21 June 2019

Mr Chris Pattas
General Manager, Distribution
Australian Energy Regulator
GPO Box 520
Melbourne VIC 3001

By email: AERinquiry@aer.gov.au

Dear AER Inquiry team,

## Re: Consultation paper: ICT Expenditure Assessment

GreenSync welcomes the opportunity to provide input to the AER on its consultation paper on ICT Expenditure Assessment. We consider it important for the AER to establish methodology to assess DNSPs' proposed spend to ensure that the best outcomes are realised for electricity users across Australia.

GreenSync is an Australian energy-tech company that develops software solutions to connect millions of distributed energy resources and create more dynamic grids. Our technology enables flexible and decentralised electricity grids via new marketplaces for distributed energy.

The acceleration of distributed energy resources (DER) installation rates over the next decade presents massive opportunities to distribution networks if managed effectively and massive risks if it is not. Development of a relationship between distribution networks and installed DER is essential to a future in which customers maintain control over the use of their assets, while the network is kept within safe operating limits. GreenSync believes that a software-based solution that provides the ability for network companies to interact with installed DER is the best way of achieving these outcomes, and provides a path for optimal utilisation of network and private assets.

We are proud to have created deX (the decentalised energy eXchange), a digital exchange that enables owners and agents of DER to register assets on an exchange and offer services to other interested parties. All parties that choose to integrate with deX have access to an open standard that is interoperable with their own software platforms and allows them to communicate with others in a trusted environment.

GreenSync believes that DER markets, tempered with regulation, are the best way to signal investment by networks and consumers so as to build an energy eco-system to reduce long term costs (including carbon) of our energy future.

Our response to this consultation is split into general comments and responses to the specific questions in the ICT Expenditure Assessment Paper.

**General comments**

GreenSync agrees that ICT spend is needed to support networks in adapting to the 21st century and the new ways that networks operate. However, the increase in spend to manage the changes in the distribution network should be subject to a commensurate level of scrutiny, to ensure that customers receive the best outcomes. GreenSync believes that competition and transparency in the DNSP process is critical to achieving this.

As identified in the paper, service-based delivery by third parties such as software as a service (SaaS) based models have started to emerge as a way for network companies to deliver solutions. In 2019 cloud-based infrastructure is, almost without exception, both technically and economically superior to traditional on-premises solutions. GreenSync supports the consideration of all delivery models in the options analysis, to ensure that the approach delivers the best outcome for customers.

In the context of DER management, GreenSync considers that minimisation of cost is important, but other benefits that are more challenging to quantify should also be considered in the assessment of the options. This includes the risk associated with delaying the implementation of capability to manage DER installed in the network (given that longer deferrals can result in larger customer impacts) and the benefits associated with allowing larger amounts of DER to connect to and export into the distribution network.

GreenSync appreciates that as the volume of increasingly capable DER technologies increases the regulatory frameworks associated with these technologies will progressively develop and mature. One area that GreenSync believes should be an area of focus is in the quantification of benefits associated with maximising customer's access to network capacity and opportunities and services by other parties. In the longer term, this may evolve into an incentive scheme that provides the right signals to network businesses to deliver the greatest access and use of network capacity while keeping the network within defined network limits.[1]

GreenSync strongly believes that consumers must not be limited to models (enforced by any participant) which limit their ability to benefit from their DER.

**Response to consultation questions**

> **Question 1**: *Does It make more sense to disaggregate ICT into its 'recurrent' and 'non-recurrent' components?*
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> *Ausgrid presented their ICT capex forecast into the categories 'Comply', 'Protect (cyber)', 'Maintain' and 'Adapt' that are based on purpose. Would stakeholders find these categories more useful than our suggested recurrent and non-recurrent categories?*

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[1] This may be something like the AER's Service Target Performance Incentive Scheme (STPIS).

GreenSync supports the approach of splitting into expenditure in components and that the split should reflect the function that is being delivered by the spend. We consider that this approach could be extended further to include additional details on the particular systems,[2] and that clear definitions and criteria should be established by the AER to define what is eligible for inclusion in each category. Obliging all DNSPs to submit spend according to defined categories will be the most effective way to increase transparency of ICT spend and facilitate benchmarking between DNSPs. GreenSync would also support the inclusion of a category which explicitly enables consumers access to either more network capacity, or additional services, either from the network or third parties. Networks should be incentivised and allowed to undertake expenditure which unlocks value for consumers.

