⁷² HoustonKemp, p. iii.

government-provided energy comparator services⁷³) to build APIs to provide CDR data to AEMO for centralised storage, and would require AEMO to build open APIs to provide that data to accredited data recipients.

Model 2, the AEMO gateway model, would require AEMO to build a ‘gateway’ through which AEMO, on behalf of energy data holders, would provide CDR data to accredited data recipients. This would require data holders to develop web-based APIs that enable ‘on demand’ provision of various energy data sets. The data holders may include energy retailers, distributors and potentially also government-provided energy comparator services. AEMO could also potentially be designated as a data holder for some data sets. To the extent that AEMO was designated as a data holder for any of the data shared through the gateway, it would be subject to the CDR obligations that apply to data holders rather than the CDR obligations that apply to gateways.⁷⁴

Model 3, the economy-wide CDR model, would involve accredited data recipients and/or consumers themselves directly contacting the data holder responsible for collection and management of relevant data sets, and would require participants and potentially also AEMO and government-provided energy comparator services to build open APIs for the provision of data to accredited data recipients. This model would also require data holders (for example, energy retailers, but potentially also distributors, AEMO, and government-provided energy comparator services) to build APIs for the delivery of data.

Consent, Authorisation and Authentication

Irrespective of the chosen data access model, it must support an appropriate process for consumers to consent to sharing their data. This may relate to consumers consenting to an accredited data recipient receiving their data, authorising data holders releasing/sharing their data⁷⁵, and authenticating or verifying their identity. However, the specific processes for consent, authorisation and authentication in the energy sector will be determined at a later stage, through the CDR rule-making process once the data access model has been determined. Further information on the Consumer Experience aspect of the Consumer Data Standards work program is contained in Data61’s *Consumer Data Standards Christmas working draft*.⁷⁶

9.1. AEMO as the sole data holder in the energy sector

Under this model, AEMO would act as a centralised store of data, and provide a single point of contact for accredited data recipients. AEMO would be the sole data holder for purposes of the CDR, and the model would not require AEMO to be accredited as a data recipient. AEMO would share data with accredited data recipients via APIs. For this model to

⁷³ Transitional provision for energy sector, item 3, Schedule 1, Part 1 of the Bill. The Bill contemplates that data holders may include registered participants within the National Electricity Market such as electricity retailers and distributors, as well as AEMO. (HoustonKemp proposed that all or a subset of AEMO, distributors, retailers and Metering Data Providers would be the designated data holders. However, Metering Data Providers are not registered participants and so not within scope of the transitional provision).

⁷⁴ The Bill, subsection 56AJ(1)(c).

⁷⁵ Under open banking, OAuth 2.0 will be used to allow third party software to prompt the user for authorisation when it is needed.

⁷⁶ Data61, *Consumer Data Standards Christmas working draft*, 20 December 2018, <https://consumerdatastandards.org.au/standards/christmas-2018-working-draft/>

be operationalised, AEMO would need to be in receipt of all data required to fulfil a request under the CDR, including, but not limited to, any customer contact data required for authorisation purposes.

AEMO does not currently hold many of the data sets that are likely to be required under the CDR. For example it does not currently hold customer provided data or billing data. This option would require changes to the existing energy regulatory framework (e.g. the NER and/or the NERR) to ensure that AEMO is in receipt of and able to manage and use all data relevant to a defined CDR transaction.⁷⁷ This model would be expected to apply to NEM priority data sets in the initial stage of CDR implementation and the process for CDR implementation for further data sets, such as gas data sets and electricity data sets outside of the NEM, would need to be considered further.

Under this model, AEMO would need to store consumer identity and billing information for individual households and businesses, potentially as an element of NMI standing data. This would require retailers to develop APIs for AEMO to draw on up-to-date billing and retail product information from them. It may also require middleware to connect APIs to retailer legacy systems. Retailers would need to ensure that up-to-date data is available to AEMO on demand. The APIs would need to conform to the API design standards.⁷⁸ This model would put responsibility for verification of consumer consent, and validation of consumer identity (known as authentication) with AEMO.

Under any data access model, data holders are required to comply with CDR rules and standards, to ensure there is potential for broader cross-sector data sharing. If this model is adopted, AEMO as the sole data holder in the energy sector, would be required to comply with the CDR rules, standards⁷⁹, and relevant privacy safeguards, and share data with entities outside of the energy sector.

