MCKELL INSTITUTE

Submission to the AER

RESPONSE TO ESSENTIAL ENERGY DRAFT DETERMINATION

FEBRUARY 2015

Background

This submission was undertaken at the request of the NSW Electrical Trades Union (ETU) in order to respond to the Australian Energy Regulator's draft determination for Essential Energy.

The paper examines the appropriateness of the methodology used in the draft determination, while also making a series of recommendations on how the process can be enhanced. The document also considers the likely impacts of an inappropriate determination.

The authors of this paper have utilised a range of publicly available information and our own analysis in compiling this paper. The NSW ETU had no input or direction over the findings contained within this submission.

About the McKell Institute

The McKell Institute is an independent, not-for-profit, public policy institute dedicated to developing practical policy ideas and contributing to public debate. The McKell Institute takes its name from New South Wales' wartime Premier and Governor–General of Australia, William McKell.

William McKell made a powerful contribution to both New South Wales and Australian society through significant social, economic and environmental reforms.

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Note

The opinions in this paper are those of the authors and do not necessarily represent the views of the McKell Institute's members, affiliates, individual board members or research committee members. Any remaining errors or omissions are the responsibility of the authors.

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Introduction

The McKell Institute is writing in regards to the recent round of AER Draft Determinations for the NSW network businesses.

We are compelled to submit our views on the determinations due to what we perceive to be some grave oversights in the determination process. We believe that these not only entail flawed cost analysis that imposes unreasonable (not to mention infeasible) cost reduction demands on the NSW network businesses, but also oversights in relation to the broader responsibilities of the AER in supervising the network businesses – that is, to not only ensure fair pricing of electricity, but also to maintain the quality, safety, reliability, and security of electricity supply.

First, we will consider the price-side of the AER's responsibility. Here, we will focus on the new economic benchmarking work that the AER has used to inform cost cuts in the most recent round of determinations. While we believe economic benchmarking is a useful tool and respect the AER's intention of expanding its regulatory toolkit, we believe that an unreasonable degree of faith was placed in an untested tool, to the point at which the results of the benchmarking exercise were actually used to prescribe the scale of cost cuts (whereas, in our view, benchmarking should be used as an informative tool, rather than a deterministic one). This has proved particularly troublesome due to the various issues with the AER's benchmarking modeling that have been identified.

Second, we will discuss some gaps in the risk-management and reliability considerations in the AER's most recent draft determination. We will consider costs to reliability and costs to safety (particularly as a results of cuts to vegetation management). This section will also discuss the broader economic and community impacts that the AER's proposed cost cuts would entail, which the AER must take heed of as a responsible government body.

We have also included with this submission a copy of a recent report by the McKell Institute, which includes independent benchmarking analysis based on the same economic benchmarking RINs that the AER has used. We hope you find that some of the nuance in our method will help to rectify some of the obvious teething issues with the current AER benchmarking methodology.

Issues with the AER's benchmarking exercise

In all regulatory rounds, there is a natural to-and-fro between the regulator and the network businesses. This largely arises because of contrasting views about what represents a reasonable forecast for various components including demand, factor prices, and appropriate productivity savings.

The current round of regulatory determinations has seen an unusually high level of disagreement as a result of the new benchmarking tool employed by the AER. The result of this new benchmarking exercise has been a recommendation for seismic cost reductions for NSW network businesses. The steep nature of these reductions will almost inevitably require these businesses to entirely restructure their operations, including implementing a sharp reduction in staff numbers.

Given the implications associated with such a severe reduction, the AER must be ***confident beyond any doubt*** of all the following three things:

1. That the analytical conclusion of the benchmarking model are beyond reproach
2. That the cost profile subsequently prescribed by the AER is feasible from a business perspective
3. That the cost savings will not jeopardize the AER's ability to ensure non-price objectives of the National Electricity Law are met (namely, the 'quality, safety, reliability, and security' of electricity supply)

From a community perspective, the McKell Institute is worried that none of the above three criteria have been met. We strongly believe that the steep nature of these reductions is highly unnecessary and is likely to impose unreasonable hardship upon the workers and families employed by these businesses, as well as a material fall in the reliability of supply and an increase in the risk of tragic events such as bushfires that can arise when network businesses are unable to properly manage vegetation.

The first two of the above considerations will be considered in the first section of this submission, while the third will be considered separately in the second half of this submission.

