Attachment A

Energex

Consultation Paper: Demand management incentive scheme and innovation allowance mechanism

February 2017

positive energy

Energex Limited (Energex) is a Queensland Government Owned Corporation that builds, owns, operates and maintains the electricity distribution network in the growing region of South East Queensland, including the poles and wires and underground cables used to connect houses and businesses to the electricity network. We provide distribution services to almost 1.4 million domestic and business connections, delivering electricity to a population base of around 3.2 million people.

General Manager
Regulation and Pricing
Energex
GPO Box 1461
BRISBANE QLD 4001

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1 Introduction

1.1 Background

On 5 January 2017, the Australian Energy Regulator (AER) published an issues paper on its review of the Demand Management Incentive Scheme (DMIS) and Demand Management Incentive Allowance (DMIA) following a change to the National Electricity Rules (the Rules).

The purpose of this review is to encourage distributors make greater use of efficient demand management (DM).

1.2 General comments

Energex is broadly supportive of promoting competition in the provision of non-network solutions by building the capacity of the competitive market, provided adequate customer protections are in place and the outcome of the review results in efficient non-network solutions.

Noting that this consultation paper is requesting evidence to support stakeholder views, Energex's submission includes real life case studies illustrating the work Energex has conducted thus far in managing demand and emerging network issues.

Energex also encourages the AER to further engage with distribution network service providers (DNSPs) after the close of this consultation to enable networks to give due consideration to stakeholders concerns.

The remainder of this chapter expands on key themes in Energex's submission and provides a summary of comments on the proposed options. Chapter 2 provides answers to the consultation questions, with some analysis of DMIS and DMIA options tabulated in Chapter 3. Chapter 4 provides a summary of third party engagement within Energex's DM program.

1.3 Demand management

1.3.1 Defining Demand Management

In Section 3.2 of the consultation paper, the AER defines DM as "the act of modifying the drivers of network usage, including reducing peak demand or changing the demand profile."

Energex is of the view that the definition of DM should be broad to encompass the emerging issues DNSPs have to grapple with and manage. Whilst Energex agrees that peak shaving, load shifting and broad-based load reduction are important elements of DM, voltage management and power quality management solutions are equally important solutions employed by DM programs in reducing long term network expenditure. The exclusion of

voltage management and power quality from DMIS would not seem to align with the DMIS objectives.

Energex employs load shifting to prevent and/or minimise reverse flow in some areas of its network. Reverse flow can be caused by significant export of solar PV generated electricity in localised areas. Inability to manage backflow through DM solutions may lead to the requirement of additional network expenditure. Consequently, care should be taken not to define DM only in terms of its management of peak demand, but rather in terms of a holistic management of load on the network.

Moving forward, it is anticipated that distributed energy resources (DER) other than solar PV will also cause constraints on the network that will require a DM solution.

Network capacity, DER and customer consumption patterns vary considerably by location in the NEM, and change rapidly over time. Consequently, any prescribed definition of DM needs to be broad and flexible enough to capture this variability, and not limit the scope of reform only to peak demand reduction initiatives.

1.3.2 The most influential drivers of Demand Management

Energex considers that the most influential drivers of DM are:

- The ability to manage the load profile of specific assets on the network,
- The ability to address power quality and voltage management constraints, and
- The ability to increase the hosting capacity of DER on the network.

Non-network solutions that seek to address the drivers of DM above must:

- Be highly reliable,
- Be responsive in real time,
- Be available for long periods of time, covering multiple regulatory control periods, and
- Be perceived by customers as improving the value they obtain from the network.

1.3.3 Barriers to Demand Management

In the consultation paper (2-9), the AER notes four prominent barriers to DM that the Scheme could address. This section summarises Energex's responses to these barriers, with a more detailed response found in our response to Question 2, in Chapter 2 of this submission. Chapter 4 provides a summary of third party engagement within Energex's DM program, and may therefore be of benefit to the AER in assessing these prominent barriers.

