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**Submission to Energex Revenue Proposal (2015/16 to 2019/20)**

Thank you for the opportunity to provide the Energy User Association of Australia's (EUAA) perspectives on the Energex revenue proposal submitted to the AER dated 31 October 2014. The EUAA has a number of significant concerns with the proposal and these are presented in the attached submission.

The attached EUAA submission is focused on matters that it believes are within the remit of the AER to address during the revenue determination process. Under the current Rules, the EUAA estimates that around 70% of the revenue proposal is effectively locked-in by past decisions and investments whether the investments are prudent and efficient or not in hindsight. Whilst this submission does not address Rule change issues, the EUAA remain concerned about the following issues:

- No process for optimization of RAB
- Indexation of the RAB
- Process to determine WACC
- Recognition of ownership in determining WACC and gamma
- Information and resource asymmetry during revenue determination process
- Lack of prescription to ensure cost reflective pricing

The above issues are well documented in the EUAA submission to the current Senate Committee Inquiry "The performance and management of electricity network companies".

We hope you find the enclosed EUAA response of assistance for the AER Draft Determination process and welcome further dialogue or clarification on any of the matters raised. Please do not hesitate to contact me should you require any clarifications or further information regarding this submission.

Yours sincerely

**Philip Barresi**  
**Chief Executive Officer**  
**Energy Users Association of Australia (EUAA)**



**SUBMISSION TO THE AER**

**EUAA RESPONSE TO ENERGEX REVENUE PROPOSAL 2015 – 2020**

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## 1 EXECUTIVE SUMMARY

It is clear that Energex like all other network owners have put significant effort and cost into preparing their 2,600+ revenue proposal documentation. For this reason it is useful to take some perspective to establish some context to this submission by taking a high level view of the Energex proposal taking into account historical and forecast demand for services. Based on the information provided by Energex, other industry bodies and EUAA analysis based on the current National Electricity Rules (NER), some high level summary observations by the EUAA include:

- Energex's revenue growth to date has significantly outstripped CPI, growth in demand and energy,
- Energex has over invested in its network as a result of repetitive historical over estimations in demand forecasts coupled with introduced jurisdictional security and reliability standards in 2006 which have since been relaxed,
- The RAB is forecast to increase a further 26% over 5 years under Energex's proposed capex program,
- Energex (and other NEM network owners) were overcompensated for return on capital in the current regulatory period due to uncertainties around the GFC,
- Energex network charges have significantly increased with some EUAA members reporting a 100% increase in network charges over the past 6 years,
- Energex's profits and return on equity have increased by 310% and 150% respectively since 2009,
- Cost benchmarking by the AER indicates Energex is significantly less efficient than its peers.
- Around 70% of the Average Rate of Return (ARR) is effectively locked in (ie unable to be adjusted) due to past investments made by Energex,
- Energex system utilization is around 26%,
- Network reliability metrics have an improving / stable trend and exceed the minimum jurisdiction standards.

While the EUAA acknowledges Energex has attempted to reign in costs, our view is that Energex has been rather conservative and that there is significant scope for further savings to be returned to customers. The following summarises the key recommendations made by the EUAA.

### Recommendation 1

The AER seek independent advice to assure itself of the demand and energy forecasts proposed by Energex in light of recent demonstration of actuals being materially lower than forecast.

### Recommendation 2

The AER apply its full discretion in taking a more pragmatic approach in applying its guidelines to setting WACC in particular recognising the actual cost to businesses of debt and realistic of cost of equity given the low level of risk.

### Recommendation 3

The AER and Energex to consider a mechanism within the NER to voluntarily optimise the RAB (for future review) where known to be under utilised.

Recommendation 4

Reject the capex proposal by Energex and replace it with a total allowance that holds the ratio of RAB / Demand at a constant level. This would result in a reduction of the order of 66% (a total capex reduction of about \$2,122M) to the Energex proposal and Energex can re-prioritise expenditure.

AER should review the Independent Review Panel on Network Costs (Qld) Report which assessed all these matters.

Recommendation 5

Reject the opex proposal by Energex and replace it with a total allowance that results in a more efficient outcome and brings Energex more into alignment with its NEM peers<sup>1</sup>. This would result in a real reduction of the order of 28% (a total opex reduction of about \$500M or around \$100M / year average) to the Energex proposal and Energex can re-prioritise expenditure.

Recommendation 6

The AER immediately apply a revision to the opex forecasts to return savings to customers due to the demonstrated capacity within Energex's profits to achieve this.

Recommendation 7

The AER accept Energex's proposed cost pass through events provided the final determination results in a correction to the opex and capex as proposed above, otherwise Energex to absorb these costs within its resources.

*Note that all cost and revenue figures are presented in June 2015 dollars, unless otherwise specified. Many revenue and cost figures are the total for a five year regulatory period, unless otherwise specified. This submission addresses only the Standard Control Services that apply to all of the Distributors customers.*

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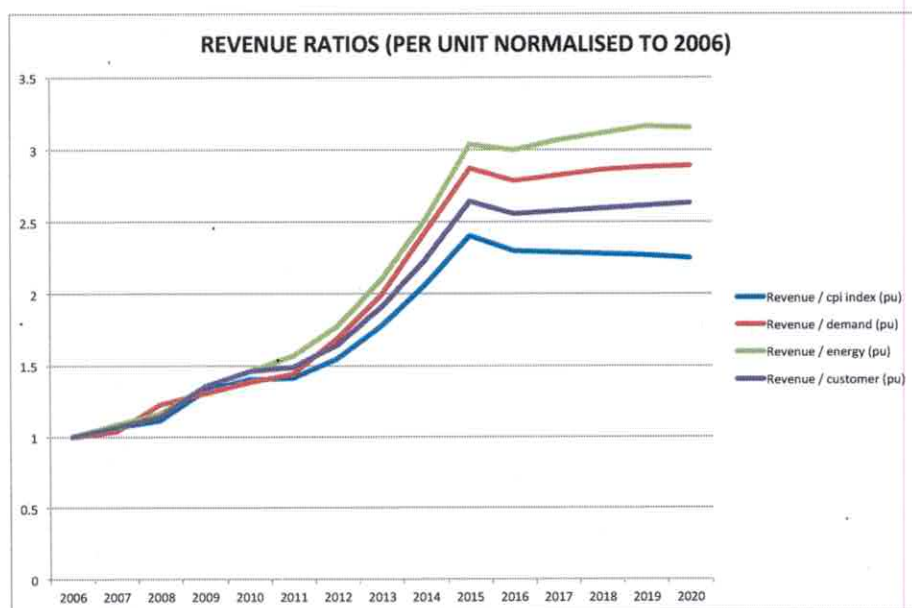
<sup>1</sup> Based on Frontier Economics Report to the AER November 2014



## 2 Over investment

The following graph was constructed to assess the trend in revenue against a number of key bases including CPI, demand and energy. Note there appears to be a major discrepancy in the required revenue presented on slide 7 at the public forum in Brisbane in December 2014 and Table E.2 of the Energex revenue proposal.

Figure 1: Revenue ratios<sup>2</sup>



**CPI** - Energex proposes to reign in the ratio of revenue to CPI as demonstrated above. However the new "base" is after increases resulting in revenue increases more than double CPI.

**DEMAND** – demand is the key driver for investment. For this ratio to be increasing it demonstrates why network charges have increased and is a possible indicator of over investment and inefficiencies. It also demonstrates the unique nature of regulated monopolies where it is possible for revenue to increase even if the demand for services reduce.

**ENERGY** – energy is the mechanism to date that the majority of Distribution Use of System (DUoS) is recovered. Due to a number of well documented reasons<sup>3</sup>, Energex's load factor has been steadily reducing so that this ratio has deteriorated the fastest.

The above graph does not take into account the effects of reclassification of costs from Standard Control Services (SCS) to Alternative Control Services (ACS), historical treatment of the solar Feed in Tariff (FiT) and that demand and energy forecasts are likely to be optimistic based on recent history. All of these factors would make the above ratios worse between 2015 and 2020.

In the same time:

- Energex's profits and return on equity have increased 310% and 150% respectively<sup>4</sup>,
- Some EUAA members have reported increases in network charge rates of 100% over the past 6 years.

<sup>2</sup> EUAA analysis based on Energex RIN data, Energex revenue proposal, Australian Bureau of Statistics

<sup>3</sup>AEMO 2014 National Electricity Forecasting Report

<sup>4</sup> Energex Annual Reports

Based on the above ratios, a reduction in revenue of between 50-70% would return Energex to pre-2010 levels. Unfortunately this is not possible in the short term due to at least 70% of the revenue being locked in due to historical investment<sup>5</sup> under the current NER.

From another perspective, it is in the interests of Energex to challenge itself to find out what it would take to return to pre 2010 ratios as allowing revenue / demand to increase will reduce barriers to alternate supply solutions. This may result in customers going off grid / taking actions to reduce network charges thus transferring more network costs to fewer customers ("death spiral").

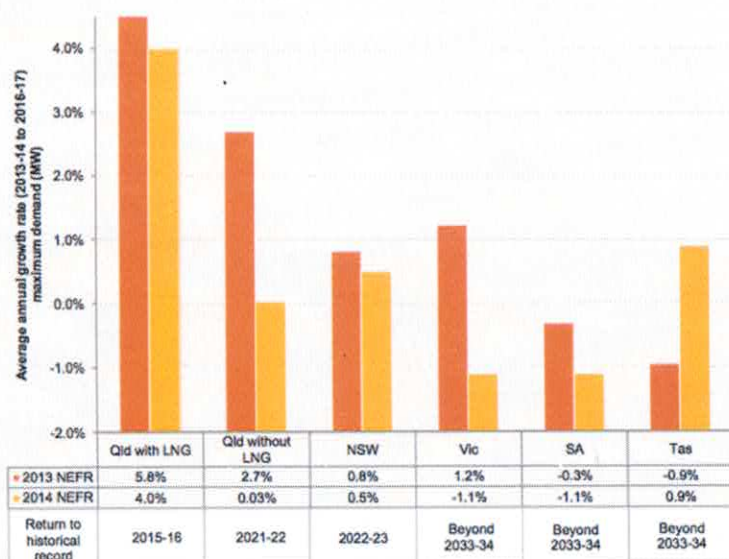
### 3 Energex demand and energy forecasts are too optimistic

Demand and energy consumption forecasts are important to set overall context for the revenue proposal and provides indicators for investment and likely price trends. The AER has identified the falling demand in the current period, yet Energex has forecast moderate reversal of that trend. The following demand and consumption trends are a concern for customers in light of signals by Energex in its proposal to maintain significant levels of spending.

Flat growth outlook in Queensland. AEMO predict that without LNG (likely to mainly impact Powerlink), a return to historical demand records will not be until 2021-22.

Figure 2 to Figure 11 below demonstrate the falling demand dynamics and solar PV displacement consumer load versus Energex's suggested reversal of this trend to forecast increased demand and proportional expenditure.