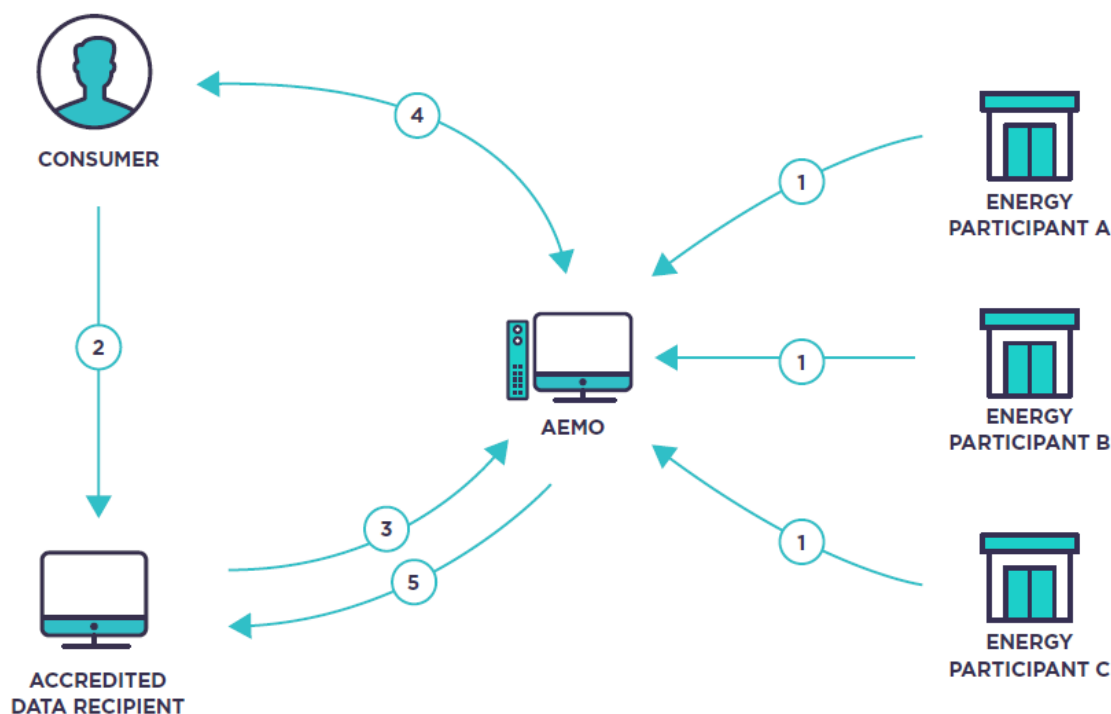
The centralised model would increase AEMO's holdings of sensitive data, which currently include a unique identifier for each household in the national energy market, and extend these holdings to include customer identity information. While AEMO's existing data holdings and role as system operator require AEMO to maintain the requisite security and resilience controls, any approach that centralises customer-specific identifiable data within one entity involves additional risks to the security of that information. This model also raises issues with respect to service continuity and performance, as centralised data access introduces the risk of a single point of failure. Any requirement to enhance security and resilience controls inherent in CDR rules or standards to address these risks would need to be assessed as part of a cost-benefit assessment.

⁷⁷ Under sub-section 56AJ(2)(b) of the Bill, a person cannot be a CDR data holder if the CDR data was disclosed to the person under the consumer data rules.

⁷⁸ See <https://consumerdatastandardsaustralia.github.io/standards/#introduction>

⁷⁹ See sections 56FD and 56FE of the Bill in relation to the legal effect of data standards and enforcement of data standards.