Barrier	Response
Lack of information on upcoming network constraints	• At high voltage levels of the network, information about network constraints is often reported in Energex's DAPR at a level of granularity that exceeds reporting requirements. • Some information sought by third parties may not be suitable for public disclosure given the need to ensure customer confidentiality in cases where network constraints relate to a limited number of large customers. • Due to the lack of advanced metering and network monitoring capabilities at the low voltage level of the network, granular data about network constraints is not always available.
Lack of information on what DM solutions can deliver	• Energex considers that, in part, the lack of information on what DM solutions can delivery is a reflection of the under-developed state of the market for DM solutions. • Energex also considers this problem to be bilateral, in that DNSPs also require information from third party service providers. Such information is often found to be insufficient, inadequate or lacking.
Under developed state of the market for demand management solutions	• Energex acknowledges that the market for demand management solutions is not fully matured, and seeks to engage in collaborative partnerships with current and potential third party service providers for R&D that contributes to this maturation. • Energex does not consider there to be

Barrier	Response
	sufficient evidence to suggest that regulatory frameworks and incentives have prevented the maturation of this market. • Finally, Energex is of the view that the AER's focus on the need to build capacity in the contestable market should be considered within the wider market review and urges the AER to consider the AEMC's review of the distribution market model currently under way.[1]
Potentially, cultural biases within distributors	• Energex does not agree that there is a cultural bias within its network against non-network solutions. Energex's successful Peak Smart program, whilst not being a DMIS or DMIA project, is a case study in how non-network solutions can be achieved through market based programs. • Additionally, Energex's leadership in the development of AS4755 standards demonstrates a culture that facilitates rather than inhibits the capacity building of third party demand management solution providers. • Chapter 4 provides a summary of third party engagement within Energex's DM program, evidencing support for market partnerships delivering non-network solutions.

1.4 Preferences

In principle, the assessment criteria set out by the AER appears to be appropriate. In balancing assessment criteria, Energex emphasises the need for simple, reliable and consistent solutions that span multiple regulatory control periods, and thereby provides some level of certainty to networks, customers and the broader market.

Energex notes that some sections of the consultation may benefit from more clearly differentiating between research and development (R&D) costs not associated with a specific network constraint or RIT-D, R&D costs that are associated with a specific network constraint

[1] Refer AEMC's website: http://www.aemc.gov.au/Major-Pages/Distribution-market-model.

or RIT-D, and costs associated with the implementation of a non-network solution.

Energex is concerned about confusion between the role of the DMIA – a funding mechanism for innovative, ground breaking R&D – and a DNSP's development and implementation of its Demand Management (DM) program for which CAPEX / OPEX trade-offs may be considered. Furthermore, Energex notes the consultation paper when stating that "the new rules requiring [the AER] to develop an Allowance Mechanism responds to concerns that the current regulatory framework creates a bias towards expenditure on network investment over non non-network options."[2] As demonstrated by the range of DMIA funded projects undertaken to date, Energex does not agree that it brings a bias towards network solutions when undertaking R&D.[3]

1.4.1 DMIS preferences

Energex is supportive of the involvement of third party participation to undertake DM. However, it does not believe that Type 3 (Mechanisms to promote competition) or Type 4 (Targets for demand management deployment) will meet the scheme objectives, as they fail to recognise the full range of DM projects, exclude networks from providing least-cost non-network solutions in a maturing market, and increase barriers caused by administrative burden.

Energex is of the view that a combination of the proposed DMIS Type 1(Mechanisms to target potential disincentives) and Type 2 (Net market benefit sharing) seems to most appropriately balance the objective to build market capacity with the need for administrative simplicity and customer outcomes.

Chapter 3.1 of this document details Energex's position on each of the proposed DMIS options.