Analytics of the AER's benchmarking model

It is the view of the McKell Institute that, even before considerations of the feasibility and secondary impacts of the proposed reductions, the AER's benchmarking model does not stand up to rigorous examination. We believe that this absolutely must be a precondition for using such a model in a deterministic fashion to prescribe cost reductions.

As part of a recent report on the electricity sector (attached), the McKell Institute conducted a comprehensive benchmarking exercise using the publicly available AER economic benchmarking data. This exercise was completed prior to the release of the AER's annual benchmarking report, and so we were very curious to understand what the key differences were in the methodology that drove some of the differences in conclusions.

Our own modeling exercise focused on partial performance indicators. While we accept the theoretical value of models based on total factor productivity, we were concerned that such models are *highly* sensitive to functional specifications and model design.

1. Relationship between physical span and operating expenses

The first issue we would like to draw to the attention of the AER is the way that the relationship between operating expenses and the physical span of networks is modeled in their consideration of partial performance indicators.

We agree with the AER's conclusion that there is a clear relationship between the size of networks and their operating expenses (see p24 of the Annual Benchmarking Report). This is intuitive - a larger network entails a higher per customer cost.

However, we disagree with the form of this relationship that the AER has chosen.
Specifically, we have two concerns:

a) Use of Customer Density as the independent variable
b) Use of Average Total Opex as the dependent variable

(a) Use of Customer Density

As part of our research, The McKell Institute considered various functional forms of the relationship between size and operating costs. Ultimately, Line Length was selected as the independent variable in our regression, due to stronger intuition, a stronger mathematical foundation, and a stronger relationship in the data.

Intuitively, it is the size of a network that determines how many staff must service a particular corridor of customers (e.g. inspection, vegetation management, maintenance, and so forth), as opposed to the density of those customers.

Mathematically, if x is the number of customers, then 1/x is negatively related to x - that is, as x increases, 1/x decreases. Our finding was that opex per customer was positively correlated to line length. Given the above basic logic, changing the relationship to opex per customer on customer per line length (where customers are both the numerator of the independent variable and the denominator of the dependent variable) therefore creates an artificially weaker relationship between opex and physical span. In other words, misspecification in this relationship gives the impression that the physical span of the network is less important in determining variation in opex than it actually is.

Analytically, the data showed a much stronger correlation between costs per customer and line length (as opposed to density), and The McKell Institute strongly contends that this metric is a more appropriate measure than the metrics used in the draft determination.

(b) Use of Average Total Opex

We also do not agree with the choice of Average total opex as the dependent variable when examining this relationship.

First, as a lesser point, it is unclear why historical average is a more appropriate metric than the final period in the available data when comparing relative efficiency.

Secondly, our own analysis found that the relationship between physical span and operating expenses was particularly strong when focusing on the subset of operating expenses we termed 'upkeep costs'. We intentionally disaggregated the subcomponents of opex into: 'excludables' (including state specific taxes/levies and costs that could not reasonably attributed to the efficiency of a network such as insurance); 'overheads' (including selling, general and administrative expenses); and 'upkeep' (including inspection, vegetation management, maintenance, and so forth). Looking at 2013, we found an 88% correlation (R^2) between line length and upkeep costs per customer, a particularly strong relationship. (See p34 of our report attached).

2. Comparison of capital expenditure across networks

We note that the AER's work focuses the capital comparison on asset cost (depreciation plus the WACC multiplied by the RAB), as opposed to annual capital expenditure. The rationale for this is that capex can be 'lumpy' and not consistent across years. We do not dispute this. However, we believe that the focus on the Asset Cost exposes the analysis to important gaps and nuances that are otherwise apparent when examining capex over time.

In particular, our concern is with asset life. An asset that has not been replaced for a long time will have substantially more accumulated depreciation and hence a lower asset cost, due to a lower RAB. In contrast, a brand new asset, such as the higher voltage assets purchased by the NSW networks in the previous regulatory period, will have lower accumulated depreciation and hence a higher asset cost.

This is important because, focusing on the last regulatory period, NSW's networks had higher capital expenditure due largely to renewal and augmentation. Much of these costs came from expensive individual transactions (such as higher voltage substations), which would substantially increase the total asset cost. The spike in NSW investment (largely responsible for the subsequent increase in the asset cost) is far more apparent when examining capital expenditure.

Another important point to add here is that focusing on overall remaining asset life for these networks ignores the fact that much capital expenditure in the period was driven by large, discrete purchases. This means that while overall asset life may be comparable between two networks, one may still need significant immediate investment while the other does not.

