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13 September 2023

Anna Collyer
Chair, Australian Energy Market Commission
GPO Box 2603
Sydney NSW 2000

Dear Ms Collyer,

Directions Paper on Unlocking CER Benefits through Flexible Trading (ERC0346)

SwitchDin welcomes the Australian Energy Market Commission (AEMC) Directions Paper on the National Electricity Amendment (Unlocking CER Benefits through Flexible Trading) Rule 2023. We are happy to provide some recommendations that we believe will improve customer support and social license for flexible trading arrangements.

SwitchDin is an Australian energy software company that bridges the gap between energy companies, equipment manufacturers and energy end users to integrate and manage energy resources on the grid. SwitchDin's technology enables our clients to build and operate vendor-agnostic virtual power plants (VPPs) and microgrids, and to optimise performance across fleets of diverse assets. Founded in 2014, SwitchDin operates in all Australian states, including in leading-edge distributed energy projects like Simply Energy's national VPP, flexible export programs in South Australia (SA) and Victoria, Project Symphony in Western Australia (WA) and the Solar Connect VPP in the Northern Territory (NT). We work with distribution network service providers (DNSPs), electricity retailers, inverter original equipment manufacturers (OEMs) and aggregators to enable and utilise flexible export capability. SwichDin's 'droplet' product is home energy management system[1] (HEMS) that enables orchestration of multiple flexible loads, generation and storage devices behind the connection point.

Even though SwitchDin is a technology provider for HEMS and has a commercial interest in the success of the HEMS-based model, we support the introduction of 'flexible trading arrangements' provided that:

- the 'flexible trading arrangements' (FTA) architecture is not mandated, and
- the cost benefit analysis includes an objective assessment of the benefits of a whole-of-site, HEMS-based approach versus centralised 'prices to devices' asset coordination.

We believe that no single architecture should be prioritised or mandated by policy makers. If a consumer wants to derive value from energy flexibility using a single National Metering Identifier (NMI) and a HEMS, they should be free to do so. If they would prefer to use 'flexible trading arrangements' with multiple NMIs, they should be allowed to choose that option. There are concrete use cases for each which benefit consumers.

We agree that there are opportunities to improve the regulatory framework for commercial and industrial customers who wish to derive value from incentives for energy flexibility. We support the

[1] HEMS are also sometimes referred to as gateway devices or site controllers.

Commission's intention to consider the proposal for multiple service providers with secondary meters at large commercial premises. We also support the proposed new framework for the measurement of street lighting and other public assets.

Thank you for the opportunity to respond to these important issues. I remain available for further discussions and inputs.

Best regards,

Darren Gladman
Head of Policy and Regulatory Affairs

Responses to questions raised in the Directions Paper

QUESTION 1: ENERGEIA COST AND BENEFIT ANALYSIS APPROACH AND METHODOLOGY

Are there any other considerations or issues you consider should be included in Energea's assessment approach and proposed methodology?

We welcome the proposal to model the costs and benefits of enabling load flexibility in energy imports and exports.

The decision on whether to allow 'flexible trading arrangements' could have a significant influence on the future direction of flexibility markets in Australia. If the proposal for 'flexible trading arrangements' does not proceed, it seems likely that HEMS will play a central role in enabling sites to participate in markets while orchestrating generation, flexible load and storage behind the connection point. If the 'flexible trading arrangements' rule change is adopted, HEMS can be expected to play a less significant role in future flexibility markets.

We welcome the proposal for Energeia to model the benefits of flexibility of CER. However, the methodology for attribution of the effects of the flexible trading arrangements rule change is unclear. The proposed modeling methodology appears to attribute all the benefits of flexibility to the proposed rule change. It appears that the assumed business as usual (BAU) scenario is 'no flexibility', with the benefits of flexibility attributed in the model to the flexible trading arrangements (FTA) proposal. The modeling should more clearly articulate its BAU assumptions. The BAU case should not be 'no flexibility'. There is already an Australian scenario for flexibility which involves a single NMI, a single retailer and a HEMS at the connection point that is able to orchestrate flexible load, generation and storage. This could be considered a BAU scenario.

Modeling of consumer benefits should consider potential benefits of market participation (exports), self consumption (avoiding imports) and whether the proposed regulatory framework for FTA would limit customers' ability to optimise for both. The Directions Paper refers to restrictions / requirements potentially being placed on wiring to separate CER from passive load. If the proposed wiring configurations limit the potential for optimisation across multiple circuits, that should be considered in the modeling.