1.4.2 DMIA preferences

Chapter 3.2 of this document details Energex's position on each of the proposed DMIA options. Energex's strong preference is for Option 2 (High cap allowance with ex-ante approval). This mechanism is simple and well understood. A higher cap would assist DNSPs in further investigating non-network options associated with future peak demand and the integration of DER on the network.

Energex is of the view that a bidding mechanism would introduce unnecessary costs and complexity in the administration of the allowance that is unlikely to be offset by increased competition or customer outcomes relative to Option 2.

Under the existing allowance, R&D costs are typically tendered externally to third party service providers. Each proposal is individually evaluated in accordance with Energex's

[2] AER, Consultation Paper: Demand management incentive scheme and innovation allowance mechanism, January 2017, page 19.
[3] Refer AER's website: https://www.aer.gov.au/networks-pipelines/compliance-reporting/energex-demand-management-incentive-scheme-report-2014-15

tendering process to ensure the funding is awarded to the party that is best placed to efficiently complete the work. Examples of Energex awarding DMIA funding to third party service providers during the 2015-20 regulatory period include:

- Forecasting of residential storage and Electric Vehicle Adoption project awarded to Energeia
- Development of residential demand tariff load profile awarded to CSIRO, and development of load profiles of small and medium size business customers awarded to Deloitte
- Energex Residential Energy Efficiency Study by Energy Consult
- Potential for Demand Response from Low Voltage Customers on Type 4 Metering by Integrated Management Services.

It is unclear how Options 3 (Bidding to encourage ground breaking R&D) and Option 4 (Bidding to encourage market-facilitated R&D) materially improve outcomes relative to this process. Energex also believes that a bidding mechanism would be complex and costly to administer and would, therefore, not align with the criteria of simplicity used by the AER when considering DMIA options.

Furthermore, Option 4 would exclude Energex from providing the cheapest non-network solution, even where it is best placed with the expertise and resources to do so. This is directly in contradiction with the objective to provide distributors with funding for R&D in DM projects that have the potential to reduce long term network costs.

1.4.3 Information disclosure and reporting preferences

With respect to information and reporting requirements for DMIS and DMIA:

- Energex believes that the scope of information disclosure and reporting should scale with the value of the non-network solution. This approach would reduce any disincentive caused by the information and reporting burden for smaller projects, and encourage the increased level of granularity in information disclosure necessary for larger projects.
- Where possible, information disclosure and reporting requirements should be captured within existing reports such as the DAPR and the regulatory proposal.
- Information disclosure and reporting should be flexible and reflect the nature of the network constraint, so that pertinent information is not obscured by out-of-scope information provided as a result of inflexible requirements.

2 Response to consultation questions

2.1 Question 1

Do stakeholders support our interpretation and proposed implementation of the new rules? If you have alternative views, please share these and provide supporting evidence.

Energex notes that the consultation paper defines non-network options as involving "non-network assets that are deployed to address a constraint either alone or in conjunction with network assets" [emphasis added].

Energex considers that this interpretation is too narrowly focused and does not reflect the role of DM in an ever-evolving environment. The current definition of non-network options seems to exclude power quality and voltage management issues to be included under the DMIS.

Energex is currently taking a flexible load management approach which is driven by improving network utilisation and reducing power quality issues. Controlling flexible residential and business loads enables Energex to reshape the load profile on the network in a way that has minimal impact on the customer by matching load to generation. DM has traditionally used the audio frequency load control (AFLC) program to reduce system peak demand. With the emergence of new technologies and changing consumption patterns, Energex's DM program goes beyond shaving peaks and needs to include the management of load during periods of low demand. Energex considers that there are significant potential benefits in shifting 'troughs' in demand, resulting in improvements in network utilisation and reduction in power quality issues with minimal customer impact. Energex is now trialling an alternative switching program whereby electric storage for hot water systems on control load tariffs are used as a 'solar sponge' to integrate renewables into the network. This approach is documented in Energex's DM Plan.[4]

It should be noted that the flexible load management approach is being followed by other distributors. It has also been adopted in the USA.[5]

In recognition of the changing focus of DM to new ways of managing the network, Energex's preference is for the AER to consider DM's role in the broader sense.