Figure 2: Maximum demand growth in 2013 and 2014 NEFR<sup>6</sup>



<sup>5</sup> EUAA analysis

<sup>6</sup> AEMO 2014 NEFR

Figure 3: History of over estimation for the Queensland jurisdiction<sup>7</sup>

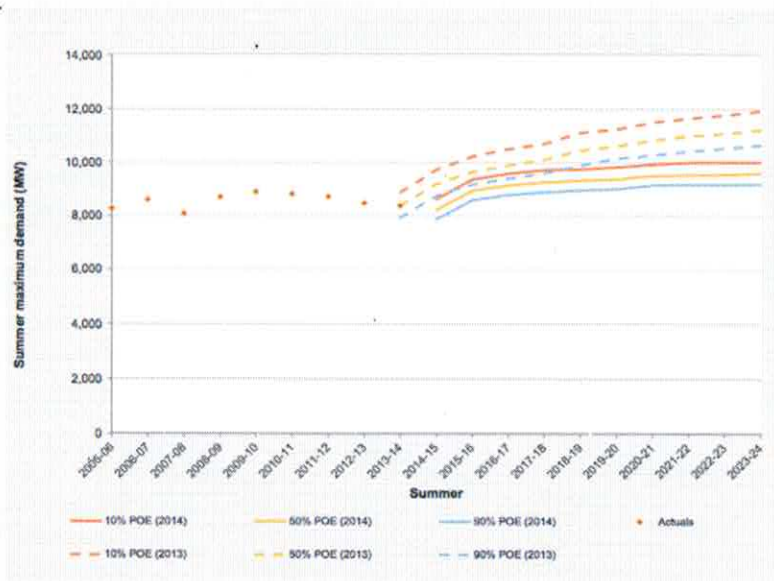
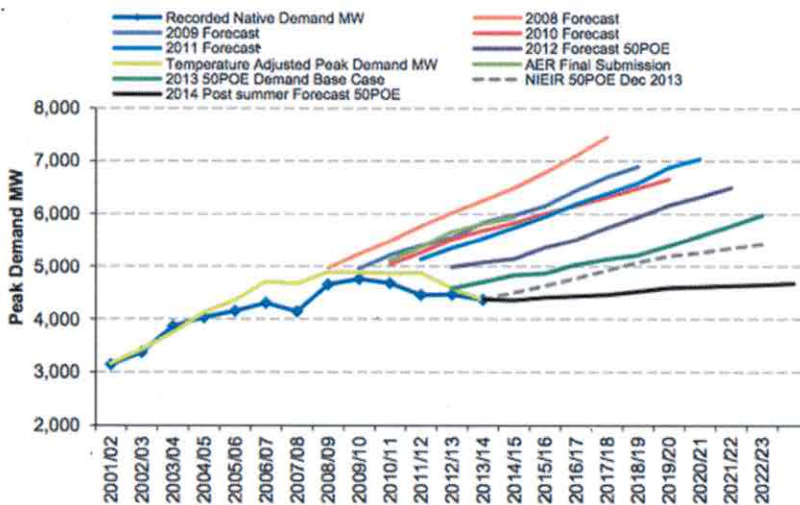


Figure 4: Previous years demand forecast comparison<sup>8</sup>

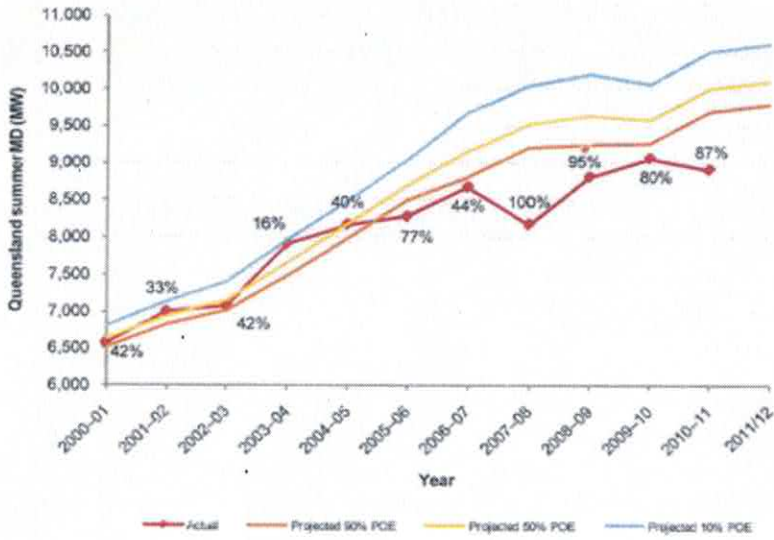


<sup>7</sup> AEMO 2014 NEFR

<sup>8</sup> Energex Distribution Annual Planning Report 2014/15– 2018/19



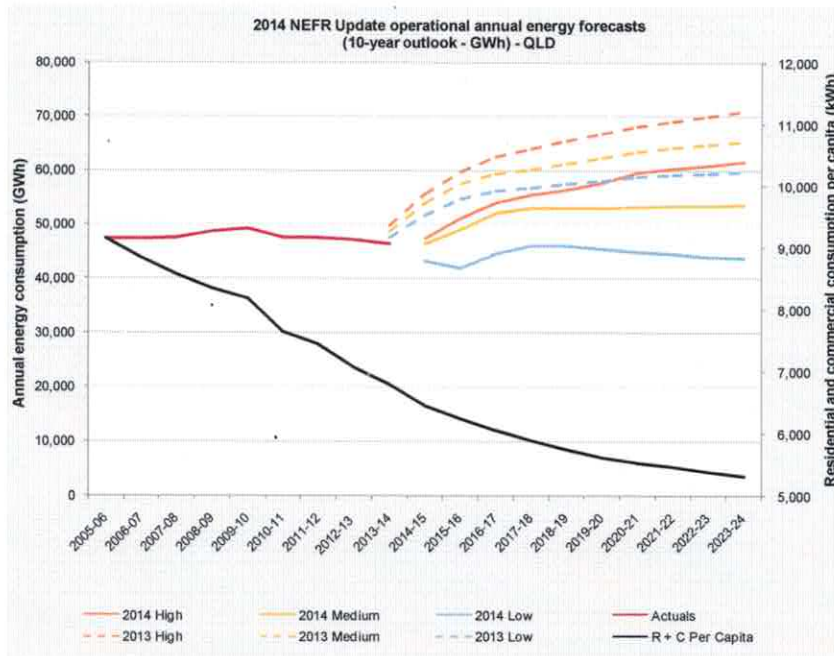
Figure 5: Powerlink summer one year out forecasts and actual maximum demand<sup>9</sup>



Note: The percentage next to each demand data point represents the estimated PoE of the peak demand for that year.

Source: AEMO 2011 Electricity Statement of Opportunities Appendix B

Figure 6: 2014 NEFR update operational annual energy forecasts<sup>10</sup>



<sup>9</sup> Independent Review Panel on Network Costs (Qld)

<sup>10</sup> AEMO NEFR December 2014 Update

Queensland has the highest forecast rate of uptake of rooftop solar PV in the NEM<sup>11</sup>. See Figure 7.

Figure 7: Solar PV installations - Energex

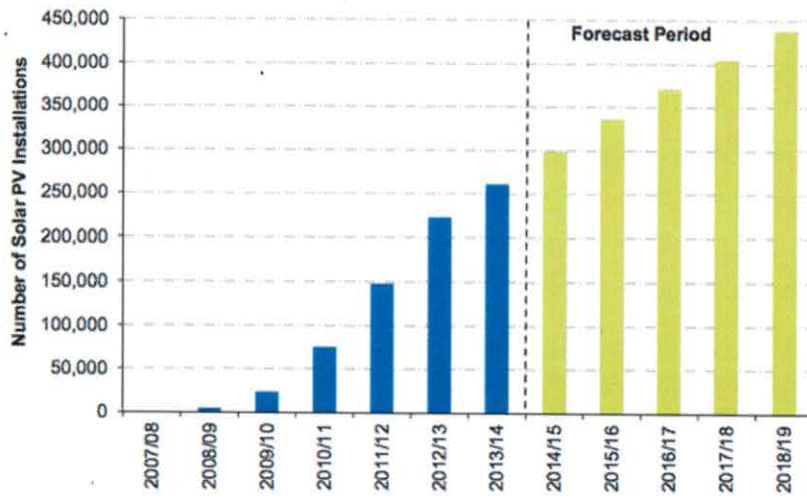
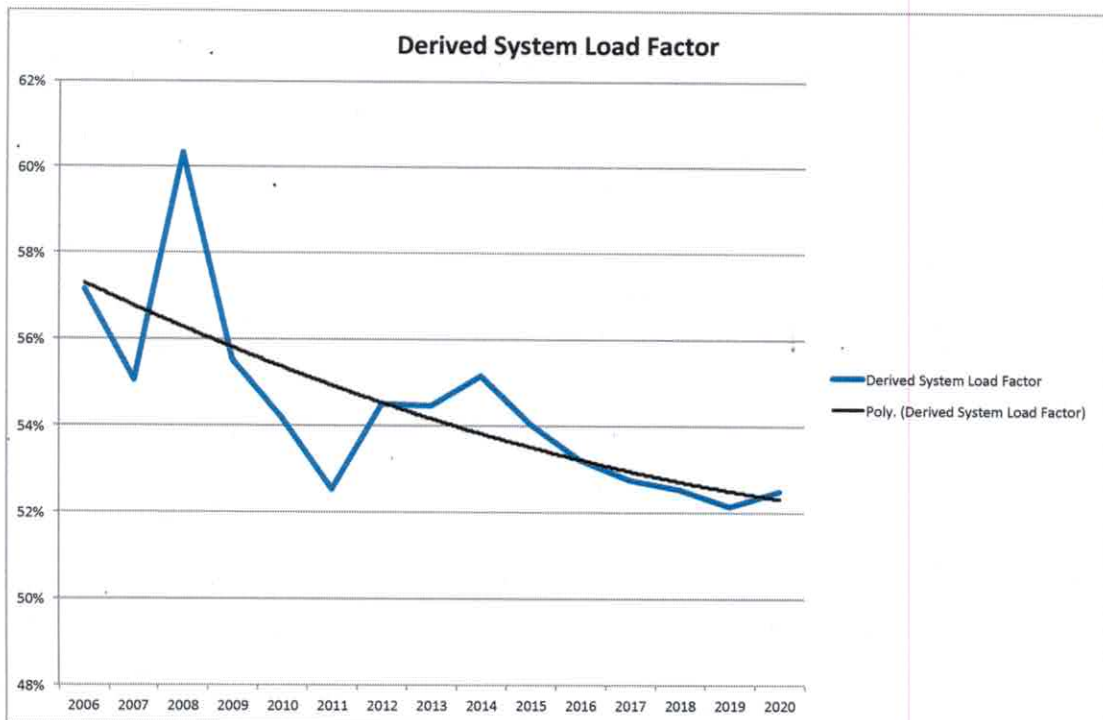


Figure 8: Deteriorating system load factor<sup>12</sup>

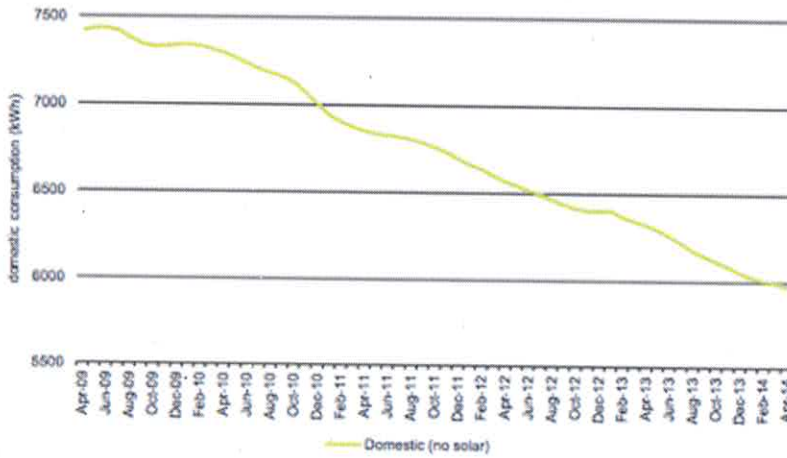


<sup>11</sup> AEMO 2014 National Electricity Forecast Report - sect 3.3

<sup>12</sup> EUAA Analysis based on RIN data

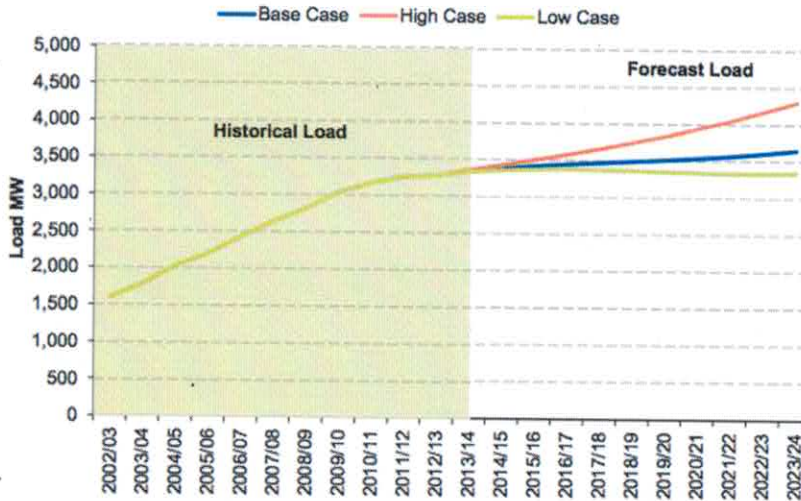
For premises without solar PV, residential energy consumption is continuing to fall. See Figure 9.