Allowing for these nuances in our benchmarking work led us to draw substantially different conclusions about the relative efficiency of the different network businesses in the National Electricity Market.

Given this, we remain concerned that the AER has rested on its Total Factor Productivity models to reach its conclusions about what the actual scale of cost reductions should be.

The McKell Institute has reviewed the Frontier Economics report into the AER's benchmarking work, which includes a thorough examination of the Total Factor Productivity models employed. We reaffirm their conclusions that these Total Factor Productivity models, while constructed with the best intentions, are not analytically robust, and therefore prescribe unnecessary and unreasonable cost cuts.

In particular, we reaffirm the following issues identified by Frontier Economics:

- Inconsistency of data definitions across the RIN submissions of the various NSPs
- Integration of international network businesses (in New Zealand and Ontario) into the model, which further compound data comparability issues as well as introducing additional factors that must be adequately controlled for
- AER applying substantially less caution than other regulators around the globe when using such models due to their inherent sensitivities, including not taking adequate steps to utilize multiple different specifications

We note that Frontier Economics is a leading global firm with regards to economic analytics, and has supported many regulators with benchmarking exercises in various countries. For this reason, we strongly encourage the AER to examine their report in detail.

Feasibility of cost reductions

The second criterion that the AER must meet in its regulatory process is to ensure that the cost reductions implied by its analytical work are feasible for the impacted businesses.

While we welcome the AER employing sophisticated analytical techniques, it is important the regulator does *not* engage in an academically elegant exercise at the expense of business practicality.

Ultimately, a business does not operate like a machine – to apply cost benchmarking deterministically to prescribe what the costs of a business should be is misguided. There are a multitude of factors that determine what is an *achievable* cost for a business. Benchmarking is useful in informing such a process, but is insufficient on its own. Such exercises must be coupled with 'zero base' cost reviews, in which the AER engages external engineers/consultants and the industry itself to define what the minimum achievable cost could be based on maximum efficiency scenarios. Benchmarking can assist in this, but cannot replace it. The zero based cost structure can then be compared to actuals to determine a maximum possible cost saving.

How much of this cost reduction is achievable over what time frame is then a question of delivery risk, which the AER must also factor into its determination – cost reduction is a complex, difficult, and sensitive process.

Certainly, the AER's expectation that the NSW network providers adjust their base year costs *immediately* is unfathomable – such drastic changes in the cost base as the AER is pursuing would require multi-year transformation programs. To rush such a process would be highly irresponsible.

The AER seems to have ignored the fact that the NSW businesses are already pursuing a multi-year cost saving program, factoring in a gradual reduction in costs, and instead have insisted on an immediate 're-basing' of costs.
Moreover, the AER seems to have given minimal consideration to the costs that occur as a result of such a transformation program (including, for instance, fair redundancy payments).

One particular area that we would like to comment further upon is the AER's approach to reducing labour costs in the NSW businesses.

First, the AER appears to have entrusted to itself, with no legislative basis, the power to refute the determinations of the Fair Work Commission. We quote from the Ausgrid Draft Determination:

> *"The presence of a legal obligation, by itself, is insufficient to justify us providing opex for a particular item… Enterprise Agreements are one example of this. If a contractual or legal obligation were sufficient to justify the provision of opex, it would curtail the scope for us to undertake efficiency assessments."*[i]

The AER here appears to be ignoring the role of the FWC entirely. The FWC is responsible for ensuring that labour is not unfairly remunerated by businesses and that conditions are reasonable.

Therefore, if the AER is arguing that NSW network businesses should be penalized for meeting their obligations to their workforce, it is effectively suggesting that the FWC is prescribing unreasonable standards of compensation and conditions for workers in these businesses. Clearly, **such conclusions are well beyond the mandate of the regulator.**

Secondly, the AER references external research from Deloitte, which argues that the NSW network labour force is inefficient as a result of:

- *"A relatively inflexible workforce with limited ability to innovate or respond to changing circumstances*
- *Labour costs entrenched in Enterprise Bargaining Agreements (EBAs) which are well above peer costs*
- *In some cases, poor management of labour costs – for example in relation to overtime*
- *Union opposition to management attempts to reduce costs and/or improve productivity."*[ii]

As mentioned above, it is not within the mandate of the AER to decide that those conditions determined by the FWC as fair (as part of the enterprise bargaining process) cannot be upheld in these network businesses. For the FWC to be able to protect fairness in the workforce, the NSW network businesses *must* be able to meet such conditions.