[4] https://www.energex.com.au/__data/assets/pdf_file/0009/343584/Demand-Management-Plan-201617.pdf

[5] See paper by RMI The Economics of Demand Flexibility: How Flexiwatts Create Quantifiable Value for Customers and the Grid (http://www.rmi.org/Knowledge-Center/Library/RMI-TheEconomicsofDemandFlexibilityFullReport).

2.2 Question 2

Do you agree with our view on the main demand management incentives (or disincentives) provided under the regulatory framework and the potential issues associated with these incentives? Please provide reasons to support any alternative views you may have.

Energex notes that the consultation paper attributes the low deployment of DM projects to a potential cultural bias for distributors against non-network options. Energex does not believe this factor is relevant to a distributor's reasons for not conducting innovative R&D under the DMIA funding mechanism. In the case of Energex, the low use of the DMIA funding during the 2010-15 regulatory control period stems from the availability of other sources of funding.

For example, Energex used funding made available by the Queensland Government through the then Queensland Office of Clean Energy (OCE) which approved total funding of $25.9 million. This funding was provided to initiate a range of Energy Conservation and Demand Management (EC&DM) initiatives to address peak demand growth.[6] As a result, Energex's actual DMIA spend for the 2010-15 regulatory control period was only $1.3M. In contrast, for the 2015-20 regulatory control period, Energex has to date endorsed $3.5M of DMIA funding and is expected to use the totality of the DMIA funding allowance.

Additionally, in the 2010-15 distribution determination, funding (excluding approved DMIA) was provided to build upon the EC&DM initiatives supported by OCE funding. Energex prioritised expending funds from these sources to deliver on its commitments. Therefore, the full DMIA was not sought during the current control period.

2.3 Question 3

Do you see value in exploring the net-market benefit sharing mechanism further, despite the difficulties associated with measuring net-market benefits? If yes, what detail of guidance should we provide on calculating market-wide costs and benefits? Should we (and if so, how should we) establish a method for valuing smaller demand management projects in a way that reduces the administrative burden of applying the Scheme to these projects?

There are significant issues associated with measuring net-market benefits. Despite this, Energex supports further exploration a net-market sharing mechanism for potential projects that exceed a predefined threshold. The design of the mechanism should be simple and fair, and provide consistent outcomes. In practice, a simple $/kVA benefit may be appropriate. The mechanism should also clearly explain how to best manage multiple projects of small value, that combined exceed the threshold.

DNSP's benefits received from such a mechanism may be lumpy, and therefore the benefit should be best managed as an adjustment in future regulatory revenue resets and recovered from all SCS customers.

[6] Energex, 2015-20 Regulatory Proposal, p.202.

Energex notes the ENA's suggested approaches in its submission and believe they are worth further considerations by the AER.

2.4 Question 4

Since the RIT–D already requires distributors to select the option with the highest total market benefit, should we (and if so, how should we) treat RIT–D projects differently under this type of Scheme (that is, under a net market benefit sharing mechanism)?

Based on the discussion in the AER's consultation, Energex's preliminary view is that RIT-D projects should not be treated differently regardless of the DMIS. Before making any further comments, Energex seeks further guidance from the AER about the linkages between RIT-D and the DMIS. Energex also notes that the ENA's submission is not supportive of further changes to the RIT-D process.

2.5 Question 5

How might we best combine the mechanisms discussed in section 6 into an option that achieves the Scheme's objective? If you prefer a mechanism that we did not discuss in in section 6, please provide details on this mechanism.

Energex discusses the advantages and disadvantages of each of the proposed DMIS options in Chapter 3.1 of this response.

