



Clean Energy Council supplementary submission to the Department for Energy and Mining consultation paper: Accelerating the roll out of smart meters in SA

The Clean Energy Council (CEC) welcomes the opportunity to provide additional feedback to supplement our original submission to the South Australia (SA) Department for Energy and Mining (DEM) consultation paper, *Accelerating the roll out of smart meters in South Australia*.

The CEC is the peak body for the clean energy industry in Australia. We represent and work with Australia's leading renewable energy and energy storage businesses, as well as rooftop solar installers, to further the development of clean energy in Australia. We are committed to accelerating the transformation of Australia's energy system to one that is smarter and cleaner.

In addition to the points made in our original submission, we would like to bring to DEM's attention the benefits of enabling access to local, real-time data from the revenue meter. Under the current rules, implementing either dynamic export limits or static zero export limitation requires the installation of an extra metering device, in addition to the revenue grade meter. This would potentially add hundreds of dollars to the cost of new installations.

In the remainder of this submission, we provide additional background information regarding this issue.

We would be happy to discuss these issues in further detail with representatives of DEM. We look forward to contributing further to this important area for policy development.

Context of this review

Metering policy is an active area of policy development and different approaches are being taken in different jurisdictions. See Appendix 1 for a summary of which jurisdictions are subject to *Power of Choice* metering reforms and which of those are undertaking an independent review of metering policies.

This submission supplements a submission provided to the SA DEM in February 2022 in response to its review of metering policy. For context, the earlier submission is included as Appendix 2.

What is the problem that local, real-time data access would solve?

The problem confronting consumers is knowing in real-time how much energy they are consuming and generating so that they can decide when to run shiftable loads.

Consumers want simplicity. Many consumers want a third party to simplify energy optimisation for them. This requires low-cost access to the energy generation and consumption data.

Local, real-time data access avoids duplication of metering between inverter and utility meter.

Consumers pay for the meter. It is their data and their right to access it should be recognised.

Will this problem be solved by the Consumer Data Right?

It is not an objective of the Consumer Data Right (CDR) to provide access to local, real-time data. The CDR will not solve the problems caused by the inability to access local, real-time data.

Do inverters already incorporate a second meter?

Many original equipment manufacturers (OEMs) already incorporate a meter within the inverter for their monitoring and export limiting functionality. However, less than 20% of solar inverters have a consumption meter installed, hence consumers can only see generation.

If OEMs and utility smart metering companies decide to collaborate by allowing utility smart meters to integrate with on-site distributed energy resources (DER) to perform consumption monitoring and export limiting, this will be in the hands of each individual OEM and meter provider to support. However, this would also require development time, cost, and effort in comparison with current approaches.

The power of telemetry data from the utility smart meter is expected to become apparent when the distribution network service provider (DNSP) wants to know specific site telemetry data in 5-minute intervals. If the OEM is required to report this telemetry data as well as provide dynamic export limiting and production limiting etc. then the cost to the cloud infrastructure would increase as a myriad of sites would have to report data to another server. This would be an unnecessary additional cost, as this data can be extracted from the utility smart meter which is already on site and has access to the required telemetry data for retailer billing reasons.

Will SA customers be required to install two meters?

From 1 December 2022, all new solar and battery connections in South Australia will be required to either be capable of dynamic export limits or be subject to a static zero export limitation. Without access to local, real-time data from the revenue meter, there will be a requirement for a second meter (or other measurement device). Although the second meter will not have to be revenue-grade, the requirement for additional metering could add hundreds of dollars by way of supply and installation to the cost of a typical installation in SA.

Is it technically feasible for revenue-grade meters to provide local, real-time data access?

Yes. This is not only feasible - it is already a feature of some metering platforms.

Do we already have a right to access local, real-time data from the revenue meter?

CEC has investigated whether customers (or their assigned agents) have a right to access local, real-time data from the revenue meter. The answer is 'no'

There is currently no "service type" for local access to real time metering data at the small customer's metering installation. Local access at the meter is not offered as a "service" under the National Electricity Rules (NER). The NER's *Table S7.5.1.1 Minimum Services Specification – services and access parties* (attached below) states that the small customer can authorise a remote (part e) "Metering installation inquiry service" and that data is time-stamped beyond energy data (i.e., voltage, current etc) but the data comes via the metering coordinator cloud and there is no option of accessing the data in real time by interfacing with the meter itself. The request description specifically says a "remote" request. There is no mandated timing for the delivery of the cloud data, and it could arrive days later.

Whilst relevant revenue meter service operators are often able to provide data of increasing dispatch frequency on a service basis, these service offerings are not technically capable of providing real-time data suitable for self-consumption or export limiting applications. Additionally, these service offerings represent additional costs typically considered on a network investment efficiency basis, which is not always reflective of consumer interests.