Figure 9: Energy consumed in the home May 2009 - April 2014<sup>13</sup>



Airconditioning load is flattening - possibly another indicator of flattening demand. Figure 10 clearly demonstrates this.

Figure 10: Flattening load from airconditioning<sup>14</sup>



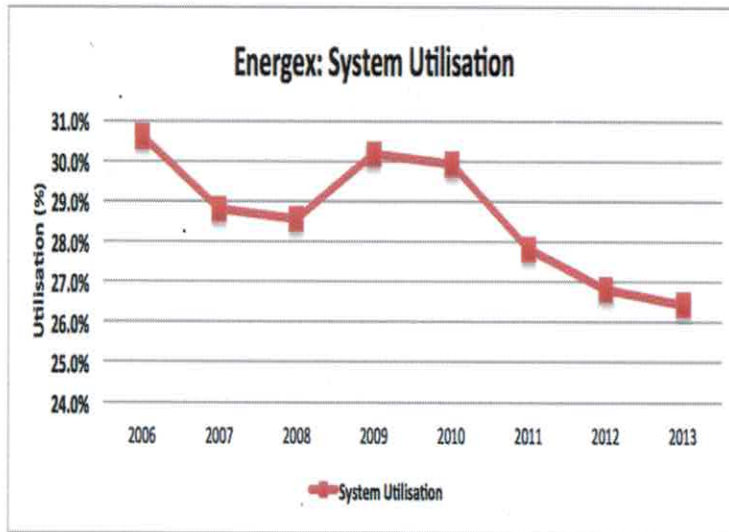
Note: This forecast air-conditioner load is an input to the system demand forecast model. Not all air-conditioners in SEQ operate or draw full power at the same time. Due to this diversity, the data does not represent the net contribution of air-conditioner load to the system peak demand.

<sup>13</sup> Energex 2014 Annual Report

<sup>14</sup> Energex Distribution Annual Planning Report 2014/15– 2018/19

Figure 11 demonstrates system utilisation is deteriorating indicating over investment or a declining demand which if continued increases risk of stranded assets.

Figure 11: Decreasing system utilisation<sup>15</sup>

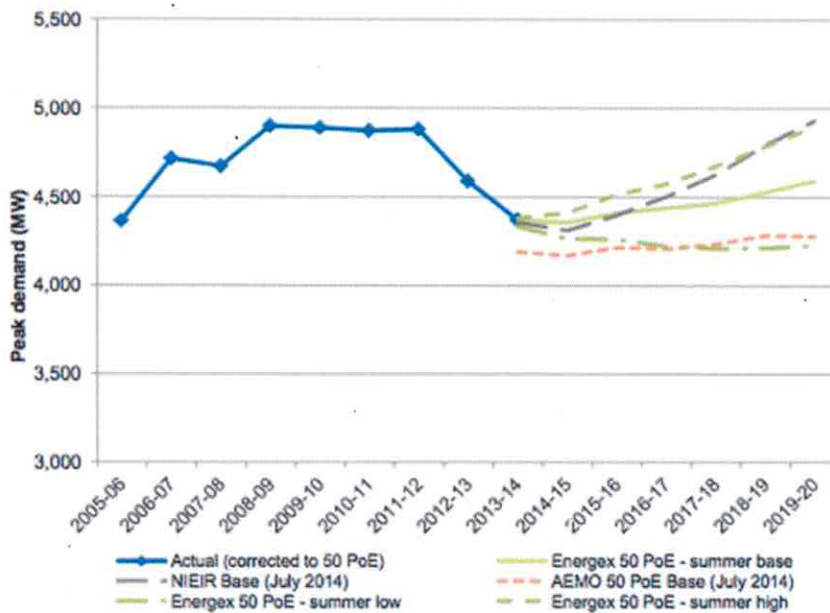


Source: Bev Hughson Analysis of Energen RINS Data



Against all of the above, Energen are optimistically forecasting an increase in trend in demand and energy shown in Figure 12 and Figure 13 below.

Figure 12: Forecast increase in demand contradicts usage and utilisation data<sup>16</sup>

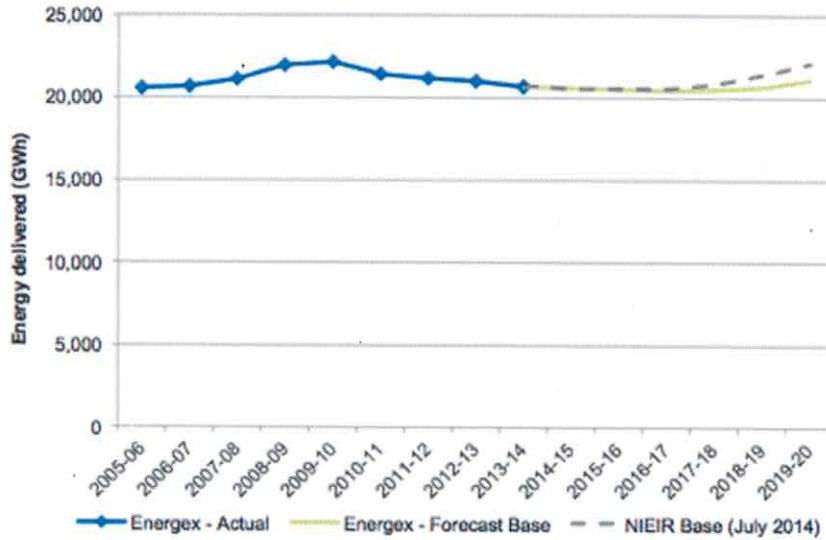


<sup>15</sup> AER Public Forum - CCP Slide Deck

<sup>16</sup> Energen Revenue Proposal



Figure 13: Forecast energy consumption contradicts usage and utilisation data<sup>17</sup>



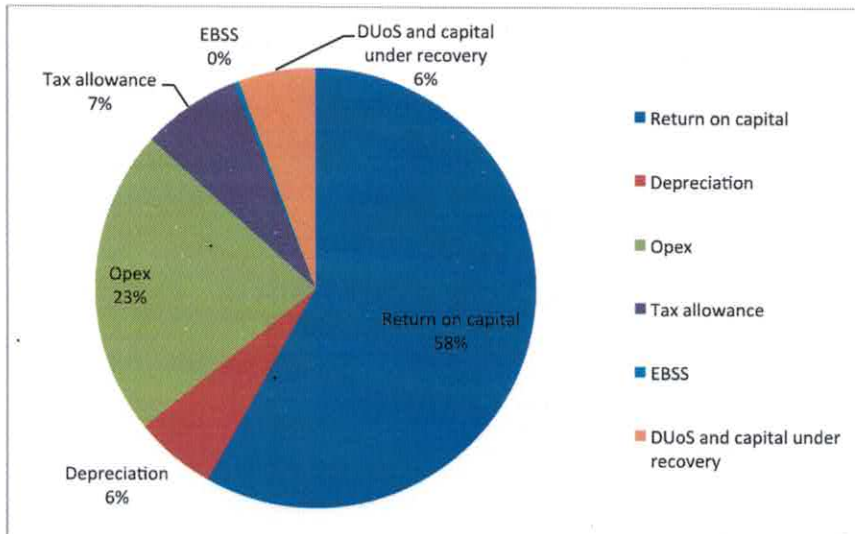
### Recommendation 1

The AER seek independent advice to assure itself of credible demand and energy forecasts proposed by Energex in light of recent demonstration of actuals being materially lower than forecast.

## 4 Return on capital

The materiality of the elements that make up the ARR building blocks for Energex's proposal is illustrated in the following diagram.

Figure 14: Elements of ARR in Energex's revenue proposal<sup>18</sup>



It is well known that the dominant sources of the annual revenue requirement (ARR) are return on capital and opex.

<sup>17</sup> Energex Revenue Proposal

<sup>18</sup> EUAA based on the Energex Revenue Proposal

The return on capital (% WACC x \$ RAB) is the most significant element underlying charges to customers. Based on available information, the EUAA calculate that the proposed WACC is reducing by 20.3%, while the RAB is growing 26% over the next period. So it can be seen that there will be no relief in regard to return on capital due to Energex proposing additional capex that causes an increase in RAB that more than offsets the reduction in WACC. This is confounding given the current economic climate and flat demand and energy outlook.

It is also a frustrating reality that under the current NER and regulatory framework that a large portion of the DNSP's revenue is "protected". This is due to the dominance of the RAB (affecting both return of capital and depreciation) combined with the historical "efficient" opex base, the rules for depreciation and tax allowance. When all of these are considered it is likely that greater than 80% of the historical revenue appears to be locked in to the current determination process.

#### **4.1 AER Needs to apply its Guidelines to WACC**

The WACC is a highly sensitive element of the ARR. The EUAA recognize the importance of striking the right balance between investors and customers. The placeholder nominal vanilla WACC of 7.75% proposed by Energex is considered by the EUAA to be far too high for the following reasons.

- Energex has departed from the AER Rate of Return Guidelines in a number of areas, selecting parameters over and above ranges deemed reasonable by the AER.
- AER recent draft determination on 27 November 2014 for NSW distributors for a WACC of 7.15%.
- Energex has enjoyed the high WACC that was determined for the current Regulatory control period on the basis of the effects of the GFC.
- Energex's year on year profit and return on total equity have increased 310% and 150% respectively since 2009.
- The regulatory framework provides a very low risk business environment where :
  - It is a monopoly provider where almost 100% of revenue is set every 5 years by the AER.
  - Investments are long term.
  - Has a high degree of control over its costs.
  - There is no risk of optimization / stranding / write down of assets.
  - There is no medium term volume risk to the shareholders as unders / overs are simply recovered in subsequent years.
  - There is a cost pass through mechanism for material unforeseen circumstances.
  - Cost efficiencies are retained by the company for 5 years over and above "regulated return".
  - The NSP's are able to financially structure their businesses to increase effective returns to shareholders above the assumed values used by the AER.