Energex does not believe that Type 4 (Targets for demand management deployment) will meet the scheme objectives, as it fails to recognise the full range of demand management projects that will be required in the future. Furthermore, Energex is concerned that Type 3 (Mechanisms to promote competition) will increase administrative costs and yet exclude networks from providing non-network solutions in a maturing market, even in circumstances where the network is capable of providing such a solution at the lowest cost.

Combinations of elements from Types 1-2 seem most appropriate, including:

- Removing penalties associated with DM projects under STPIS
- Excluding DM R&D from EBSS
- Enable networks to earn a return on benefits arising from DM projects
- Simple mechanisms to recognise net market benefits. In support of net market benefits, Energex cautions that:
    - Further consultation is required in order to optimise the threshold above which the net market benefits approach would be required
    - It is necessary that the approach used to value a project not distort cost reflective network pricing signals

- There is difficulty in measuring net market benefits, especially in a developing market. It would be speculative to quantify this prior to project execution, making the reporting requirements difficult to fulfil.

2.6 Question 6

If you have views against applying any of the particular mechanisms discussed in section 6, please provide reasons to support this view.

Energex discusses the advantages and disadvantages of each of the proposed DMIS options in Chapter 3.1 of this response.

2.7 Question 7

How we might best give effect to or enhance the information and reporting requirements discussed in section 6.5?

Energex is of the view that the information it currently provides under the existing requirements is sufficient to support third party participation in the provision of DM services. Chapter 4 of this document provides a summary of third party engagement within Energex's DM program.

For example, Energex's DAPR, published by 30 September each year, includes information on:

- Where and when limitations are forecast to occur on Energex's network within a five year planning horizon
- Potential solutions to manage each limitation, or group of limitations
- The magnitude of load reduction required to defer each limitation of a capacity nature.

Further, Energex provides information to third party providers through its non-network engagement process in accordance with the Rules requirements. Under this process, Energex engages with non-network providers on potential non-network opportunities. To enable third parties to meaningfully participate in proposing non-network solutions, Energex discloses information on network constrained areas and allows non-network providers to approach it to consult and discuss non-network solutions.

When detailed investigations into addressing capacity limitations commence for projects subject to the RIT-D, Energex will publish a non-network options report for a period of not less than three months.[7]

[7] Energex, 2016 Demand Side Engagement Strategy.

Finally Energex notes that the consultation focuses solely on the information needs of third party providers, it however overlooks the information requirements of DNSPs to assist them in assessing the technical and commercial viability of non-network proposals.

2.8 Question 8

Which of the options discussed above in section 7 would best achieve the Allowance Mechanism's objective? Please provide reasons supporting your view. If you prefer an Allowance Mechanism design that we did not discuss as an option in section 7, please provide details on this option.

Energex discusses the advantages and disadvantages of each of the proposed DMIA options, as well as Energex's preferred option, in Chapter 3.2 of this response.

2.9 Question 9

If you have views against applying any of the particular mechanisms discussed in section 7, please provide reasons to support this view.

Energex discusses the advantages and disadvantages of each of the proposed DMIA options, as well as Energex's preferred option, in Chapter 3.2 of this response.

2.10 Question 10

How we might best give effect to or enhance the information and reporting requirements discussed in section 7.5?

With respect to information disclosure and reporting requirements discussed by the AER in Section 6.5 of the consultation paper, Energex notes that

- In some circumstances, third party service providers may need to retain IP they contribute for a period of time in order to fully develop a non-network solution.
- Care must be taken not to discourage third party participation due to the timing and degree of reporting and information disclosure arrangements.
- In addition to the confidentiality that may be required for third parties, there is an obligation to protect customer data. This is especially important in network constraints that arise in areas of the network utilised by a limited number of large customers.