However, we also contest the accuracy and conclusions of this research more generally. As part of our own research into the electricity supply labour market and EBAs across states[iii] (again, contained in the McKell report attached), we reached the following conclusions:

1. Restrictions on the use of contractors are no greater in NSW than in other states, refuting the claim of inflexibility. The typical provision across most states (not only NSW) is that contractors receive the same safety, performance and industrial standards that already exist for non-contract employees.

2. On the latest available statistics, labour was actually less expensive in NSW than in other states such as Victoria (with average weekly cash earnings of $1,970 in NSW for non-managerial labour compared to $2,330 in Victoria[iv])

We recommend that the AER review its conclusions on the role of labour costs as a supposed driver of inefficiency in the NSW network businesses.

Non-price impacts of the AER's Draft Determination

The draft determination by the Australian Energy Regulator (AER) has elevated the price component without adequate consideration of the other key objective areas of the National Energy Law (NEL). This submission also notes that the draft determinations have not taken into account factors that lie outside the new benchmarking model, including significant factors like the impact of climate change and gas price volatility on demand.

Of particular concern is the lack of an appropriate risk assessment undertaken by the AER in regards to the possible effects on quality, safety, reliability or security of the roughly 40% cut to the operating expenditures (opex) and capital expenditures (capex) for NSW electricity transmission and distribution companies. Where these risk assessments have been carried out externally, they have found significant safety consequences as a result of the AERs' proposed cuts.[v]

This report acknowledges that the public will generally support measures to reduce electricity prices, though it cannot be assumed that this will remain the case where there is a significant trade-off in the form of reduced safety or reliability. Whether a reduction in allowable expenditure will be supported by the community is largely dependent on the perceived "cost" of those reductions. This submission has attempted to examine these costs in greater detail to provide a broader context of the impact associated with the reductions put forward in the draft determinations.

These costs are split into the following broad categories: safety costs; reliability costs; and economic costs.

The cost of safety

The authors of this submission are highly concerned that the safety of the community may be negatively impacted from the reductions in allowable opex and capex. The impact on safety will be felt in a variety of different ways, and this submission remains concerned that many of these have not been factored into the AER's draft determination.

The first and most significant safety issue examined by the authors was that of bushfire safety. This submission agrees with the concerns put forward by Transgrid, which observed that "the AER's reduction appears to be based on the premise that because [a specific safety item] has not caused an injury, fatality or significant bushfire to date, there is not a legitimate need to address the risk [under a certain amount]" This implies a disregard for non-monetary considerations[vi] that is emblematic of the AER's overreliance on benchmarking as a regulatory tool.

It must be acknowledged that Australia is now facing a large increase in the risk of bushfires in Australia over coming years, owing particularly to climate change and the more extreme weather events associated with it.[vii] This places a higher than normal emphasis on bushfire safety. This submission strongly urges the AER to acknowledge this risk, and to undertake an appropriate examination of the increase in risk that would be associated with the AERs proposed reductions.

Absolutely critical to this risk analysis would be a strong focus on securing the capacity of network companies to undertake appropriate vegetation management practices. This submission remains highly concerned that the AER has not yet risk-assessed the vegetation management funding cuts for the 160,000km of line of the NSW network in bushfire-prone areas.[viii]

The submission also notes that the AER has not mentioned either climate change or the cessation of drought conditions in any of its determinations. Were Australia to experience a greater incidence of drought and/or heatwaves, this would have a substantial impact on energy demand. The authors of this report strongly urge that the AER appropriately account for the probability of these risks eventuating, and that sufficient expenditure be made available to ensure that network companies are able to adequately cope with those eventualities. Such an analysis must be included in the final determinations of the AER.

This submission notes that the AER draft ruling would result in an estimated reduction in vegetation management of $460 million.[ix] This is in addition to the fact that vegetation management costs have been suppressed over previous periods owing to widespread drought conditions, notably called 'The Millennium Drought', from 1997-2009.[x] Now that the drought has subsided, with many areas also having since experienced record rainfalls including flash flooding in 2010 and 2011, vegetation management costs were understandably higher in the most recent 5 year period than the period immediately preceding it.

It would appear that the AER has not taken sufficient account of the volatility in climate when determining an appropriate allowance for vegetation management. In its final determination, the AER must take into account both prolonged weather trends and general climate variability when determining an appropriate allowance for vegetation management.