- The other Queensland Government owned entity, Ergon, in its own 2013/14 Annual Financial Statements<sup>19</sup>...“A post-tax WACC of 6.86% (with a range of 5.78% - 6.86%) has been employed in the valuation. The WACC discount rate has been determined by management, in consultation with independent experts, with regard to the AER’s recent decisions on rate of returns updated for current market variables.”

By stark comparison, there are some EUAA member industries in the agricultural sector with significantly higher risk and facing global competition. For example referring to the ABARE report on financial performance of agricultural sectors (broadacre and dairy) indicate maximum return on investments of 4.7%. There is still investment happening in these sectors.

Some ASX Index comparisons are shown below:

Figure 15: Index comparisons of ASX ARR

	<b>5 year average annual return</b>	<b>10 year average annual return</b>
<b>ASX200 Industrials</b>	+0.82%	-1.56%
<b>ASX200 Utilities</b>	+7.08%	+2.94%

The difference to the above is that the businesses that are included have a higher risk than Energex as a regulated monopoly, so returns should be even lower.

The EUAA believe that the current approach to determining WACC is a highly theoretical and academic approach that does not seem to reflect the real world. The EUAA encourages the AER to exercise its discretion in considering a more pragmatic approach given the very low investment risk. The EUAA are of the view that as a minimum the AER should use the lowest end of parameter ranges that are provided in the rate of return guidelines. Even using those parameters are likely to result in a WACC that is still very generous considering the very low investment risk.

It was noted that during the recent public forum on the revenue proposals by both Ergon and Energex, the joint network owner response to a question around departure from the AER Guidelines was essentially that it is only a guideline and that the network owners have a different position. This is despite the significant stakeholder consultation on developing the Guideline through the Better Regulation process. Given this position by the network owners, perhaps the AER can also depart from the Guidelines where appropriate arguing a strong case of alignment to the NEO and deliver a WACC outcome that is more consistent with broader industry considering the very low investment risk.

The EUAA has the view that the AER has historically erred on the high side of setting WACC, possibly influenced by network owners running an argument that they won’t invest if its too low. The EUAA believe that the AER should be bolder in setting WACC as there are mechanisms and processes to deal with under investment in a timely way (ie performance indicators, jurisdictional licence non compliances, etc). The AER should also keep in mind that the regulated network businesses have demonstrated considerable inherent capacity via discretionary budgets in regard to absorbing expenditure shock without compromising safety or reliability due their ability to re-prioritise discretionary expenditure.

<sup>19</sup>Note 11 page 42 Ergon Annual Financial Statements for the year ended 30 June 2014



## **Recommendation 2**

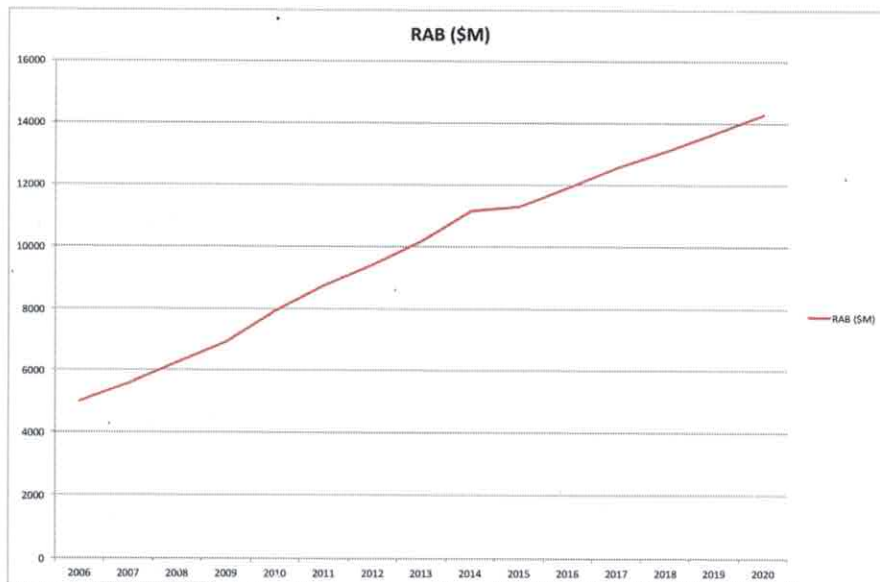
**The AER apply its full discretion in taking a more pragmatic approach in applying its guidelines to setting WACC in particular recognising the actual cost to businesses of debt and realistic of cost of equity given the low level of risk.**

### **4.2 RAB is proposed to increase 28% over 5 years**

The RAB reflects the cumulative capital investment in infrastructure to supply the customer power demand. Energex proposes to continue to increase its RAB via its capex program (discussed further in later Capex section). Energex is proposing a 26% increase in the value of the RAB over the next Regulatory control period. This is a significant increase as the AER have rightly recognized in its Issues Paper, a quarter of the current RAB value over 5 years, in a climate of unprecedented subdued growth in demand and energy.

*AER Issues paper – “However, given the distributors’ relatively flat demand forecasts, we will investigate why the RABs are proposed to continue to grow so significantly.”*

*Figure 16: 26% RAB increase proposed and locks in investment for 40 years<sup>20</sup>*



This forecast trend is also surprising given that the post ENCAPS review has resulted in a relaxation of jurisdictional reliability and security standards.

The problem with the increase in RAB is that it locks in investment for up to 40 years or more. This problem is further compounded if the demand and consumption does not follow a similar trend as this results in much higher upwards pressure on unit network charges.

A reasonable expectation as a general performance indicator is that the size and value of the infrastructure has some proportionality to the demand and energy. The following diagrams show the ratio of RAB to demand (MW) and consumption (GWh) over time. (note these ratios rely on Energex’s demand and energy forecasts beyond 2014 which if optimistic may the trend look better than it may end up being over time)

<sup>20</sup> Energex Regulatory Proposal, RIN data



Figure 17: RAB/Demand ratio should be flat at least<sup>21</sup>

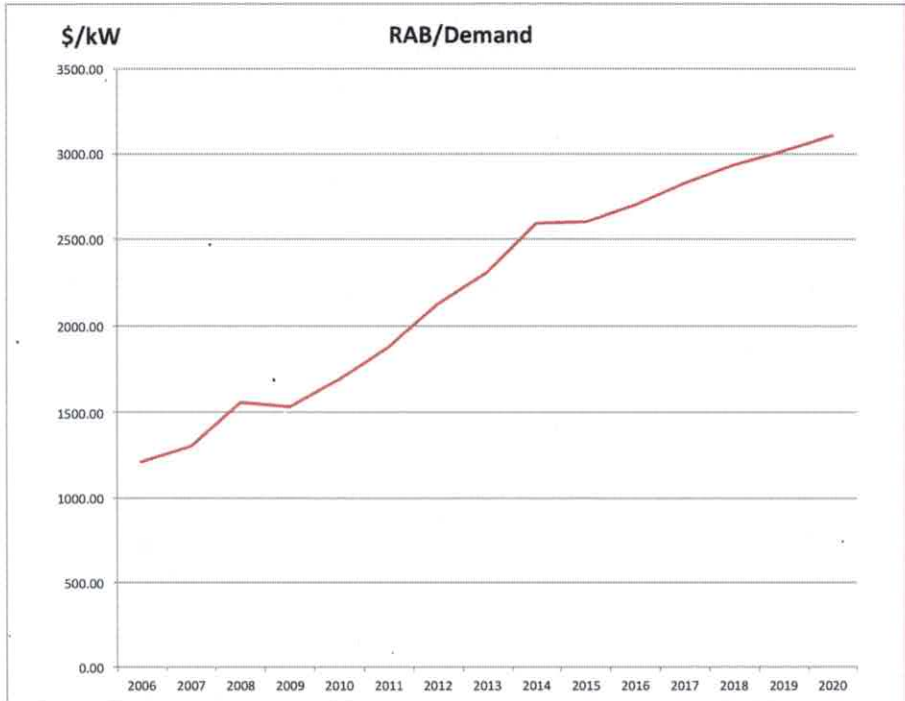
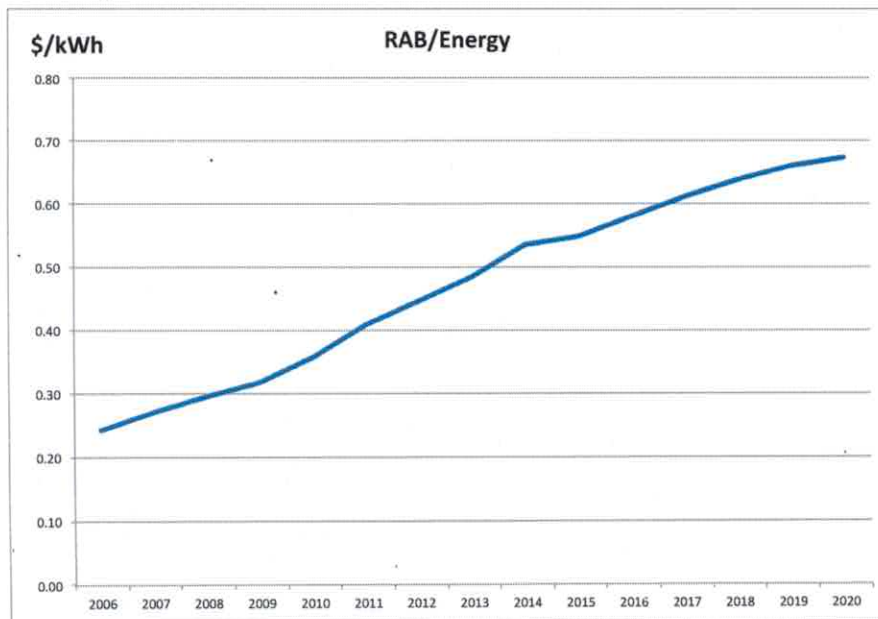


Figure 18: RAB/Energy ratio should be flat at least<sup>22</sup>



The above graphically demonstrates a continuing trend in over building infrastructure in relation to demand and energy consumption. The EUAA believes it is reasonable to expect that at least the above ratios would remain fairly constant over time rather than increasing as these ratios should be self normalising for specific regional operating environment factors. It is interesting to note these ratios are trending upwards even considering Energen's demand and consumption forecasts are likely to be optimistic based on past history.

It clearly shows that since 2006 the change in RAB is forecast to outstrip change in demand and consumption by over 100%.

<sup>21</sup> Energen Regulatory Proposal, PTRM, RIN data

<sup>22</sup> Energen Regulatory Proposal, PTRM, RIN data

Given the forecast demand and consumption and relaxation of jurisdictional standards, the AER must challenge the forecast trend in RAB via a critical review of all capex.

Although requiring a Rule change to be enforced, there may be a mechanism to allow voluntary optimisation of the RAB where assets are under-utilised.