High-level transaction flow (third party access):



1. All CDR data is provided to the Australian Energy Market Operator (AEMO) by energy participants. These transfers would occur under national energy legislation and not under the CDR regime
2. The consumer consents to an Accredited Data Recipient (ADR) obtaining their energy data
3. The ADR contacts AEMO seeking to access the consumer's data
4. The process of authentication and authorisation occurs in accordance with any requirements in the CDR energy rules
5. AEMO shares the consumer's data with the ADR

9.2. AEMO as the 'gateway' to data holders in the energy sector

The 'gateway' model would involve the decentralised sharing of CDR data by data holders in the energy sector supported by an AEMO gateway. The CDR legislation enables an entity to be designated as a 'gateway' to facilitate the transfer of CDR data between data holders and accredited data recipients. The entity must be specified as a gateway in the designation instrument for the sector, and the instrument must specify what classes of information the entity is a gateway for. A gateway cannot also be a data holder for the classes of data it acts as gateway for.⁸⁰

Under this model, AEMO would source CDR data that it does not already hold from data holders and act as a pipeline for the provision of that data to accredited data recipients. To the extent that AEMO is designated as a data holder for any of its own data holdings (for

⁸⁰ The Bill sub-section 56AJ(1)(c)

example, NMI standing data, and NEM interval metering data), it would not be acting as a gateway in the sharing of this data with accredited data recipients, and it would be subject to the CDR obligations imposed on data holders. These obligations are more extensive than the obligations that apply to designated gateways.

If AEMO is designated as a gateway for NEM data holdings, but not designated as a data holder, the gateway will be required to direct data requests to the relevant retailer(s) (or other entities designated as data holders, for example distributors), and co-ordinate the CDR authorisation process. This may require a consumer to authorise the sharing of their data by more than one data holder, or it may be that a form of central authorisation could streamline this process. AEMO would then package the data from the data holder(s) and deliver the data to the accredited data recipient. To the extent that AEMO is designated as a data holder for any of its data holdings, this data could be delivered through the same transaction, but as noted above, AEMO would not be acting as a gateway in this context and would be subject to the CDR obligations that apply to data holders.

As noted in section 9.1 above, under any access model, data holders are required to comply with rules, standards, and privacy safeguards set out in the Bill. A designated gateway is subject to fewer privacy safeguards in the Bill,⁸¹ as some privacy safeguards are not relevant to a gateway function.

The gateway model as recommended by HoustonKemp is intended to leverage AEMO's IT capability, and potentially also leverage AEMO's existing IT infrastructure, such as the functionality provided by AEMO's B2B e-hub.⁸² The B2B e-hub is the platform in which existing service requests are passed between different market participants.

In recommending the gateway model, HoustonKemp made certain assumptions about the scope to leverage AEMO's systems and data infrastructure.⁸³ However, further work is required to establish the full extent of the infrastructure build required to develop a gateway. The e-Hub was initially used as a B2B communication platform provided by AEMO to support electricity B2B retail transactions. The e-Hub includes an API gateway and API portal to support web service-based communications between energy participants.⁸⁴ The capabilities of the e-Hub were extended to other business areas such as Generator Recall (wholesale) and forecasting (5-minute self-forecasting). The e-Hub's capability includes RESTful APIs.⁸⁵ While B2B retail data transfers through the e-Hub currently use aseXML⁸⁶ format, the e-Hub is capable of supporting other standards.⁸⁷ Currently, participants may use either File Transfer Protocol or an API interfacing method⁸⁸, or a combination of the two protocols, for their B2B communications. The platform provides interoperability for participants with different systems, acting as a translation tool, and the e-Hub's API systems can be accessed over the internet.

⁸¹ Four of the thirteen privacy safeguards in the Bill apply to designated gateways. These safeguards relate to the management of CDR data (section 56ED of the Bill), its use or disclosure (sections 56EI and 56EJ of the Bill), and the security of CDR data (section 56EO of the Bill).

⁸² See AEMO, *Shared market protocol (SMP) technical guide*, 11 April 2018 (ver. 1.15), https://www.aemo.com.au/-/media/Files/Electricity/NEM/Retail_and_Metering/B2B/2018/B2B-SMP-Technical-Guide.pdf

⁸³ HoustonKemp, p. 31.

⁸⁴ Ibid.

⁸⁵ The representational state transfer (RESTful) approach to designing APIs is proposed for use in open banking. Further information on the Consumer Data Standards work program is contained in Data61, *Consumer Data Standards Christmas working draft*.

⁸⁶ aseXML is the acronym for 'A Standard for Energy Transactions in XML'.

⁸⁷ As part of Power of Choice reforms, the e-hub's capability was extended to RESTful APIs via XML format. e-Hub capability was also extended to RESTful APIs via JSON format for the wholesale APIs.