The draft determination's reduction in the vegetation management budget would force network companies to increase the use of untrained and non-specialist staff, as opposed to trained arborists or other specialists. This submission strongly reminds the AER that such outcomes were specifically listed by a Royal Commission as a core cause of the Beechworth-Mudgegonga fires during the Black Saturday.[xi] The failure to properly manage vegetation to mitigate fire risk led to a massive compensation bill of $500 million, paid by network company SP Ausnet and the Victorian Government. This submission strongly urges the AER to reconsider its cuts to vegetation management, and to only recommend changes after conducting a thorough risk analysis of any proposed changes. In addition, the AER must also acknowledge that a reduction in allowable staffing costs is likely to further incentivize the use of under-trained and under-paid staff in order to meet the steep efficiencies proposed by the AER. This must also be taken into account as part of the proposed risk analysis.

In addition, this submission cautions the AER against the view that asset replacement and network upgrades have been overly excessive in NSW. It should be acknowledged that the Royal Commission into the Black Saturday bushfires in Victoria specifically noted that an ageing energy infrastructure could lead to an increased risk of bushfires due to asset failures.[xii] As electricity equipment ages and approaches the end of its engineering life, cracks and sparks are more likely, and pressure on the system during the hottest days of the year results in a greater risk that a fire will start from an electrical fault.[xiii] Such factors must also be taken into account when determining allowable CAPEX.

Finally, this submission notes that the AER does not appear to have taken climate change into account, with none of the NSW or ACT draft determinations mentioning its potential impact at any point. While the worst impacts of climate change are likely to felt further into the future, it should be acknowledged that an increase in warm weather is already being experience in Australia. The most obvious impact of this would be through an increase in energy demand, though it should also be acknowledged that climate change can increase the wear and tear on electricity networks, resulting in an appreciation of asset replacement schedules.

Importantly, climate change has also increased the risk of bushfires, as can be witnessed by the increased incidence of declared extreme fire danger days. Given that "…on days of extreme fire danger, the percentage of fires caused by electrical distribution assets rises dramatically above the long-term average[xiv]", the decision to not include an appropriate analysis of the increased risk of bushfires associated with climate change when determining the budget for vegetation management appear to be a significant oversight. This submission strongly urges the AER to take into account the increased risk of natural disaster arising from climate change when determining an appropriate vegetation management budget. This submission reminds the AER that effective vegetation management is not only imperative to hinder the spread of bushfires, but is also essential in ensuring NSW's extensive electricity

infrastructure is undamaged by the increased risk of bushfires that a changing climate will bring.

To provide an appropriate context to the potential impact of reduced expenditure on vegetation management, this submission notes that the $500 million settlement paid out by SP AusNet and the Victorian Government following the Black Saturday Bushfires was the highest ever recorded settlement in Australian history, more than doubling the previous record.[xv] It is worth noting that this settlement eclipses the proposed amount to be cut from vegetation management in NSW, thus, the savings made on opex may be wiped out by settlements and other increases to network operator liability, should another extreme weather event such as the Black Saturday bushfires take place in NSW.

This submission also reminds the AER to consider that NSW energy distribution and transmission companies have firm legal requirements to meet certain safety standards, and warns that under the current proposal, these standards may not be attainable. This submission notes that Ausgrid has already warned that "the proposed operating and capital expenditure allowed for in the draft determination would preclude Ausgrid from complying with its obligations under the [Workplace Health and Safety Act] (WHS)".[xvi]

This submission also notes that Essential Energy has already commissioned a safety risk assessment of the proposed reductions in opex. This assessment determined that "…the proposed operating and capital expenditure…would preclude Essential Energy from complying with its obligations under the [Workplace Health and Safety] legislation.[xvii]

In addition, ActewAGL has also stated that "ActewAGL Distribution cannot fathom how the AER can expect it to deliver safe, secure, reliable and quality electricity distribution services with a 42 per cent reduction in its opex allowance and a resultant allowance set at levels experienced 15 years ago."[xviii]

This submission strongly urges that the AER take these warnings seriously, and recommends that the final determination accurately reflect the legal obligations of network companies.

Costing reliability

This submission contends that an immediate budget reduction of 40% will be highly visible within the community through the increased likelihood of blackouts and brownouts.