What needs to change?

Customers (and their assigned agents) should be given the right to free access to local, real-time data from the revenue meter.

We note that the Australian Energy Market Commission (AEMC) is resuming its review of metering services soon. The CEC will be advocating to the review that customers should have free access to local, real-time data and will work with industry towards fair, achievable standards to these ends. We urge DEM to support this position.

Customers are made to pay for the meters, so it's unacceptable to exclude them from accessing locally their own real time power data.

Table S7.5.1.1 Minimum Services Specification – services and access parties

1. Service	2. Description	3. Access Party
(a) remote <i>disconnection</i> service	The remote <i>disconnection</i> of a <i>small customer's</i> premises via the <i>metering installation</i> .	<i>Local Network Service Provider</i> <i>financially responsible Market Participant</i>
(b) remote <i>reconnection</i> service	The remote <i>reconnection</i> of a <i>small customer's</i> premises via the <i>metering installation</i> .	<i>Local Network Service Provider</i> <i>financially responsible Market Participant</i> <i>Incoming Retailer</i>
(c) remote on-demand <i>meter read</i> service	The remote retrieval of <i>metering data</i> including quality flags for a specified point or points in time and the provision of such data to the requesting party. The service includes the retrieval and provision of: <ul style="list-style-type: none"> • <i>reactive energy metering data</i> and/or <i>active energy metering data</i> (for imports and/or exports of <i>energy</i> measured by the <i>meter</i>); • <i>interval metering data</i> and cumulative total <i>energy</i> measurement for the <i>metering installation</i>; and • <i>accumulated metering data</i> at the start and the end of the period specified in the request. 	<i>Registered Participants</i> with a financial interest in the <i>metering installation</i> or the <i>energy</i> measured by that <i>metering installation</i> A person to whom a <i>small customer</i> has given its consent under clause 7.15.4(b)(3)(ii)
(d) remote scheduled <i>meter read</i> service	The remote retrieval of <i>metering data</i> including quality flags on a regular and ongoing basis and the provision of such data to the requesting party. The service includes the retrieval and provision of: <ul style="list-style-type: none"> • <i>reactive energy metering data</i> and/or <i>active energy metering data</i> (for imports and/or exports of <i>energy</i> measured by the <i>meter</i>); • <i>interval metering data</i> and cumulative total <i>energy</i> measurement for the <i>metering installation</i>; and • <i>accumulated metering data</i> at the start and the 	<i>Registered Participants</i> with a financial interest in the <i>metering installation</i> or the <i>energy</i> measured by that <i>metering installation</i> A person to whom a <i>small customer</i> has given its consent under clause 7.15.4(b)(3)(ii)

1. Service	2. Description	3. Access Party
	end of the period specified in the request.	
(e) <i>metering installation inquiry service</i>	<p>The remote retrieval of information from, and related to, a specified <i>metering installation</i> and the provision of such information to the requesting party. The <i>metering installation</i> must be capable of providing the following information, as a minimum, when requested:</p> <ul style="list-style-type: none"> • the status of the switch used to effect the <i>disconnection</i> and <i>reconnection</i> services; • the <i>voltage</i> as measured by the <i>metering installation</i>, with a date and <i>time stamp</i> for that reading; • the current as measured by the <i>metering installation</i>, with a date and <i>time stamp</i> for that reading; • the power (watts) as measured by the <i>metering installation</i>, with a date and <i>time stamp</i> for that reading; • the supply frequency (Hertz) as measured by the <i>metering installation</i>, with a date and <i>time stamp</i> for that reading; • the average <i>voltage</i> and current over a nominated <i>trading interval</i> for one or more nominated <i>trading intervals</i>; and • events that have been recorded in <i>meter log</i> (or logs) including recorded information in the tamper detection alarm, reverse energy flow alarm and <i>metering device</i> temperature alarm. 	<p><i>Local Network Service Provider</i> <i>financially responsible Market Participant</i></p> <p>A person to whom a <i>small customer</i> has given its consent under clause 7.15.4(b)(3)(ii)</p>
(f) <i>advanced meter reconfiguration service</i>	The remote setting of the operational parameters of the <i>meter</i> .	<i>Local Network Service Provider</i> <i>financially responsible Market Participant</i>

1. Service	2. Description	3. Access Party
	<p>The operational parameters that must be capable of being set are, as a minimum, the following:</p> <ul style="list-style-type: none"> • the activation or deactivation of a data stream or data streams; and • altering the method of presenting <i>energy data</i> and associated information on the <i>meter</i> display. 	