**Recommendation 3**

**The AER and Energex to consider a mechanism within the NER to voluntarily optimise the RAB (for future review) where known to be under utilised.**

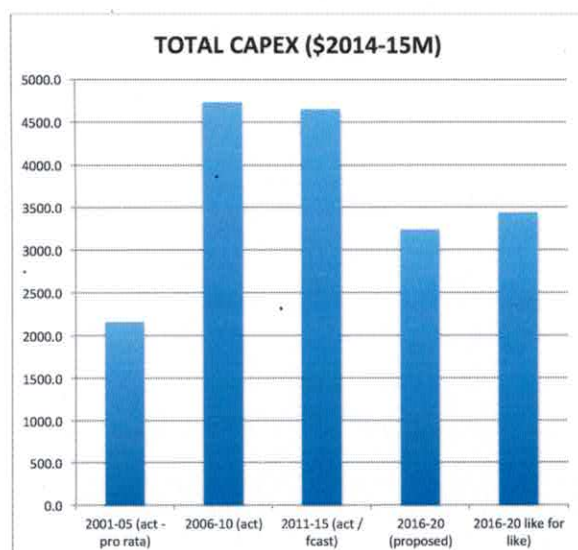
**5 Capital expenditure – A top down assessment suggests a reduction of 66% to the proposed capex**

The majority of the proposed capex of \$3,239M contains discretionary expenditure. Ie – expenditure that is not directly required to meet standards required under Energex's DNSP licence. Energex will likely claim that the majority is required indirectly to meet those conditions and the National Electricity Objective (NEO). The EUAA believe there is wide scope for reduction.

Energex are proposing a 30% reduction in total capex. In reality this reduction will be smaller in like for like terms due to the change in treatment of some expenditure transferring to ACS. Based on analysis of data contained in Energex's reset RIN (tab 3.3 "Assets") the reduction in like for like terms is more likely to be about 26%. Note this was difficult to evaluate as the data presented by Energex on CICW was not as transparent as Ergon in regard to being able to see the underlying changes in total CICW spend and change to customer contributions. The EUAA request that Energex provide the "raw" CICW expenditure (ie – before customer contributions / attribution to ACS) to compare and form a view with historical expenditure and customer number forecasts.

*\*Note for the following comparisons of regulatory periods, the 2011-05 was only a 4 year period so numbers were pro rated up to make them more equivalent to the subsequent 5 year periods.*

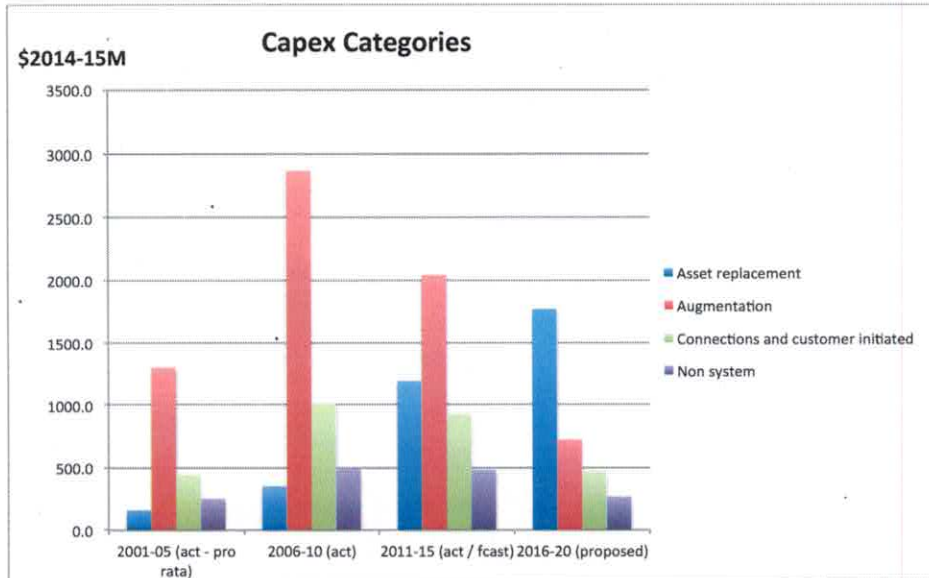
Figure 19: Energex total capex (\$m)<sup>23</sup>



<sup>23</sup> Energex Revenue Proposal, PB Review of 2010-15 Revenue Proposal Expenditure

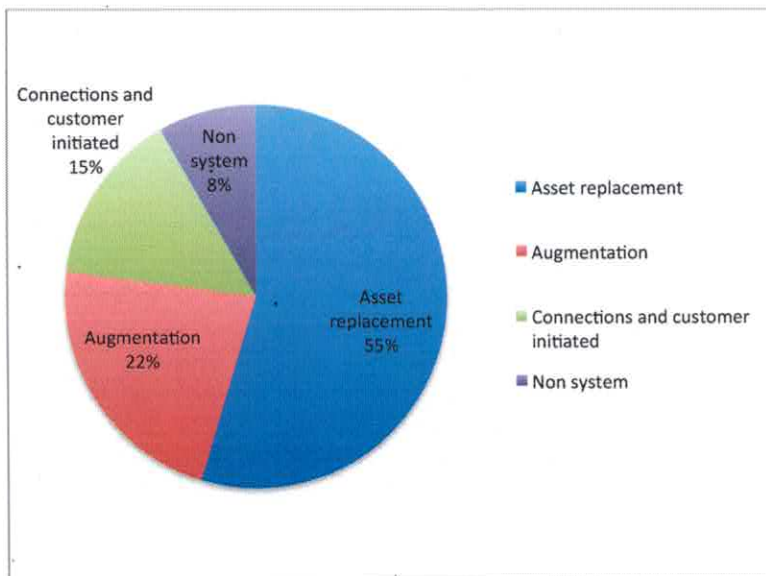
Figure 19 illustrates the very large capex program between 2006 to date and has resulted in many of the criticisms in the Independent Review Panel on Network Prices. It has also likely to have created a largesse of latent network capacity.

Figure 20: Capex components - actual/forecast/proposed<sup>24</sup>



The following is a representation of the relative materiality of each of the capex categories.

Figure 21: Relativity of capex categories<sup>25</sup>



In a climate of unprecedented subdued demand and consumption these expenditure forecasts are difficult to reconcile. The large capex program since 2006 show significant increases in augmentation and replacement (resulting from now relaxed jurisdictional standards and possible desire to reduce risk as low as possible) should result in a "capex holiday". There is a predominant exponential growth in replacement capex.

<sup>24</sup> Energex Revenue Proposal, PB Review of 2010-15 Revenue Proposal Expenditure

<sup>25</sup> Energex Revenue Proposal



The Independent Review Panel on Network Costs (Qld) Report provides the following insights on capex.....

*"Another factor contributing to the escalation in capital programs has been the consistent over-estimation of demand by the NSPs. The Panel also notes that the current revenue cap control mechanism places volume risk on customers. Where demand is over-estimated, capital programs will be excess to requirements and network tariffs to customers will increase during the regulatory control period to ensure the NSPs are able to recover the allowable revenue.*

*Through consultations with stakeholders and discussions with Technical Reference Groups (established by the Panel and comprising representatives from the NSPs), it is further evident that these issues have been compounded by:*

- an industry engineering culture biased toward expanding the network infrastructure and enlarging the capital base of the NSPs;*
- a deficient commercial model in that there was no rigorous capital rationing by the Government, as shareholder and provider of capital, to guide investment decisions; and*
- a regulatory model that limits the ability of the AER to drive the NSP's towards the delivery of efficient capital and operating programs....."*

The EUAA suggests the AER to review this report and take into consideration these issues and the degree of positive changes that have been made since this report was published.

Taking a top down view the EUAA are of the opinion that the starting position should be to limit capex to maintain a constant ratio between RAB and demand at 2014-15 levels. Applying this methodology implies a total capex allowance of around \$2,122M in \$2014-15 as distinct from the \$3,239M being proposed. ie - a 66% reduction.

#### **Recommendation 4**

**Reject the capex proposal by Energex and replace it with a total allowance that holds the ratio of RAB / Demand at a constant level. This would result in a reduction of the order of 66% (a total capex reduction of about \$2,122M) to the Energex proposal and Energex can re-prioritise expenditure.**

**AER should review the Independent Review Panel on Network Costs (Qld) Report which assessed all these matters.**

Notwithstanding this recommendation, the EUAA provides the following commentary on the material capex subcategories.

#### **5.1 Corporation Initiated Augmentation (CIA) - 22% of capex**

Energex has shown some restraint by proposing a 64% reduction in augmentation investment but this still amounts to a significant \$726M. Based on the information presented in the earlier demand section of this submission, the demand from 2009 has not been exceeded. Further according to AEMO, depending on the future of LNG (this may mainly affect transmission demand though), historical record demand may not be reached until 2021/22.

It is claimed by Energex that its program is largely driven by pockets of growth that cause asset capacity to be exceeded. By July 2015, Energex will have spent \$95M to reduce 144MVA. The AER needs to ensure that this reduction in demand is netted out against required augmentation.



The EUAA understand that system demand takes into account the load diversification and may hide lower level network capacity limitations. However, considering that the Queensland jurisdiction has relaxed its security and reliability standards following the ENCAP review this figure seems extraordinarily high and deserves close scrutiny. The EUAA suggest the AER to closely look at spatial demand growth vs capacity and satisfy themselves independently of the prudence and efficiency of the Energex assessment methodology and that all alternate reasonable options have been pursued – eg basis of load at risk assessment / defer / transfer capacity, etc.

## 5.2 Replacement - 55% of capex

Energex is proposing a 48% increase in replacement over the current period. The current period is an exceptionally high base. In addition, the Energex network would have received some inherent replacement via a "knock on" effect of the recent period of investment to comply with now relaxed jurisdictional reliability and security standards. Further, having N-1 in certain areas reduces reliability failure risk.

The year on year trend of average annual renewal investment is exponential as demonstrated below.

*Table 1: Trend of average annual repex*

	<b>Expenditure (\$2014-15)</b>	<b>% change</b>
2001-05	\$161M (pro rated)	
2006-10	\$353M	+119%
2011-15	\$1194M	+238%
2016-20	\$1773M	+48%

The drivers for asset replacement should not be based on the age of equipment, but on signals indicating deterioration of performance. A perusal of Energex's supporting documents regarding asset replacement suggests that a reasonable level of replacement of certain asset types is based on age.

Energex has indicated an improving / stable trend in reliability as follows.

*Table 2: Reliability has improved<sup>26</sup>*

<b>Normalised Reliability Performance MSS (Total of Planned &amp; Unplanned)</b>		<b>2009/10 Actual</b>	<b>2010/11 Actual</b>	<b>2011/12 Actual</b>	<b>2012/13 Actual</b>	<b>2013/14 Actual</b>	<b>2013/14 MSS</b>
<b>SAIDI (mins)</b>	CBD	1.200	6.050	8.030	1.690	3.560	15.000
	Urban	88.500	79.700	64.700	72.700	74.864	102.000
	Short rural	215.700	201.600	198.000	160.500	173.392	216.000
<b>SAIFI (events)</b>	CBD	0.080	0.010	0.035	0.015	0.058	0.150
	Urban	1.200	0.920	0.747	0.820	0.804	1.220
	Short rural	2.410	2.050	1.730	1.611	1.556	2.420

Energex will undoubtedly claim that the above reliability indicators are too lagging and that they need to identify leading indicators (ie asset condition indicators) that may lead to functional failure that result in unacceptable risks. ie - identify problems before they happen.