3 Tabulated assessment of potential options

3.1 DMIS

Option	Pros	Cons	Notes
Type 1: Mechanisms to target potential disincentives	• Energex acknowledges that in some circumstances, disincentives for DNSPs to undertake DM do exist, and is in broad support of the mechanisms underpinning this type of scheme that seek to address those disincentives.		• Energex is in strong support of mechanisms that remove potential disincentives for DM.
Type 2: Net-market benefit sharing	• Energex encourages DM across the value chain. • Net market benefit assessments are currently used as part of the RIT-D process for projects exceeding $5m. A similar approach could be replicated for smaller projects.	• The difficulty in measuring net market benefits should not be underestimated, especially in a developing market. It would be speculative to quantify this prior to project execution, making the reporting requirements difficult to fulfil.	• Energex supports, in concept, the net market benefit sharing scheme. Any scheme should remain simple, provide consistent outcomes, and be fair. • However, in recognition of the need to reduce unnecessary regulatory burden, the requirements underpinning the mechanism should be commensurate with the size of the project.

Option	Pros	Cons	Notes
Type 3: Mechanisms to promote competition		• Involvement of third parties is already common practice, as evidenced by recent DMIA expenditure. • Alternative mechanisms exist to address information asymmetry and duplication of mechanisms would introduce unnecessary complexity. • This option does not appear to align with the criteria listed in Table 2 (section 4.1) of the consultation paper.	• While supportive of third party participation in the deployment of DM solutions, Energex is not convinced that the bidding mechanism would best serve the interest of consumers as they would exclude or create a bias against DNSPs from the process even if they can provide the lowest cost non-network solution. • It should be noted that, as part of the customer engagement process undertaken by Energex for the development of its DM program (Ch19 of the 2015-20 regulatory proposal), customers believe Energex has a role to play in providing information and services relating to DER.
Type 4: Targets for demand management deployment		• Energex does not believe this option will meet the scheme objectives, as it fails to recognise the full range of demand management projects that will be required in the future. Examples	• Energex does not support this type of DMIS.

Option	Pros	Cons	Notes
		are provided in Section 1.3.1 of this document. • This option does not appear to align with the criteria listed in Table 2 (section 4.1) of the consultation paper. • In addition, this scheme design does not encourage investment in uncertain non-network solutions, because project funding is success-dependent.	

3.2 DMIA

Option	Pros	Cons	Notes
Option 1: Minor extension to the status quo	• This option is simple and familiar to DNSPs, and there is a lack of evidence as to the failure of this option.	• The higher cap allowance in Option 2 is more preferable in periods of rapid change and high levels of DER adoption.	• Energex notes in its answer to Question1 that the DMIA underspend may be caused by alternative funding sources rather than limitations to the design of the current DMIA. • Energex notes the minor extension options discussed by the AER, and supports all three extensions. Clarity about the nature of innovative tariff trials is especially pertinent where secondary load control tariffs are in early stages of development. • Energex points to the significant portion of its DMIA spend that has been, or is allocated to be, awarded to third party providers in the 2015-20 period as an indication that this particular DMIA option does not prevent the enhancement of competition.

Option	Pros	Cons	Notes
Option 2: High cap allowance with ex-ante approval	• This option is simple and familiar to networks, and there is a lack of evidence as to the failure of this option. • With the increasing adoption of DER, combined with expected future increases in demand, DNSPs will have to increasingly investigate new ways of managing the network without having recourse to augmentation expenditure.	• In many cases, R&D projects incur a significant fixed cost that does not scale proportional to the network or customer base upon which the solution may be applied. This may imply the proportional allocations fail to adequately recompense smaller networks engaging in R&D. A base plus proportionate allocation may be more appropriate, e.g. $1M per year plus a percentage of CAPEX.	• It would be preferable for the AER to permit project funding for projects run in collaboration with multiple DNSPs, where the research problems are common to all parties. • Energex points to the significant portion of its DMIA spend that has been, or is allocated to be, awarded to third party providers in the 2015-20 period as an indication that this particular DMIA option does not prevent the enhancement of competition.
Option 3: Bidding mechanism to encourage “ground breaking” R&D	• Energex welcomes opportunities to expand its current partnerships with third parties and universities in future DM R&D. • This option easily facilitates project funding for projects run in collaboration with multiple networks, where the research problems are common to all parties.	• A bidding mechanism is likely to introduce additional costs and administrative complexity that are unlikely to be offset by increased competition and customer outcomes. • This option does not appear to align with criteria listed in Table 3 (section 4.2) of the consultation paper.	• In some circumstances, third party services providers may need to retain IP they contribute for a period of time in order to fully develop a non-network solution. Care must be taken not to discourage third party participation due to the timing and degree of reporting and information disclosure arrangements.