Appendix 1 – National and jurisdictional metering policies and reviews

Organisation / jurisdiction	Metering policy	Comments
Western Australia	Not governed by AEMC framework.	Distributor-led rollout of meters is proceeding. DNSPs have access to data from meters.
Victoria	Smart meter rollout preceded <i>Power of Choice</i> metering reforms	Close to 100% rollout. DNSPs have access to data from meters.
AEMC	About to resume its review of metering policy	
SA	Has initiated a review of metering policy	This submission supplements an earlier submission provided by CEC
New South Wales	Is reviewing DER policy including metering policy	Has identified “Providing access to near real time data and meter minimum specifications” as a high priority
Other NEM jurisdictions	Subject to <i>Power of Choice</i> metering reforms	Not known to be proceeding independently with a review of metering policy



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The *Competition in metering* policy has been a major disappointment. The Australian Energy Market Commission (AEMC) has been too slow to address the failure of its metering policy. As DEM acknowledges, the roll out has been too slow and most smart meter installations are related to installation of solar PV systems. Roll outs initiated by retailers have been minimal at most.

Consumers are paying for the smart meter roll out without realising the smart meter benefits. Smart meters can be beneficial but unless the data is accessible there is insufficient value for consumers. The potential benefits have not been realised due to difficulties with accessing the data in a useable form. The current arrangements for negotiating access to metering data are inefficient and are not contributing to the long-term interest of consumers.

The CEC's preference is for a target-based roll out, requiring replacement for a percentage of customers each year. The CEC is opposed to the use of demand-response appliance installation as a trigger for meter replacement because it could act as a disincentive to uptake of demand-response appliances. Already, the smart meter roll out is inequitable because it is being imposed selectively on customers who install solar PV systems. To make matters worse, cost-reflective tariffs are being imposed selectively on customers with smart meters. The AEMC has acknowledged that this discourages customers from obtaining a smart meter. The regulatory framework should not single out a relatively small group of customers for the mandatory smart meters and cost reflective tariffs.

We understand that the specifications for the 'smart' meters is outside the scope of this review. Nevertheless, we must alert DEM to the risk that it will be speeding up the rollout for meters that are not capable of doing what is needed from the device at the connection point. Rolling out 'smart' meters at scale in SA with the current default billing meter specification will result in a huge legacy fleet of meters that are unable to support the transformation to a dynamic connection point that leverages consumer market participation.

We would be happy to discuss these issues in further detail with representatives of DEM. We look forward to contributing further to this important area for policy development.

Roll out approaches supported by CEC

The CEC prefers *Option 2 – Target based roll out*, which would require replacement of a certain percentage of small customers' type 6 meters each year. This would allow electricity retailers the flexibility to determine the most efficient pathway for them to meet their installation targets. This approach could potentially be combined with *Option 1 – Smart meter requirement for controlled load* if replacement of smart meters for controlled load would count toward the target under *Option 2*.

We are less supportive of *Option 3 – Age-based meter replacement*. Requiring meters to be replaced once they have reached a certain age would impose logistical costs on the roll out. It would be better to allow retailers to target a particular area (for example) to meet targets rather than having to travel across the country for a meter replacement whenever a meter reaches thirty years of age.

Roll out approaches opposed by CEC

We are opposed to *Option 4 – Demand-response appliance installation trigger*. This could act as a disincentive to the adoption of demand-response appliances. We want to encourage demand-response appliances. We don't want additional costs and disincentives placed on customers who are considering purchasing demand-response appliances.

The current approach to the roll out is inequitable and *Option 4 – Demand-response appliance installation trigger* would exacerbate the problem. The roll out of smart meters has been largely paid for by customers who are required to install a smart meter as a condition of connecting distributed energy resources (DER). Very few customers request a smart meter because they want a smart meter per se.

Cost-reflective tariff reform is primarily being imposed on customers who have been forced to install a smart meter. As the AEMC has acknowledged, concerns over tariff reassignment are a disincentive to request a smart meter. If cost-reflective tariffs are to be imposed on unwilling customers, they should be imposed on all customers and not just on a limited cohort.

Smart meter specifications

There is an emerging consensus among policy makers that dynamic export limits will apply at the connection point. Policies, standards, and guidelines for interoperability are under active development and the Common Smart Inverter Profile Australia (CSIP-Aus) is being considered for application to DER.

A high priority should be to ensure that the device at the connection point can support use of CSIP-Aus. We strongly urge DEM to consider whether CSIP-Aus capability should be required of the 'smart' meter or whatever other device might take its place at the connection point. If DEM is unable to support this proposal, we would greatly appreciate an explanation of how dynamic operating envelopes at the connection point and coordination of multiple DER devices behind the connection point are expected to work if the meter occupies the connection point and lacks the required functionality. It would be a very poor outcome for consumers if multiple DER devices behind the connection point are each required to be interoperable and with their own meters while the 'smart' meter at the connection point remains incapable of doing what is required.