Energex claims to have improved asset management methodologies - predominantly CBRM (Condition Based Reliability Management). As asset replacement is largely discretionary expenditure, the EUAA urges the AER to critically review the asset management framework in particular the risk identification and mitigation management elements. The key elements that

<sup>26</sup> Energex 2014 Annual Report

should be reviewed include:

- Confidence that asset condition is consistently and accurately assessed across all asset classes forming part of the replacement expenditure.
- Degree of conservatism and consistency of risk assessment eg -
  - How does risk assessment stack up against industry best practice
  - Simple graded framework vs quantified risk
  - Does risk based approach apply to all assets or is age used as a proxy
  - Indications of lots of examples of safety risk being the justification for a majority of investment - this is usually a sign of a lack of a robust business case framework.
- Consideration of options eg :
  - increased condition monitoring
  - life extension / refurbishment
  - run to failure
- Trade off with maintenance
- Governance of the asset management framework

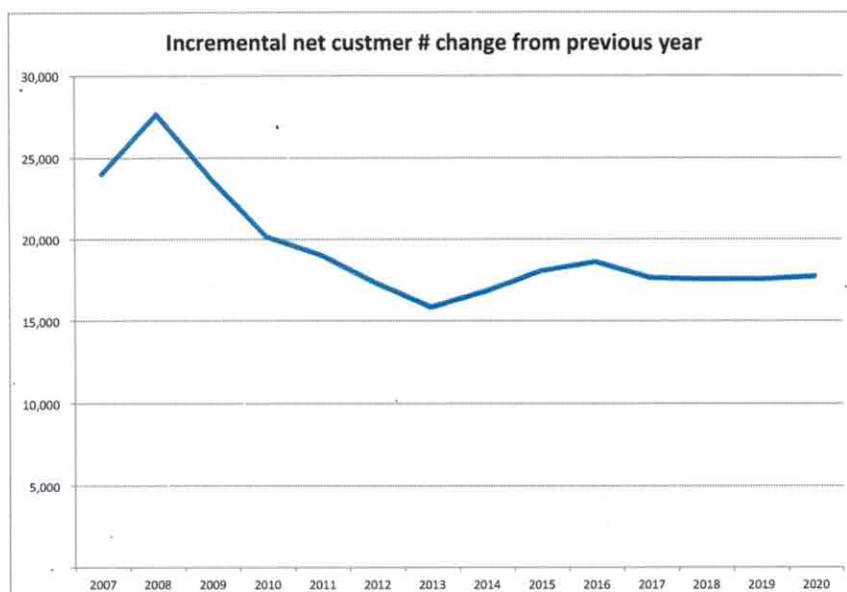
A review approach similar to the one undertaken in the recent NSW draft determination may be appropriate.

### **5.3 Customer Initiated Capital Works (CICW) - 15% of capex**

The expenditure on Customer Initiated Capital Works (CICW) will apparently decrease by 49% over the current period. However it is very unclear what the true like for like picture is due to re-classification of services and expected level of customer contributions. Without the full picture it is difficult to tell if the reduction in the SCS component is enough.

The following graphic of net customers indicates a flat and stable outlook – but is it optimistic?

Figure 22: Year on year customer numbers<sup>27</sup>



It is also noted that up to July 2015, customer contributed SCS assets (gifted / peppercorn) have been added to the RAB with a correction to the overall revenue to ensure no windfall gains. It is understood that beyond this date those assets will be added at zero value. The EUAA request that the AER ensure that the correction remains in place until those assets are fully depreciated.

The EUAA suggest the AER to closely scrutinise the basis of estimating increases in the underlying CICW expenditure (ie - before allocations to ACS / customer contributions). The point being if the total CICW is forecast high, then the SCS component will be as well.

#### 5.4 Non system expenditure - 8% of capex

This category is associated with fleet, IT systems and property / easements. These expenses are forecast to reduce by 44% from this period. Whilst this is a desirable trend, many of these costs can become "business as usual". The EUAA suggest the AER to assess and form a view of the relationship between these costs and the level of capex and opex determined in the draft decision, as well as the level of discretion.

### 6 Operating expenditure – AER Benchmarking suggests a reduction of 28% on proposed opex to be efficient

Energex is proposing an overall 10% reduction in opex from the current period. However this is only a 5% reduction compared to the revenue allowance for the current period due to overspend.

The subsequent charts below illustrate the operating expenditure forecasts for the period 2015 to 2020.

<sup>27</sup> Energex Regulatory Proposal, RIN data



Figure 23: Total opex (excluding meter reading and customer services) (\$m)<sup>28</sup>

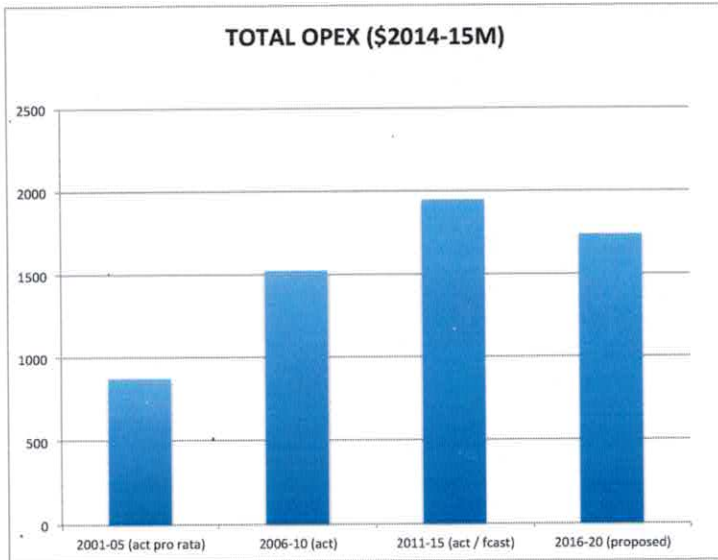
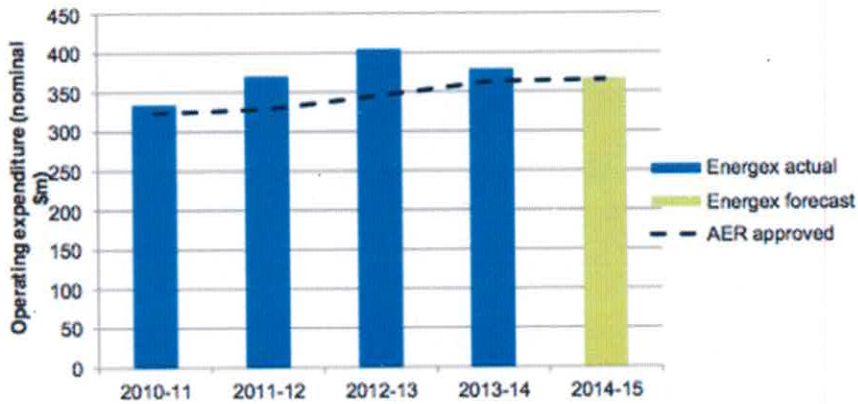


Figure 24: Opex for the 2010-15 regulatory control period<sup>29</sup>



Note: Solar feed-in costs are excluded

Based on the submitted reset RIN there does not appear to be any significant reclassification of opex to ACS by Energex.

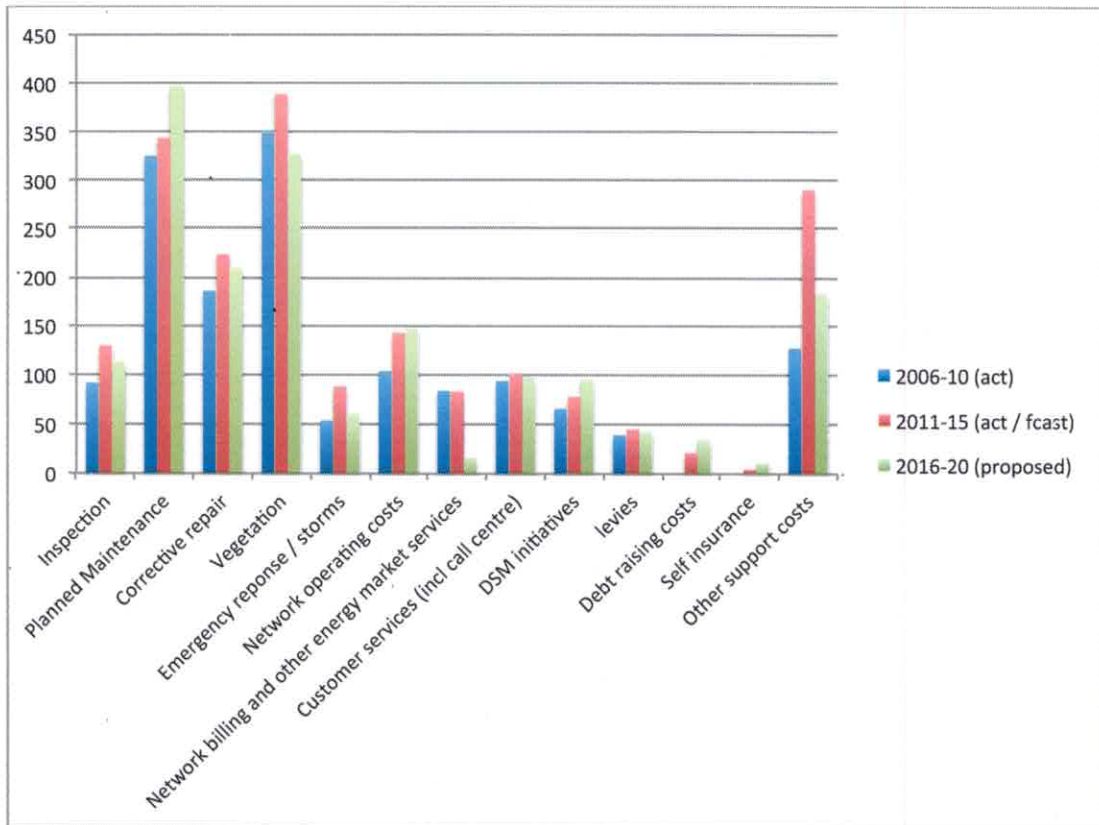
The trend for each opex category is as follows.

<sup>28</sup> EUAA based on Energex revenue proposal, RIN data and PB Report to the AER regarding review of proposed expenditure for the 2011-2015 period.

<sup>29</sup> Energex Revenue Proposal

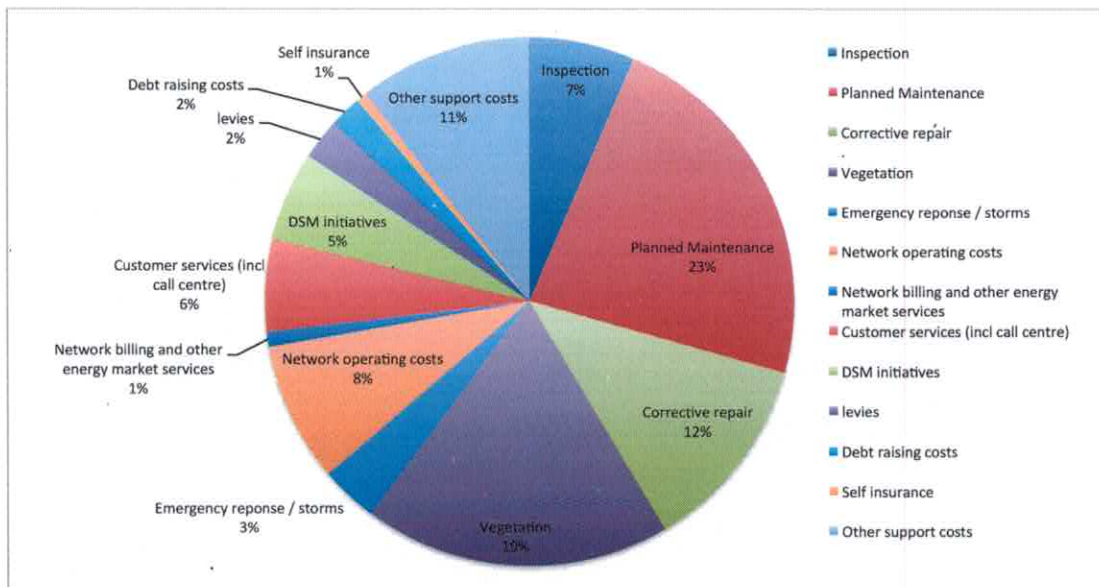


Figure 25: Opex category trends (\$m)<sup>30</sup>



The relative materiality of each opex category as a percentage of total opex is illustrated in the following diagram.