Immediate cuts in opex, and subsequent cuts in capex will lead to an ageing system that is not being managed by appropriate professional staff. An increased likelihood of load shedding, which is the forced cutting of supply to certain areas due to greater demand than supply, will occur, particularly during extreme weather events and heat waves.

The community is likely not aware that a reduction in reliability does not mean more blackouts spread evenly over the course of the year, but rather that this means that the network is substantially more likely to fail during peak periods such as the hottest and coldest days of the year. This submission also draws attention to recent surveys which have indicated that 60.8% of consumers were actually willing to pay more in exchange for a more reliable

network with reduced outages.[xix] In addition, even amongst those customers who indicated that they were not willing to pay more for a more reliable network, the overwhelming view was that they would not be willing to pay less for a less reliable network.[xx]

This submission shares the concerns raised by Ausgrid that "there appears to have been no comprehensive research carried out by the AER with regards to consumer willingness to accept compensation payments for longer or more frequent power outages."[xxi]

Critically, local service interruptions caused by blackouts or load shedding has not been risk-assessed by the AER for the approximate 54,000 life support customers in NSW.[xxii] Such analysis should be undertaken as a matter of priority before the AER delivers its final determination.

This submission is surprised that the AER has not yet undertaken any analysis of the potential economic impact of more frequent blackouts. A less reliable energy network carries a marginal risk that easily portable companies, such as web-based firms, may take their business elsewhere. This submission acknowledges AERs' view that it may be more cost effective to simply allow more blackouts to occur and then compensate customers after the fact, though we heavily caution against the assumption that such an appropriate would be supported by the public and business community. As has already been noted, surveys indicate that such an approach directly contrasts with the community's desire for a highly reliable modern electricity network.

Service reliability aside, electricity prices would be expected to decrease as a result of the AER's ruling. Critically, the immediate and abrupt nature of the reductions will likely lead to more pricing volatile both during and after the next five-year regulatory period. Endeavour Energy has already outlined that "In response to customer feedback, we sought to minimise pricing volatility."[xxiii] However, the proposed reductions – and the resulting drastic measures that transmission and distribution companies would need to employ to meet them – will inevitably result in a higher likelihood of applications for cost pass throughs by energy companies as they struggle to find such significant efficiencies over such a short period of time.

Emerging external factors with the potential to increase demand

In addition, factors outside of the electricity market itself may give rise to greater than foreseen price volatility. As one example, the natural gas price in NSW is expected to increase by 40% or more over the next few years by some estimates[xxiv] owing to the opening of the NSW gas market to the international market. This could lead to a spike in demand for electricity as households attempt to swap from gas to electricity.

This outcome has already occurred in Japan[xxv] as electricity companies have begun to promote "all-electric houses" in response to rising gas prices. The likelihood of increased demand arising from a conversion away from gas is strong, but does not appear to have been taken into account by the AER when determining future demand and the CAPEX required to meet that demand.

This submission warns that the AER's attempt to secure lower electricity prices could in fact have the opposite impact by forcing gas users to endure a higher priced option. Such considerations are not accurately captured by the AER's benchmarking model. In its final determination, the AER must consider emerging external factors that could impact demand, including the forecast surge in gas prices and the impact that will have on energy usage conversion rates.

Economic costs

This submission feels that the full economic impact of the AER's draft decision has not been fully quantified within the new benchmarking model. Extreme downsizing of the workforce is expected arising from an average 40% reduction in allowable expenditure, increasing pressure on welfare services as well as additional unforeseen externalities.

It has been estimated that the AER's draft decision will result in an extreme downsizing of the electrical workforce nationwide, with as many as 4600 jobs to be cut from the three distribution companies in NSW alone.[xxvi] In addition, it is expected that a minimum of 750 apprenticeships will be discontinued, and many more apprentices will not be offered work at the end of their training. These factors will contribute to the already growing unemployment figures and place a higher burden on welfare payments at a time when the federal government is attempting to decrease spending.

This submission warns that the significant loss of apprentices could potentially lead to a skills shortage in coming years, particularly if the AER has under-estimated future demand. A skills shortage would lead to increases in both opex and capex, as higher wages are demanded by skilled workers and as demand outpaces supply. Any savings made in the short term could potentially be eclipsed by the future expenses associated with a skills shortage occurring in following regulatory periods.