SwitchDin is keen to support an objective assessment of the benefits of a whole-of-site HEMS-based approach (aka edge multi-asset) versus per device coordination (aka centralised, single asset or 'prices to devices'). A HEMS-based approach allows for optimisation of exports and imports, market participation and self consumption and can optimise across all generation, flexible load and storage to achieve the best overall result for the consumer based on all their CER. A FTA-based approach might tend toward a focus on market participation by energy storage devices, with remaining load managed separately. This could deliver a better result for consumers and the energy system. The question is, will it? What benefits will the FTA approach deliver in addition to what would otherwise occur if we remain with the HEMS-based approach and without FTA? These are the questions the modeling should address.

QUESTION 2: KEY CONSIDERATIONS FOR SEPARATELY IDENTIFYING AND MANAGING FLEXIBLE CER

1. *What benefits can be gained through separately identifying CER irrespective of whether there is a single FRMP or multiple FRMPs at the customer premises?*

The separation of CER from passive load would potentially simplify the job of aggregators managing CER participation in markets and might also simplify the job of AEMO in managing aggregators. Further modeling is required to determine whether the proposal is in the long term interests of all consumers.

2. *Are there additional implementation issues that we should consider for the draft determination (and draft rule if needed)?*

Yes. A key implementation issue will be how dynamic operating envelopes would be treated. Would one dynamic operating envelope continue to apply at the connection point? Or would multiple dynamic operating envelopes apply at each sub metered circuit? If a single dynamic operating envelope would continue to apply at the connection point, would HEMS be expected to optimise across separate circuits rather than the current model of optimising multiple devices on a single circuit?

We urge the AEMC to consider reviewing the minimum technical specifications for all meters, rather than focusing only on the specification for sub metered load. The Directions Paper refers to "agreement that the framework needs to make more use of embedded capability within appliances and CER devices, such as measurement and communications, to enable more demand flexibility". Key to making use of embedded measurement capability will be agreement on the necessary accuracy and other parameters for measurement devices. It would be logical to review the minimum technical specifications for all meters, not just the meter for sub metered loads.

We note that the Final Report of the AEMC Review of the Regulatory Framework for Metering Services recommends that an enabling framework for consumer access to real-time smart meter data should consider interoperability as a matter of performance. SwitchDin supports this approach. It requires the consideration of the performance of the primary meter and secondary meters together, as a system.

QUESTION 3: ENABLING A SECOND SETTLEMENT POINT AT A SINGLE CONNECTION POINT

1. *Do stakeholders agree the technical and market considerations outlined above are the key considerations we should address in relation to establishing a second settlement point, irrespective of the metering and configuration options available and proposed for separating and measuring CER?*

SwicthDin strongly supports the recommendations in the Final Report of the AEMC Review of the Regulatory Framework for Metering Services which would enable customers and their authorised agents to access real-time data from their primary meter. We believe that real-time data access will facilitate flexible trading arrangements. The role and benefits of access to real-time data from the primary meter should be incorporated into future analysis of the FTA proposal.

2. *Should a second settlement point at a single connection point be restricted to defined situations and conditions (e.g. EV charging)? What criteria and governance processes need to be applied when allowing second settlement points at customer premises?*

If a second settlement point is permitted it should not be restricted to electric vehicle charging. All discretionary load and storage should be treated agnostically. If excluding certain types of load, the primary consideration for doing so should be safety. Life support equipment is a clear example of load that should never be treated as discretionary. Refrigeration and lighting could be other examples.

3. *What would be the appropriate framework for approving and verifying alternative measuring devices permitted to be used at the second settlement point?*

The minimum technical specifications for alternative measuring devices should be considered as part of a broader review of the minimum technical specifications for metering. This should include the primary meter and secondary meters, considered together as a system.

4. *What would the implementation costs be for creating second settlement points with associated metering configuration options?*

It is not possible to place a firm figure on the implementation costs without knowing the details of the proposal. It is unclear, for example, whether the proposal will involve regulation of wiring configurations. The cost of rewiring (if required) could be substantial and will vary from site to site.

QUESTION 4: USING OTHER DEVICES FOR CER MEASUREMENT AND REWARD

What changes to the rules, if any, should be assessed in relation to these non-market-related devices for CER products and services to consumers?