Figure 26: Opex category pie chart<sup>31</sup>



<sup>30</sup> EUAA based on Energex revenue proposal, RIN data and PB Report to the AER regarding review of proposed expenditure for the 2011-2015 period.

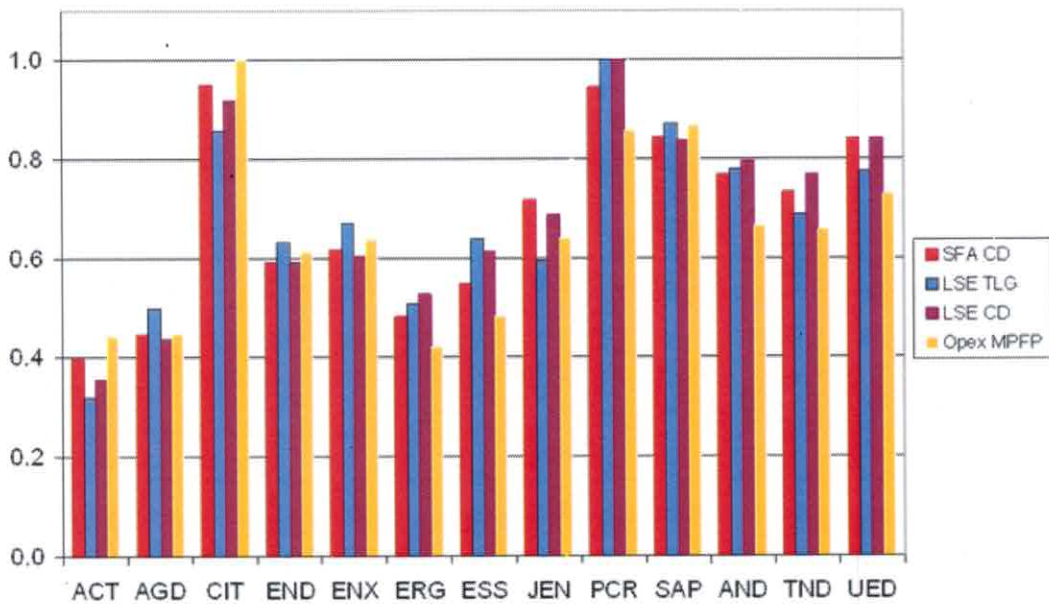
<sup>31</sup> Energex revenue proposal and RIN data

Areas of material increase over the current period include:

Planned maintenance	15%
Debt raising costs	58%
Self insurance	135%

The EUAA is not prepared to be drawn into details of the opex proposal or responding to the AER's Issues Paper questions regarding base, step change and drivers of opex while there is such a fundamental question over the premise that Energex's revealed costs are efficient. Recent benchmarking carried out by the AER and its consultant<sup>32</sup> suggests that Energex has material ground to make up (an implied 36% reduction in opex) to be considered fully efficient against its NEM peers. This is equivalent to a 28% reduction to the proposed opex and would be the equivalent of around a \$500M total reduction to current levels or around \$100M / year average.

Figure 27: NEM service provider's average opex efficiency scores 2006 - 2013<sup>33</sup>



Source: Economic Insights, 2014<sup>31</sup>

<sup>32</sup> Economic Insights (2014), Economic Benchmarking Assessment of Operating Expenditure for NSW and ACT Electricity DNSPs, Report prepared by Denis Lawrence, Tim Coelli and John Kain for the Australian Energy Regulator, Eden, 17 November. - Table 4.2

<sup>33</sup> AER 2014 Annual distribution benchmarking report

Figure 28: Multilateral total factor productivity for each distributor<sup>34</sup>

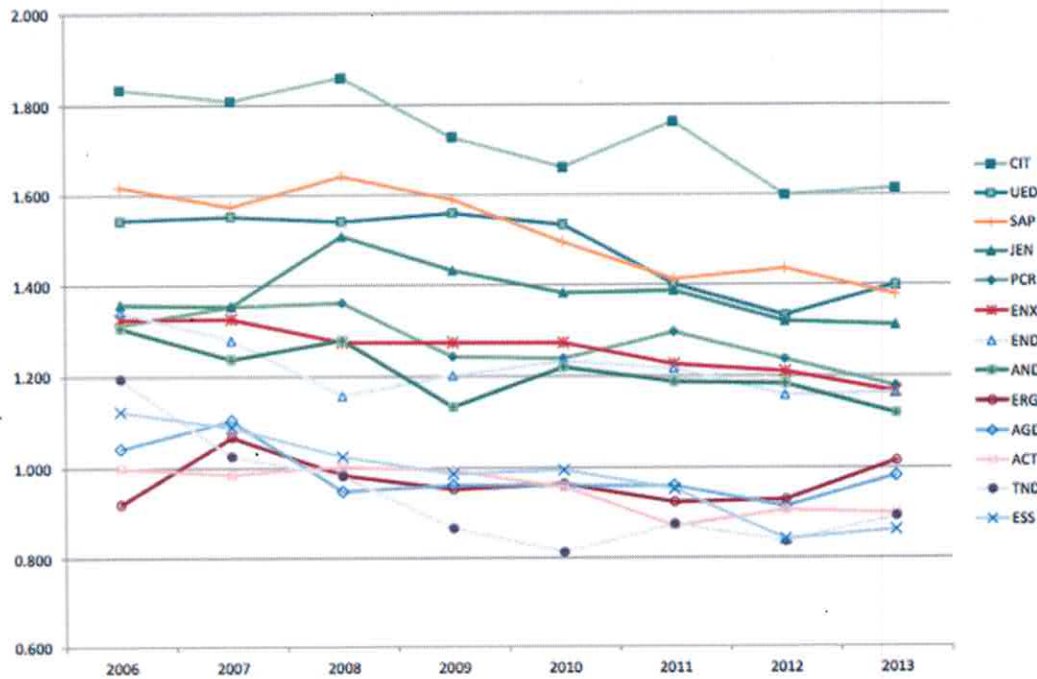
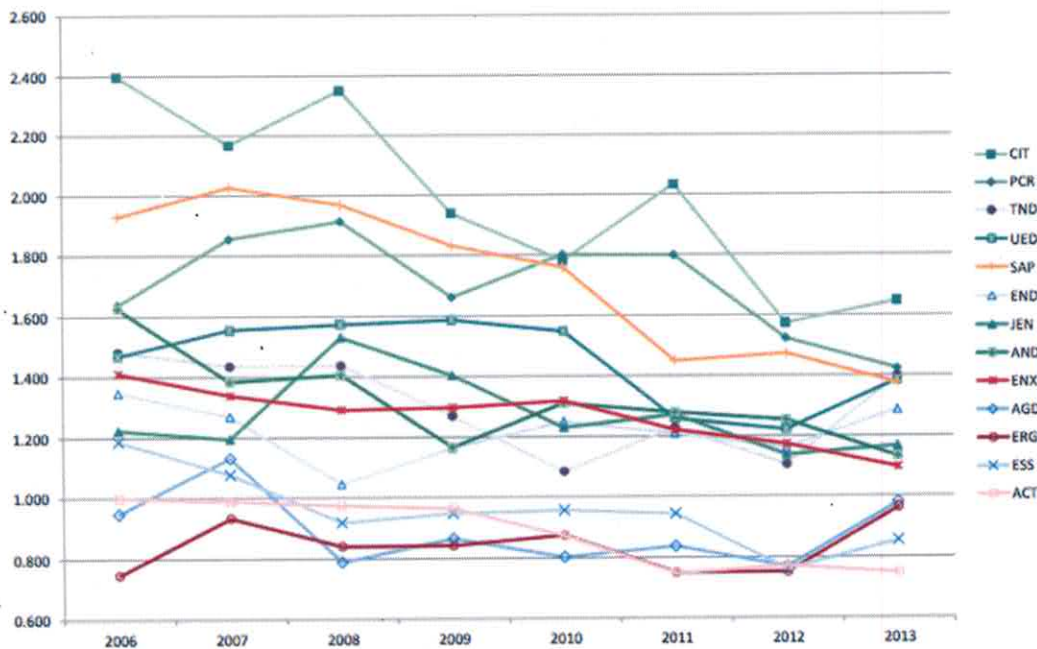


Figure 29: Partial factor productivity of opex<sup>35</sup>



<sup>34</sup> AER 2014 Annual distribution benchmarking report

<sup>35</sup> AER 2014 Annual distribution benchmarking report

**Recommendation 5**

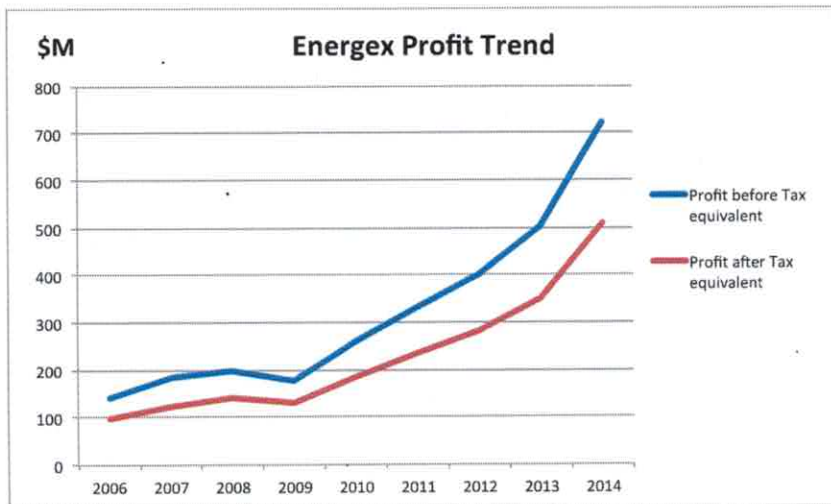
**Reject the opex proposal by Energex and replace it with a total allowance that results in a more efficient outcome and brings Energex more into alignment with its NEM peers<sup>36</sup>. This would result in a real reduction of the order of 28% (a total opex reduction of about \$500M or around \$100M / year average) to the Energex proposal and Energex can re-prioritise expenditure.**

*AER Issues Paper - "If we were to make a revision to the opex forecasts to close the efficiency gap, a further issue to consider is how quickly this transition should take place. That is, who should bear the cost of the transition: consumers or shareholders?"*

Energex has the capacity to immediately return savings to customers resulting from an efficiency gap by merely reducing the profits to its shareholders and still receive a reasonable return on equity given the low investment risk. If the shareholders wanted to further improve their returns then there is incentive to further improve business efficiencies.

Figure 30 and Figure 31 illustrate the remarkably profitable business but has no incentive to return the dividend to consumers.