In addition to the potential costs for the distribution companies themselves, there are also unforeseen externalities to the broader economy that the AER does not appear to have taken into consideration. Many of the jobs and apprenticeships to be lost under the current determinations are in rural areas of NSW, many of which are already suffering from comparatively high levels of unemployment and even higher levels of youth unemployment. For example, under the draft determination, Dubbo would likely lose 55 full-time employees, resulting in a $4.4 million drain from the local economy in a region. Dubbo already struggles with an unemployment rate of 7.1% and youth unemployment of 12.3%.[xxvii]

While such outcomes are not strictly within the scope of analysis required by the AER, it should still be acknowledged that such outcomes are not likely to be well received by the broader public. It should not be assumed that customer savings from lower energy bills will be considered acceptable when it is also attached to the broader economic costs associated with losing nearly 5000 jobs from the NSW economy, in addition to the over 800 apprenticeships that will inevitably have to be discontinued.

Other costs

By demanding an immediate 40% reduction in allowable expenditure, the AER does not appear to have appropriately considered the many externalities that may be brought about as a result of such a change. In addition to safety, reliability and economic factors, the national energy market may be affected by increased price volatility and a decrease in market efficiency, as well as possible negative impacts on government budgets.

This submission notes that the AER has argued that part of the reason for the size of the proposed cuts is that the effects of the Global Financial Crisis upon debt and investment costs have abated. This submission argues that, while there has been some improvement in international markets, sufficient issues of concern remain. Global growth forecasts have recently been downgraded again, new economic concerns have emerged in the Eurozone, and Japan's recent unconventional economic measures are already starting to unravel. This submission remains concern that the draft determination does not appear to have provided any significant safety buffer to provide an appropriate level of flexibility for companies should international finance markets encounter unexpected extreme market volatility.

Another cost associated with the AER's draft determinations is that the proposed reductions will invariably have a substantial negative impact on the value of NSW's network assets. While the McKell Institute does not support the privatization of these assets, it should be acknowledged that the AERs' draft proposal would significantly reduce the price received by the NSW Government should privatization go ahead. This would in turn undermine future state infrastructure spending, which is planned to take place utilising the funds from the privatisation. This will reduce economic growth, slow job creation, and undermine productivity.

Social considerations

This submission strongly degrees with the steep nature of the proposed reductions. Nevertheless, if such cuts are to be implemented, it is imperative that they are phased in over a substantially longer period of time. This would support the community's preference for less price volatility, and would provide an appropriate buffer to adjust plans should there be unforeseen cost increases or changes to demand.

This submission contends that the AER has not sufficiently explained why the efficiencies it is demanding are required so abruptly. A case has not been made as to why a 40% cut must be made within a single regulatory period, as opposed to phasing it in over 2 or 3 regulatory periods.

A longer transitional period would reduce the risk of forecasting and benchmarking errors, and would allow the regulator to properly account for emerging factors including climate change, changing trends in the renewable energy sector, and the impact of rising gas prices on electricity demand.

The AER's charter requires the regulator to strike an appropriate balance between reliability, safety and affordability.[xxviii] This submission contends that the current proposal fails to consider the social goods provided by energy companies. It is our belief that the community at large would not be happy with the implications of the AERs' current proposal, provided they were given an accurate overview of the situation. Given this, the submission respectfully suggests that the AERs' current proposal does not meet the National Energy Objective to the greatest degree possible.In particular, although the AER has itself acknowledged that setting revenues too low "…can have adverse consequences for safety, security and reliability of the network"[xxix], it would appear that AER has not adequately addressed safety, security or reliability concerns. This does not align with the NEO as it stands, which explicitly lists "the reliability, safety and security of the national electricity system" as one of its' two core components. The draft determinations appear to have an unbalanced focus on pricing, with the reliability and safety aspects largely being disregarded. This submission remains highly concerned that safety and security concerns are barely mentioned at all within the AER's draft determinations. Of critical concern is the remarkable omission of detailed and appropriate risk assessments.

It is therefore our conclusion that the severe cuts to safety and reliability, alongside the broader economic costs, do not appear to have been sufficiently taken into account by the AER. This submission strongly urges the AER to drastically revise its proposed revenue determination to ensure a more balanced determination for the upcoming 2014-19 period.

Conclusions

We respect that the task of regulating network businesses is highly complex. Not only does the AER face the standard challenges of a regulator such as information asymmetry, but the AER is also regulating businesses that are highly complex by nature and which have a legal responsibility for safely and reliably supplying electricity to the economy.