The AEMC should consider the potential implications of the proposal for a national Interoperability Policy, and the recommendations of the Final Report of the AEMC Review of the Regulatory Framework for Metering Services with the FTA rule change proposal.

QUESTION 5: ESTABLISHING TWO CONNECTION POINTS AT A SINGLE PREMISES

1. *Are there any changes we could make to the NER and NERR to assist in overcoming the current barriers to the second connection point?*

Yes. We urge the AEMC to review each jurisdiction's Service and Installation Rules for CER and EV chargers and the potential benefits of harmonising them.

2. *What issues need to be considered in evaluating whether there should be changes to the fixed network tariff for second connection points at the same premises? How (if at all) should this issue be addressed in the NER?*

Second connection points should be permitted in the NER and in Service and Installation Rules. Network charges for a second connection point should be cost reflective, based on the incremental costs of establishing and maintaining that connection.

QUESTION 6: AEMO'S SPECIFIC FTM2 FOR SMALL CUSTOMERS

Do you agree with the Commission's view and its initial position to not progress further with AEMO's specific FTM2 for small customers?

Yes. We agree with the AEMC's assessment that there would be significant implementation challenges for enabling multiple energy providers for residential and small business customers. It could potentially complicate and reduce the effectiveness of consumer protection frameworks.

QUESTION 7: AEMO'S FTM2 PROPOSAL FOR LARGE CUSTOMERS

Do you agree that introducing AEMO's FTM2 (or variations to it) for large customers would create an additional or better option for large customers to engage with multiple service providers?

We agree that the proposal is worth exploring. The proposal should explain how the framework could be designed to minimise the cost of disputes between service providers. Enabling access to real time data from meters would help to address the risk of disputes between service providers.

QUESTION 10: OPPORTUNITIES AND BENEFITS OF IMPROVING EXISTING ARRANGEMENTS

Do stakeholders consider there are other matters that the Commission should consider in terms of the opportunities, benefits and costs for improving existing arrangements for the measurement of street lighting and public furniture?

We agree with the Directions Paper's outline of the potential opportunities, benefits and costs for improving arrangements for street lighting and public furniture. There is a clear case for taking advantage of metering and communications capability in street lighting and public furniture, now that the cost of metering and communications has fallen to the point where the benefits of doing so far outweigh costs.

QUESTION 11: MARKET FUNCTIONS AND OBLIGATIONS - METERING ROLES

1. *Should there be another level of accreditation for Meter Providers in the NER?*

If the proposal to allow sub metering is supported by the Commission then it logically follows that there should be another level of accreditation for Meter Providers in the NER.

2. *What are stakeholders' views on distributors performing the functions of the MC, MP and MDP for street lighting and other street furniture they manage, if MEFM is introduced?*

If MEFM is introduced, distributors should be allowed to perform the functions of MC, MP and MDP for the street lighting and other street furniture they manage. This would not diminish competition compared with the status quo. Requiring other parties to fulfil the roles of MC, MP and MDP for street lighting would likely lead to unnecessary red tape and other administrative nonsense whose cost could exceed the economic benefits of the proposal.

3. *For street furniture not managed by distributors, should the existing competitive framework for metering parties apply if MEFM is introduced?*

If MEFM is introduced, distributors should also be permitted to perform the functions of MC, MP and MDP for street lighting and other street furniture not managed by them. Local governments might wish to contract distributors for these functions, for example. This would increase competition compared with the status quo, provided there is no cross subsidisation from the distributors' regulated business. Alternatively, the roles of MC, MP and MDP for street lighting and other street furniture could be undertaken by the distributor's ringfenced, subsidiary companies.

QUESTION 12: TECHNICAL REQUIREMENTS

1. *Do stakeholders have views on the removal or amendment of minimum service specifications for minor energy flow meters?*

The AEMC does not appear to have considered whether the minimum service specifications for the revenue meter remain fit for purpose. Minimum service specifications for minor energy flow meters should be considered as part of a broader review of the minimum technical specifications for the primary meter. Interoperability should be considered as a matter of performance. Performance requirements should apply to the primary meter and secondary meters, considered together as a system.

2. *Do stakeholders have views on inspection and testing requirements for minor energy flow meters?*

Remote inspection and digital compliance approaches should be permitted and encouraged wherever practical. Physical inspection is prohibitively expensive.