> **Question 2**: *What other methodologies can we use to benchmark ICT capex? What are the benefits and disadvantages of each approach? What other benchmarking normalising factors do you consider appropriate? For example, Regulatory Asset Base (RAB) could be used as a proxy for asset size.*

With respect to ICT systems supporting the management of DER, we believe it is important to consider DER concentration and uptake across network areas when assessing ICT expenditure, as these uptake rates (and the challenges they pose) vary considerably across networks. We agree that larger DNSPs are likely to incur greater spend, but not a rate that is proportional to their size. In addition, and as noted by the AER, while most ICT expenditure has historically been capex, ICT opex has been increasing as a proportion of total ICT spend over time. We supports the approach of benchmarking using totex, as this allows DNSPs to identify and explore options to provide the lowest cost options to meet customer needs. We consider that investment in more advanced systems may result in operational and capacity efficiencies that ought to be considered as part of the AER's assessment.

There are a range of specific technologies required for the integration of DER into networks and the unlocking of consumer value. The AER may wish to consider that networks group this spend specifically (calling out major items, for example >$1m) and have this grouping benchmarked against other networks (both in terms of total spend and spend per NMI).

> **Question 3**: *We note the difficulty in assessing the efficiency of implementing a compliance driven step-change ICT projects. What information do you consider is required to assess the efficiency of these projects?*

GreenSync appreciates the challenges associated with assessing the efficiency associated with compliance driven step-change ICT projects. As a starting point the efficiency may be assessed through comparison of alternate options and benchmarking with peers. In particular for benchmarking against peers, the complexity of the project should be factored into the assessment of the proposed spend. Analysis of all relevant available options should be included in the

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[2] For example, operational systems, EAM systems, general IT applications etc.

submission, this should include the approach undertaken by the network with specific consideration given to how it maximises benefits for all parties beyond the network itself (consumers, aggregators, retailers, AEMO etc.)

**Question 4**: *What do you consider a sufficient business case for an ICT project should include?*

The NPV analysis is important to any ICT project business case, however, certain options that may present as unfavourable may often hold intangible or difficult to quantify benefits.

One example of intangible benefits lies in the network approaches for management of DER. Current approaches for the management of networks with high penetrations of DER include specification of protection and/or control settings and reducing the allowable capacity of the system that may be connected to the network. While these provide networks with the capability to mitigate their risk associated with the DER these are blunt instruments that result in either inequitable and/or inefficient outcomes for customers. As there are currently no incentives for network companies to improve their capability to manage existing DER and facilitate the connection of new DER, the benefits associated with improving this capability may be considered as intangible.

An important consideration is that both the issues caused by, and the benefits to be obtained by, DER will grow over time. It should therefore be expected that any business case would consider a set of foundational activities which are then built upon using a phased approach to leverage learnings and release benefits in-line with increased ICT expenditure.

**Question 5**: *What is your opinion on us requesting DNSPs provide post implementation reports from historical ICT investments?*

GreenSync supports the AER's consideration of whether it is appropriate and necessary for post implementation reports to be submitted for historical ICT investments, in addition to the wider benchmarking requirements.

**Question 6**: *What do you consider is required to demonstrate that DNSPs have incorporated benefits into its overall proposal?*

To demonstrate that DNSPs have incorporated all benefits into the overall proposal, the same benefits should be compared across all options and, where appropriate, quantified. We believe that customer benefits with respect to the ability to access the network and other opportunities should be a key consideration in any benefits assessment. Where possible, the approach taken to quantify benefits should be benchmarked across DNSPs to ensure a consistent approach with consideration for relevant factors.

The AER may wish to develop a framework which quantifies the benefits garnered by actors other than networks to be included in any assessment.

> **Question 7**: *Which scenario - self funding or productivity improvement - would you prefer and why? Are there other scenarios we should consider?*
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> **Question 8**: *We welcome stakeholder comments on the practical application of a productivity adjustment. If we were to include a productivity adjustment on the basis of ICT expenditure, how should it be incorporated? If so, how should we determine how large should this adjustment be? What aspects of a DNSP's forecast should it be applied to?*

GreenSync considers that the self-funding approach may not be suitable for realising the most optimal outcomes for customers as there may be non-financial benefits associated with the selection of a nominated option e.g. customer benefits. Without an incentive scheme in place for these benefits to passed through to customers, there is no mechanism for network businesses to benefit from these options.

The second approach may be suitable to account for intangible benefits experienced by customers. However, for this to be fair and consistent, a standard approach and methodology should be established to quantify the benefits of enabling customer DER and how this might be incorporated into a productivity adjustment. This would ensure that the benefits of enabling the connection and import/export of DER of all network businesses are assessed and compared consistently and fairly.

To summarise, we support the AER in developing additional guidance on what DNSPs should include in their regulatory submissions for ICT expenditure to better manage DER in the interests of consumers, the network and the system overall.

For queries in relation to these comments, please contact Bridget Ryan on 0402 115 589 or bridget.ryan@greensync.com.

Your sincerely,

Bridget Ryan
**Policy and Government Lead**