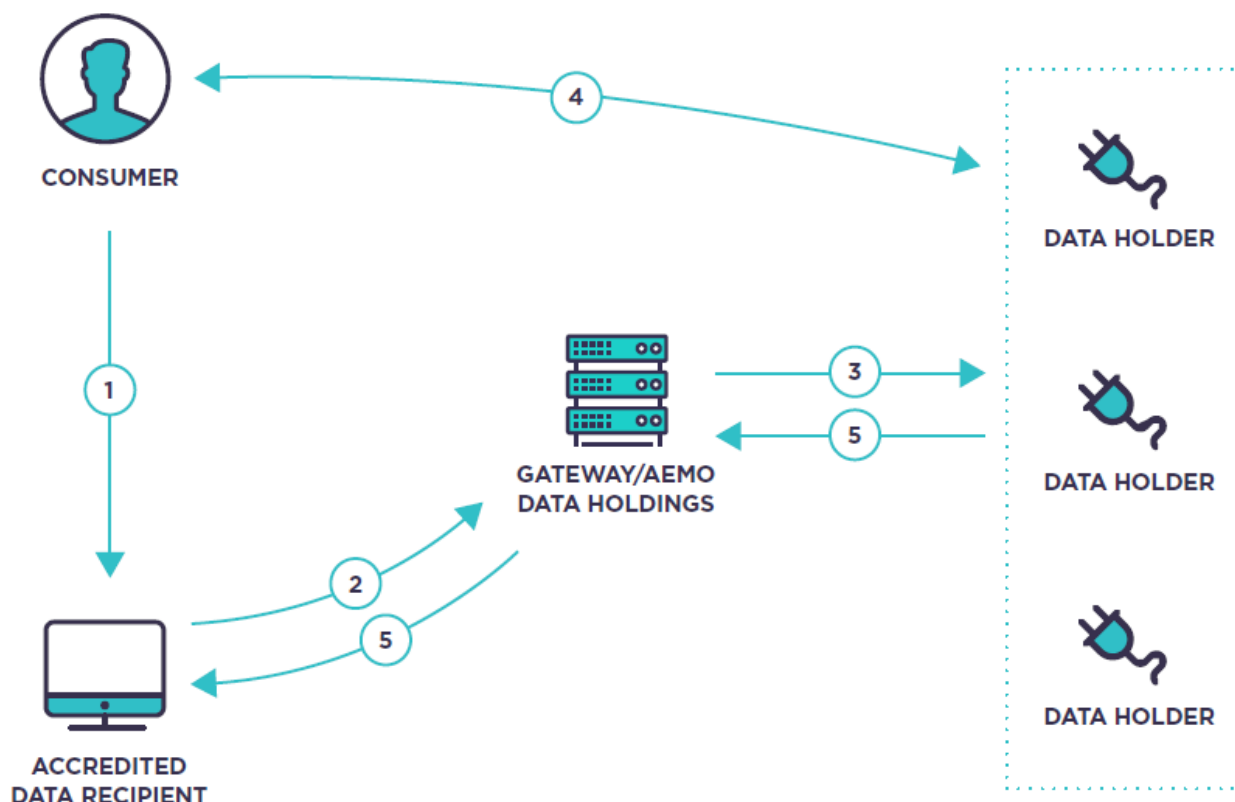
⁸⁸ All new participants accredited to use the e-Hub default to APIs.

Under this model, as with model 1, participants (and potentially government comparator services) that are designated as data holders would need to develop API interfaces for AEMO to tap into on demand to obtain data such as billing and retail product data. As with model 1, these API interfaces would need to be designed to the open standard used for the CDR.⁸⁹ The standards would apply both to participant-built APIs, and to gateway APIs. Participants may also require middleware to connect APIs to any legacy systems.

The pooling of energy data, including personally identifiable information, at a gateway may necessitate increased requirements for information security and resiliency. This model also raises issues with respect to service continuity and performance, as data access via a gateway introduces the risk of a single point of failure. The information security profile in the consumer data standards takes into account the value and risks of the information involved in the CDR, as do the CDR API designs that this profile informs. The rules established for any 'designated gateway' shall also be informed by assessments of risk. Consequently, the risk assessment of any information asset proposed for use in the CDR will inform the respective standards and rules.