Option	Pros	Cons	Notes
Option 4: Bidding mechanism to encourage market facilitated R&D		• A bidding mechanism is likely to introduce additional costs and administrative complexity that are unlikely to be offset by increased competition and customer outcomes. This option does not appear to align with criteria listed in Table 3 (section 4.2) of the consultation paper. • It would lock out DNSPs from conducting R&D projects even if they are better placed in terms of capabilities and costs. Such a situation would not be efficient and would not support the DMIA objective. • Projects of this nature would require ongoing input from networks as subject matter experts for R&D to be successful, however the requirements do not reflect this.	• It appears as if this option is encompassed within Option 3. • It has not been demonstrated how this approach would result in material increase in competition or market capacity building over and above what is possible in options 1 and 2. • Where stakeholders suggest that the under developed state of the market for DM solutions is a barrier to demand management, it is unclear why this under developed market ought to bear the full and sole responsibility for R&D in the short term. Alternative regulatory incentives, schemes, allowances and reporting may be more appropriate during the maturation of the market, with a gradual transition to fully competitive R&D once the market has matured.

4 Engagement of third parties within Energex's Demand Management program

Energex develops and maintains relationships with a wide range of stakeholders to facilitate DM outcomes in south east Queensland, nationally and internationally. Figure 1 below gives an indication of some of the relationships Energex has across a wide range of sectors.

Energex engages with:

- Electricians, Electrical Contractors, Air Conditioning Installers, Appliance Manufacturers, Appliance Retailers, Builder/Developers, associations such as HIA, DHA and Master Electricians regarding network tariffs, demand management initiatives, PeakSmart, AS4755 Demand Response and Energy Efficiency.
- Small and large businesses (commercial/industrial and SME), Energy Efficiency Consultants, lighting specialists, HVAC engineers/suppliers, PFC manufacturers and suppliers, BMS manufacturers and suppliers, facility managers and owners (local and national body corporates), universities and research organisations.
- Pool industry partners regarding promoting pool pump connections to economy tariffs and the promotion of energy efficient pool pumps and promotion of new technology allowing demand response in the industry. Energex's work with the pool industry on efficient pool pumps saw a significant growth in market share of these pumps – such that the incentives provided were able to be withdrawn.

Figure 1 – Energex's stakeholder relationships

Under the current arrangements, Energex engages and partners with external parties to assist the industry and, among other things, provide guidance in the interpretation of technical standards such as AS/NZS 4755. Innovative approaches and solutions have been

generated by market participants as a result of the guidance and incentives provided by Energex. For example, demand response enabled devices.

In each of these consultations DM leverages relationships to promote Demand Response or Demand Management. Through the use of incentives, DM encourages uptake of controlled load, DREDs, tariff selection, PFC and Energy Efficiency upgrades.

Energex has been at the forefront in developing standardisation of the demand response in electrical energy storage systems. Energex began the development process by drafting a project proposal following liaising with many representatives across many industries. Energex then gained funding for Standards Australia to fast track the AS4755.3.5 project through his Nomination Organisation, Energy Networks Association (ENA). Energex was nominated by the EL-054 committee to be the drafting lead for this new standard and completed a comprehensive engagement with the industry within 8 months of starting the project with publication scheduled later in April 2016. The speed for reaching the publication status of the standard is testament to how Energex is able to work with the market being manufacturers and suppliers of appliances.