*Figure 30: Energex profit history (\$m)<sup>37</sup>*

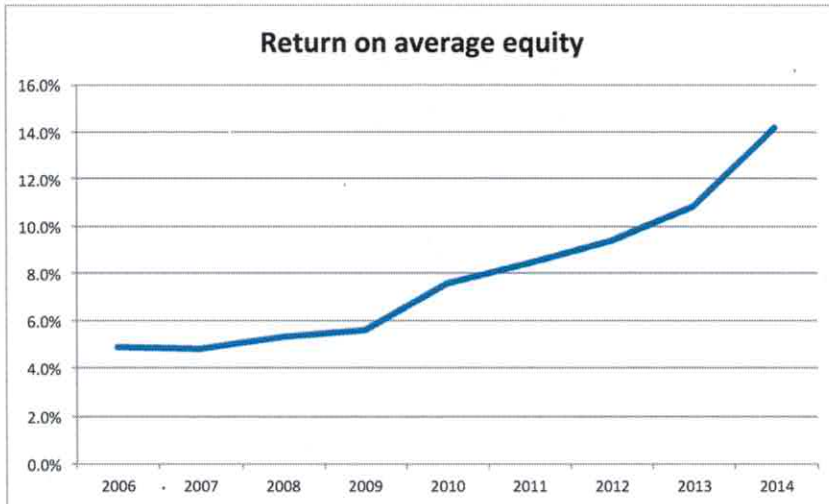


<sup>36</sup> Based on Frontier Economics Report to the AER November 2014

<sup>37</sup> Energex Annual Reports



Figure 31: Energex returns on average equity<sup>38</sup>



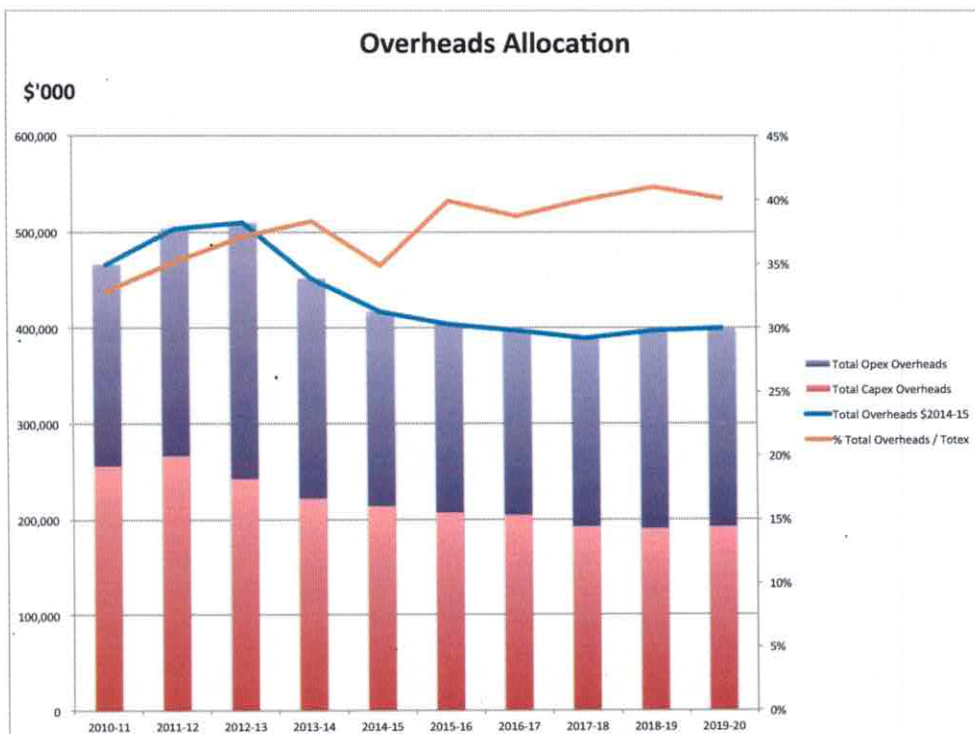
**Recommendation 6**

The AER immediately apply a revision to the opex forecasts to return savings to customers due to the demonstrated capacity within Energex’s profits to achieve this.

**6.1 Overheads appear excessive**

The operating costs include overheads allocated according to the Energex Cost Allocation Methodology.

Figure 32: Overheads allocation<sup>39</sup>



<sup>38</sup> Energex Annual Reports

<sup>39</sup> EUAA based on Energex reset RIN data

The above illustrates the upwards trend in % total overheads to total expenditure. While overheads are reducing overall, they are clearly not proportional to the reduction in Totex. This trend indicates that overheads are forecast to be a higher percentage of total expenditure than at the start of the current regulatory period. Other Support Costs is also a dominant part of the opex and is associated with indirect costs not applied as overheads. (eg audit, legal, finance) This is an area that the EUAA suggest could be closely scrutinized to assess if costs in these areas are more accurately defines as overheads and potentially contributing to the efficiency gap identified in the AER benchmarking.

## 6.2 Demand management effectiveness is questionable

Aside from the RiT-D process, demand management (DM) is a commendable initiative provided it is efficient.

It is not evident of the proposed expenditure by Energex over the next regulatory period is on DM vs reduction in demand other than the following insights into base case cost / kVA.

Figure 33: Residential DM program cost to serve \$/kVA<sup>40</sup>

Residential DM Program Cost Comparison (Capex & Opex)	
Original Approved Budget 2012/13	\$1531 / kVA
Actual DM program Spend 2012/13	\$1077 / kVA
Proposed DM base case 2015-2020	\$817 / kVA
Proposed DM base case + 22k batteries/EVs 2015-2020 (preferred option)	\$725 / kVA
Proposed DM High battery/EVs penetration case 2015-2020	\$672 / kVA

Energex is on track to spend \$95M (\$83.5M is opex) in \$2014-15 in the - current regulatory period to reduce maximum demand by 144MVA. This equates to \$650/kVA. This seems an extraordinary high cost to pay to reduce demand.

These are concerning costs based on EUAA's understanding of marginal costs to build electricity network.

<sup>40</sup> Energex Supporting Document DM Program 2015-2020

Figure 34: Excerpt from Energex supporting document DM 2015-2020

There is currently no set benchmark LRMC available from the Australian Energy Regulator for the cost of building an additional megawatt of capacity in an electricity network. The Australian Government Productivity Commission<sup>24</sup> has provided an estimation of an appropriate range of LRMC for an electricity network. This is shown below in Table A 1.

**Table A 1 - Productivity commission LRMC per kVA**

Network costs per additional KVA	LRMC per kVA p.a. (Annualised)	LRMC per MVA
Distribution infrastructure	\$150 to \$220 per kVA	\$1.5M to \$2.2M
Transmission infrastructure	\$30 to \$70 per kVA	\$300k to \$700k
Generation infrastructure	\$90 per kVA	\$900k

In September 2009, a LRMC of \$2,090 per kVA was endorsed by the Energex Network Technical Committee<sup>25</sup> and Energex Ltd Board<sup>26</sup>. This calculation was based on two accepted methodologies:

This compares with values found in a NERA report commissioned recently by the AEMC "Economic Concepts for Pricing Electricity Network Services" as part of the rule change process for Distribution Network Pricing calculated the following long run marginal costs for low voltage customers (reference Table 4.1) :

Ausgrid = \$152.30 / kVA

Endeavour Energy = \$348.39 / kVA

SA Power Networks = \$155 / kVA

ActewAGL = \$239 / kVA

Given Energex are seeking to increase its spend in this area the EUAA requests the AER closely scrutinize the proposed costs, the underlying business evaluation framework and track record of demand side costs vs peak reduction to ensure only prudent and efficient demand side costs are incurred with high confidence of achieving the peak reductions.

In particular, that the business cases have clearly tangible benefits and targeted demand reductions.

Commentary from the Independent Review Panel.....

*"One outcome has been expenditure on demand management and emerging technologies, much of which has yet to yield commercially viable solutions as genuine alternatives to network augmentation. The level of expenditure in these areas by the Queensland DNSPs is much higher than in the privately owned DNSPs in other States."<sup>41</sup>*

<sup>41</sup> The Independent Review Panel on Network Costs (Qld) Report IRP - page v



## **7 Depreciation**

*AER Issues paper – “Assets purchased or constructed by the distributors will earn a rate of return until their value depreciates away over a number of years.”*

If an asset has a 40 year book life, then it implies a straight line depreciation rate of 2.5%. If inflation runs at 2.5% (or higher), then the value of this asset remains at its original installed value and never gets to zero. It is understood that the indexation amount is removed in calculating the regulatory depreciation allowance to avoid double counting. The problem with this characteristic is that if a long life asset is replaced, then it is likely to have close to its historical value still in the RAB in addition to the replacement capex in dollars of the day. This potentially provides a continuing return on assets that no longer provide services if it is not removed from the RAB. It is noted that in the reset RIN, there is an amount of \$133M for reduction in RAB for asset disposal.

The EUAA request further information from Energex regarding (a) confirmation of the financial treatment of replaced assets, and (b) if applicable, the aggregate residual value of “replaced assets” in the RAB.

## **8 Tax allowance**

Note that Energex have asked for a gamma of 0.25% compared to draft determination in NSW is 0.4%. Adopting the AER's position on gamma should reduce the ARR by around \$300M.

## **9 Efficiency benefits sharing schemes**

The EUAA is sceptical of the effectiveness of these schemes in terms of providing suitable incentives for network owners and whether benefits really flow through to customers. The EUAA suggests that the AER use its discretion to remove these schemes as per the AER decision to discontinue the EBSS for Ausgrid.

## **10 Pricing / tariffs**

The EUAA are concerned that the pricing methodology continues to shift a disproportionate amount of network charge costs to business and large users. The EUAA's position is that it supports cost reflective pricing that includes a more dominant demand component - particularly for residential customers to enable a more equitable sharing of network costs between all consumer types.

## **11 Other matters raised by the aer in its issues paper not fully covered elsewhere**

### **11.1 Benchmarking**

*“We welcome submissions on the benchmarking results we have derived and their implications, whether from consumers or other stakeholders.”*

The EUAA are encouraged by the AER using benchmarking to inform its decision around efficient levels of opex and would like this approach to extend into capex. There appears to be a number of ratios that could be used as mooted in this submission under the capex section.



## 11.2 Cost pass through

*"We seek your views on the pass through events nominated by the distributors. In particular, should they be recovered as part of a cost pass through if such events occur, or is it more appropriate for these potential impacts to be reflected in the distributors' allowances. Alternatively, should the distributors manage the risk of these events using their existing resources."*

The EUAA are of the view that all events proposed by Energex would be acceptable provided that the reductions in capex and opex that have been recommended in this submission are supported by the AER. Otherwise, the EUAA's position is that Energex has the capacity to absorb these particularly in light of the 135% increase in self insurance at \$11.6M over the regulatory period.

### **Recommendation 7**

**The AER accept Energex's proposed cost pass through events provided the final determination results in a correction to the opex and capex as proposed above, otherwise Energex to absorb these costs within its resources.**

## 11.3 Achieving the NEO

*"We would like to hear views on how the NEO is best reflected in our decision."*

The EUAA understand the role of the AER is to strike a balance between network owners and customers. The EUAA feel that for a long time the regulatory decisions have erred favorably to network owners. The EUAA encourage the AER to utilise benchmarks and appropriate metrics to form top down views of appropriate levels of expenditure and return on investment. Network owners will undoubtedly claim that all of their bottom up engineering work justifies the proposed levels of expenditure and that the AER in its decision process are disregarding the safety and reliability consequences / risks as has been publicly stated in NSW. In order to better assess these impacts, the onus should be on the network owners to credibly model scenarios of the draft determination rather than maintaining defence of original proposals. (ie where under investment will specifically affect safety or reliability)

An argument in defence of a corrective style determination by the AER is that it is assisting the long term viability of the network by keeping it competitive to emerging technologies rather than allowing networks to continue on a trajectory of being less competitive through short term objectives of shareholders.