⁸⁹ CDR APIs are designed to an open standard, but access to the APIs is controlled.

High-level transaction flow (third party access):



1. The consumer consents to an Accredited Data Recipient (ADR) obtaining their data
2. The ADR contacts the Gateway, seeking to access the consumer's data
3. The Gateway identifies which data holder(s) holds the consumer's data and provides the transaction details to them
4. The process of authentication and authorisation occurs in accordance with any requirements in the CDR energy rules
5. The consumer's data is shared with the ADR via the Gateway

9.3. Economy-wide model

The 'economy-wide consumer data right' model is based on the data access regime being implemented in the banking sector. The operation of this model as it will apply to the banking sector is set out in the ACCC's Rules Outline released on 20 December 2018.⁹⁰ The Rules Outline sets out the ACCC's position in relation to the initial version of the rules that will

⁹⁰ ACCC, *Consumer Data Right: rules outline*, 21 December 2018, available at <https://www.accc.gov.au/focus-areas/consumer-data-right/rules-outline>

apply to data access in the banking sector. It states that the sharing of CDR data with an accredited data recipient must occur via APIs and in accordance with the Consumer Data Standards made by the Data Standards Chair.⁹¹ The Rules Outline also states that the sharing of product reference (generic) data must occur via APIs and in accordance with those standards.⁹²

The Rules Outline stipulates that banking data provided directly to consumers would not be accessed through APIs⁹³, due to the added security risks of this approach. Instead, the Rules will require a data holder to enable consumers to make a request to share their CDR data via existing mechanisms on their account(s).

Under the economy-wide CDR model, more than one party may be responsible for providing data directly to accredited data recipients if a consumer consents, and each would need to develop and maintain a means of data accessibility. As with models 1 and 2, the designated data holders (whether retailers, distributors, AEMO or a government agency) would need to develop API interfaces to provide a means of data accessibility for accredited data recipients. As with models 1 and 2, these API interfaces would need to be designed to the open standard used for the CDR, and middleware may be required to connect the APIs to legacy systems.⁹⁴

Unlike model 2, AEMO would not facilitate data transfers on behalf of data holders. AEMO would only be involved in the provision of CDR data to the extent that it was designated as a data holder for particular data sets.

Under this model, an accredited data recipient may need to request data from multiple parties in order to obtain a comprehensive data set. The use of common API standards across data holders (as will be the case for the banking sector) facilitates access to multiple data sets in these circumstances. Against this, retailers currently hold most of the data that would be envisaged under the CDR.

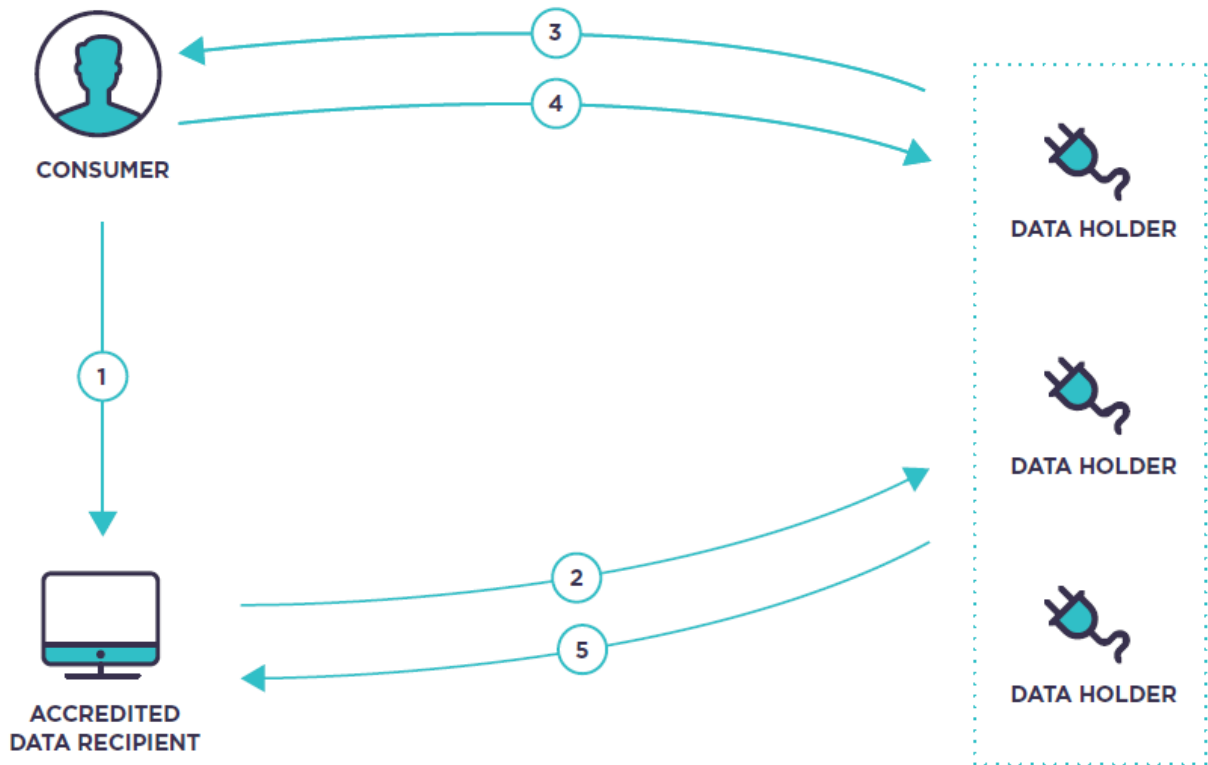
⁹¹ Rules Outline, Clause 1.3.