This submission believes that the AER has failed to use adequately robust analytics, and that the methodology applied by the AER has been done so in too deterministic a fashion without appropriate regard for feasibility. The AER has also inadequately considered a multitude of external factors beyond price considerations in reaching its determination.

Going forward, we would recommend that the AER:

1. Recognizes the limitations of its first attempt at applying economic benchmarking, and defers to the revised regulatory proposals of the network businesses
2. Ensure a more analytically robust benchmarking tool is available for future use by the AER
3. Apply 'sense tests' to the results of its benchmarking tools, and better engage with the industry to understand the actual drivers of differences in costs between network service providers (including over time), and what is feasible in what time frame regarding cost reductions
4. Ensure that future determinations adequately consider the breadth of the AER's responsibility – that is, not only to ensure the best prices for consumers, but also a quality, safe, reliable and secure electricity supply

[i] Ausgrid Draft Determination, Attachment 7, p73, http://www.aer.gov.au/sites/default/files/AER%20–%20Draft%20decision%20Ausgrid%20distribution%20determination%20–%20Attachment%207%20–%20%20Operating%20expenditure%20–%20November%202014.pdf
[ii] Ausgrid Draft Determination, Attachment 7, p89, http://www.aer.gov.au/sites/default/files/AER%20–%20Draft%20decision%20Ausgrid%20distribution%20determination%20–%20Attachment%207%20–%20%20Operating%20expenditure%20–%20November%202014.pdf
[iii] The McKell Institute, 'Nothing to gain: Plenty to lose' report, p36
[iv] Ibid
[v] Ausgrid revised regulatory proposal, page 9
[vi] Transgrid Revised Regulatory Proosal 2014/15-2017/18, page 63
[vii] https://www.climatecouncil.org.au/be-prepared-climate-change-and-the-nsw-bushfire-threat
[viii] Graham, V. 2014, *Networks NSW Presentation to AER pre-determination conference,* Networks NSW. Accessed online 22 Jan 2014: http://www.ausgrid.com.au/~/media/Files/Network/Planning%20for%20the%20future/Presentations/141207%20Presentation%20to%20AER%20Pre%20Determination%20Conference.pdf
[ix] Sourced from Paul Lister
[x] http://www.seaci.org/publications/documents/SEACI-2Reports/SEACI2_Factsheet2of4_WEB_110714.pdf
[xi] The 2009 Victorian Bushfires Royal Commission final report, Volume 1, chapter 14, page 215
[xii] Ibid, volume 2, summary, page 12
[xiii] The 2009 Victorian Bushfires Royal Commission final report, Volume 2, chapter 4, page 151
[xiv] Royal commission into black Saturday bushfires, volume 2, p148
[xv] http://www.abc.net.au/news/2014-07-15/black-saturday-bushfire-survivors-secure-record-payout/5597062
[xvi] Ausgrid revised regulatory proposal, page 9
[xvii] Essential Energy revised regulatory proposal, page 11
[xviii] ACTEW-AGL Distribution Revised Regulatory Proposal 2015-19, page ix
[xix] http://www.aemc.gov.au/getattachment/d8c16b7f-776c-4414-a22d-619219c89528/Fact-sheet-NSW-customer-survey.aspx
[xx] Endeavour Energy Regulatory Proposal, page 19
[xxi] Ausgrid revised regulatory proposal, page 39
[xxii] Graham, V. 2014, *Networks NSW Presentation to AER pre-determination conference,* Networks NSW. Accessed online 22 Jan 2014: http://www.ausgrid.com.au/~/media/Files/Network/Planning%20for%20the%20future/Presentations/141207%20Presentation%20to%20AER%20Pre%20Determination%20Conference.pdf.
[xxiii] Endeavour Energy Revised Regulatory Proposal, page 80
[xxiv] http://www.smh.com.au/business/the-economy/surging-gas-prices-to-prompt-switch-to-electricity-20150128-12zz1c.html
[xxv] http://reneweconomy.com.au/2014/australias-electricity-industry-can-save-killing-gas-96860
[xxvi] Graham, V. 2014, *Networks NSW Presentation to AER pre-determination conference,* Networks NSW. Accessed online 22 Jan 2014: http://www.ausgrid.com.au/~/media/Files/Network/Planning%20for%20the%20future/Presentations/141207%20Presentation%20to%20AER%20Pre%20Determination%20Conference.pdf
[xxvii] NSW Parliamentary Research Service 2014, p39.
[xxviii] AER charter
[xxix] NEL, s. 7