⁹² Rules Outline, Clause 1.6.

⁹³ Rules Outline, Clause 1.4.

⁹⁴ CDR APIs are designed to an open standard, but with access to the APIs is controlled.

High-level transaction flow (third party access):



1. The consumer consents to an Accredited Data Recipient (ADR) obtaining their energy data
2. The ADR contacts the data holder(s), seeking to access the consumer's data
3. The data holder contacts the consumer to authenticate the consumer's identity in accordance with any requirements in the CDR energy rules
4. The consumer authorises the data holder to disclose their data, in accordance with any requirements in the CDR energy rules
5. The data holder(s) shares the consumer's data with the ADR

10. The assessment criteria

The Bill requires the ACCC to have regard to the following matters when making rules⁹⁵:

- (a) the likely effect of the rules on:
 - (i) the interests of consumers; and
 - (ii) the efficiency of relevant markets; and
 - (iii) the privacy or confidentiality of consumers' information; and
 - (iv) promoting competition; and
 - (v) promoting data driven innovation; and
 - (vi) any intellectual property in the information to be covered by the instrument;
and
 - (vii) the public interest;
- (b) the likely regulatory impact of allowing the consumer data rules to impose requirements relating to the information to be covered in the instrument

Guided by these overarching considerations for implementation of the CDR, the ACCC is proposing to assess the three data access models considered in this paper using the assessment criteria elaborated below.

The ACCC is therefore seeking stakeholder feedback on the three potential models against the following criteria:

1. **User functionality** – whether the model provides a simple, transparent, convenient process for consumers to access their energy data on demand, enabling product comparison services and other data driven analyses. The ACCC notes that the following considerations may be relevant to this criterion:
 - For a meaningful assessment of a consumer's consumption patterns, 12 months of metering or billing data is needed, due to the seasonal nature of energy consumption. Under any model where data is sought directly from an energy retailer, accredited data recipients may from time to time need to request data from more than one data holder because the consumer has changed retailer within the preceding 12 months. This would be the case in model 3.
 - Implications for implementing consent, authorisation and authentication flows under each model and how that may impact the consumer experience
 - The extent to which a centralised access point for metering data will facilitate the provision of web-based services, including those provided through commercial or government-sponsored price comparators
 - Research suggests significant numbers of energy consumers display low levels of engagement with the competitive retail market.⁹⁶ Therefore any solution needs to reduce friction for consumers.

⁹⁵ The Bill, section 56BP (which applies the matters in sub-section 56AD(1)).

⁹⁶ ACCC, *Restoring electricity affordability and Australia's competitive advantage: Retail Electricity Pricing Inquiry—Final Report*, Canberra, June 2018, p. 236-238.

2. Cost effectiveness – whether the model provides the most cost effective solution. The ACCC notes that the following considerations may be relevant to this criterion:

- The extent to which each model would require systems changes to provide on-demand transfer of data (including customer identity and retail product data, and more recent meter reads), whether to AEMO or directly to accredited data recipients
- The extent to which infrastructure development costs for energy participants to develop API interfaces would differ under each model, or involve duplication of APIs
- The extent to which each model would be able to leverage existing systems and frameworks in the energy sector

3. Interoperability – whether the model allows for interoperability with other sectors that have implemented, and will implement, the CDR, to reduce barriers to entry for data driven service providers, and facilitate the development of innovative cross-sectoral data-driven innovation.⁹⁷ The ACCC notes that the following considerations may be relevant to this criterion:

- The CDR will be rolled out across the economy, and the extent of sector-specific variations may impact the consistent delivery of the CDR throughout the economy.
- The model adopted for the energy sector will need to facilitate convergence in data-driven services. In energy, an example of this could be the use of energy billing data as part of a personal budgeting app
- While interoperability will allow for cross-sector engagement, explicit consent, authorisation and accreditation will be required for each data set and sector

4. Efficiency of relevant markets – whether the model facilitates an over-arching common competitive framework for the CDR. The efficiency of relevant markets, and the promotion of competition, are considerations when designating a sector.⁹⁸ The ACCC notes that the following considerations may be relevant to this criterion:

- Whether the model facilitates or inhibits competition between energy retailers to offer more affordable services to consumers.
- Whether the model facilitates or inhibits the entry of new providers offering energy services to consumers and related innovation
- Whether the model is susceptible to the formation or support of data monopolies
- Whether the model facilitates or prevents the provision of intermediary data services on a competitive basis

⁹⁷ The Bill, sub-section 56AD(1)(a)(v) and section 56BP, which requires ACCC to have regard to these matters before making rules.

⁹⁸ The Bill, sub-sections 56AD(1)(a)(ii) and (iv) of the Bill and section 56BP, which requires ACCC to have regard to these matters before making rules.

- 5. Reliability, security and privacy** – Whether the model ensures secure access to and storage of data, and minimises privacy risks. The privacy or confidentiality of consumer information is a key consideration when designating a sector.⁹⁹ The ACCC notes that the following considerations may be relevant to this criterion:
- Whether the model introduces new or increased security or privacy risks, beyond existing arrangements, such as the centralised storage of consumer identity data together with granular consumption data on the behaviours of individual households
 - The extent to which the model introduces or mitigates a risk to service continuity and quality through a single point of failure, and the likely incidence of that risk
 - Whether the model pools sensitive data
 - The capacity and capability of participants in the sector to conform with CDR standards, rules and privacy safe guards.
- 6. Flexibility and extensibility** – how the model will accommodate data sets beyond the initial NEM priority data sets and innovation, for example, non-NEM jurisdictions, gas data sets and potentially off-market embedded network customers.

11. Stakeholder views

The discussion above sets out the preliminary views of the ACCC on relevant assessment criteria for assessing each of the potential models for CDR implementation in the energy sector. The ACCC seeks stakeholder comments on the advantages, disadvantages and participant implementation costs in respect of each of the models. The ACCC also seeks stakeholder views on what additional requirements the ACCC would need to consider including in the CDR energy rules if the gateway model were adopted. Submissions should be made in accordance with the process set out on page 2.

Question 1: Are there any other assessment criteria or relevant considerations which the ACCC should use to determine a preferred model for consumers to access their energy data under the CDR?

Question 2: Having regard to the assessment criteria, what are the advantages and disadvantages of each of the models?

Question 3: What are the likely implementation/compliance costs for market participants (including accredited data recipients) under each of the models, including costs associated with IT system changes or data storage?

⁹⁹ The Bill, subsection 56AD(1)(a)(iii) and section 56BP, which requires ACCC to have regard to these matters before making rules.

Question 4: What additional requirements should the ACCC consider including in the CDR rules for the energy sector if the gateway model is adopted?

Question 5: What emerging technologies do stakeholders believe will have an impact on the energy sector with respect to the CDR?

Question 6: What are the cost differences to participants of providing data once a day (to an AEMO repository) or on demand?

Question 7: What is the competitive impact, if any, of accessing data through AEMO rather than through a retailer?

Question 8: Are there any other issues that stakeholders wish to raise?