Review of regulatory treatment of risk

Ausgrid
Endeavour Energy
Essential Energy

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Building a better working world

1. Executive Summary

Ausgrid, Endeavour Energy and Essential Energy (the NSW DNSPs) engaged EY to provide assistance in relation to the regulatory treatment of risk for their 2014-19 regulatory proposal. This report documents our findings.

Key findings

- The NSW DNSPs have an integrated risk management framework, which includes processes for risk controls (preventative measures and mitigation controls) and insurance arrangements (which are regularly reviewed in line with market conditions)
- Based on EY's review, at a high level, the NSW DNSPs' risk management framework is consistent with industry practice
- While the risk management frameworks of the NSW DNSPs can provide coverage for certain risks, there are some residual risks which remain uncovered. The self-insurance and cost pass through mechanisms exist to provide some coverage for these residual risks
- EY considers that the NSW DNSPs' proposed position on self-insurance and cost pass through is appropriate from a commercial risk management and a regulatory treatment perspective. Specifically:
    - The self-insurance of workers' compensation risks by Ausgrid and Endeavour is appropriate because it is a cost effective approach
    - Essential's approach to workers' compensation liabilities is to purchase external insurance, however this also appears to be appropriate on the basis that Essential has a process in place to regularly review the appropriateness of its treatment of these risks within its broader risk management framework
    - The nominated pass through events proposed by all NSW DNSPs are appropriate because they capture risks which are beyond the control of the NSW DNSPs to prevent or mitigate. They also cannot be effectively or efficiently insured due to the likely significant cost impacts. On this basis, the nominated pass through events proposed by the NSW DNSPs appear to satisfy the pass through event considerations in the National Electricity Rules.

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Table of contents

2. Introduction

2.1 Scope of work

The NSW DNSPs engaged EY to provide the following advice on the appropriate regulatory treatment of risks that they have to bear or manage:

- Review the risks listed by Ausgrid, Endeavour and Essential to be included in their regulatory proposals
- Advise whether the current risk management approach (including the insurance arrangements) adopted across the DNSPs is appropriate and prudent for each of the risks under review
- Advise on the appropriate regulatory treatment of each risk based on the current and / or proposed risk management approach, which might include the following mechanisms: rate of return on assets; forecast capex; forecast opex (including external insurance); cost pass through events; or self-insurance (premiums included in opex).

2.2 Approach

To undertake this assignment, we have:

- Analysed the AER's approach to self-insurance and pass through events in recent regulatory determinations for electricity network businesses, including how the AER has interpreted the provisions of the National Electricity Rules and how the AER's interpretation has evolved over time
- Reviewed the broad risk management framework of each of the DNSPs, including the insurance policies and risk mitigation controls adopted by each business
- Worked with the DNSPs to identify the range of risks faced by the DNSPs and that are proposed to be recovered through the regulatory regime
- Analysed and classified each proposed risk and recommended the appropriate treatment of that risk in the DNSPs' regulatory proposal.

We were not asked to:

- Assess the materiality of the NSW DNSPs' proposed risks
- Consider the merits of the regulatory precedents established by the AER more broadly.

2.3 Outline of this report

This report provides the outline of our analysis.

- Section 3 provides an overview of the regulatory treatment of risk
- Section 4 outlines the NSW DNSPs' overall approach to risk management
- Section 5 summarises our assessment of the NSW DNSPs' risk management approach
- Section 6 provides our recommended approach to the regulatory proposal
- Appendix A contains further details of our review of the NSW DNSPs' risk management approach.

3. Regulatory treatment of risk

3.1 Definition of risk

Risk, in the context of finance and investment, refers to the possibility of actual outcomes varying from expected outcomes. Defined in this way, a risk can either be positive (likely to lead to gains) or negative (likely to lead to losses). This view of risk is quite different to the layman's definition of risk, which is the risk of loss.

Given that risk can lead to unanticipated gains and losses, thereby creating uncertainty with attendant financial consequences, electricity distribution network service providers (DNSPs), like all businesses, need to make decisions about how much risk they are willing and able to be exposed to. This will be articulated in the business' risk management plans, policies and practices. These arrangements will also address the need to seek commercial insurance for insurable risks or to self-insure.

3.1.1 Key terms

In this report, the term 'self-insurance' refers to the AER's definition of the term, as used in a regulatory context. That is, self-insurance refers to the explicit setting aside of funds as compensation for potential losses in the future. This contrasts to other interpretations in which the term self-insurance refers to the general practice of retaining potential financial risks and absorbing any potential future losses internally.

3.1.2 Compensation mechanisms

Distribution network service providers (DNSPs) manage risk in many ways. Examples include purchasing insurance, asset design, or various processes and procedures. The regulatory framework provides allowances to DNSPs to compensate for undertaking these activities to prevent and / or mitigate risks. At the most basic level, three key mechanisms of the regulatory framework provide allowances to DNSPs for the management of these risks:

- Forecast capex allowance
- Forecast opex allowance (including the costs of purchasing external insurance)
- Regulated rate of return on assets or referred to as the weighted average cost of capital (WACC).

However, the allowances from these regulatory mechanisms typically do not provide compensation return for the costs of all risks borne by DNSPs. The regulatory framework recognises this and provides two additional mechanisms for managing risks, self-insurance and cost pass through, which are aimed at addressing risks which are not compensated anywhere else in a DNSP's regulatory determination.

If a risk is not addressed through capex, opex (including external insurance), rate of return, self-insurance or a cost pass through event, then it is absorbed or retained by the DNSP.

Determining which mechanism is the most appropriate for efficiently managing a risk will depend on various factors. These factors include the nature of the risk and whether an allowance has been made for the risk through opex, capex, or the rate of return.

This is because the use of self-insurance and cost pass through is typically limited to risks:

- That are not compensated by forecast capex, forecast opex or the rate of return
- That are exogenous (i.e. beyond the DNSP's control) and are asymmetric

- With a low probability of occurrence or are unpredictable (but are often high magnitude when they do occur), and
- For which external insurance is not cost-effective or cannot be obtained at all.[1]

In addition, the use of cost pass through events to manage risks is further constrained by the need to establish that the likely financial consequences from the risk are likely to be catastrophic. This is a distinguishing feature for determining whether a risk should be managed via a self-insurance allowance or via a nominated pass through.

In other words, mitigating risks via a cost pass through should only be used as a last option available to DNSPs with respect to risk management relating to the recovery of costs associated with the provision of direct control services.[2]

This is consistent with the AER and the AEMC's approach towards cost pass through events and will help to ensure that prices for customers are not higher than necessary to provide an appropriate level of service.

3.1.3 Efficient allocation of risk

In recent electricity transmission decisions, the AER has noted that the efficient allocation of risk is one of the key initial considerations relevant to the assessment of cost pass through events. For example, in its recent determination on Powerlink's transmission revenues, it noted that:

> *The fundamental regulatory policy principle is one of efficient risk allocation: the risk should be allocated to the entity best placed to manage the risk. The nature of the risks contemplated for cost pass through should be low probability but high impact events. While the event itself may not be controllable (for example, a natural disaster) the ability to manage the costs and mitigate the risk is to some extent within a service providers control.*

Most recently, in its draft determination on SP AusNet, the AER stated:

> *We are also mindful of the overall context of incentive regulation. We need to preserve the incentives a TNSP faces to efficiently manage its risk. This is generally achieved when the party who is in the best position to manage the risk bears the risk. In addition to the efficient costs associated with managing, mitigating or avoiding risks, there is also the underlying question of the appropriate risk demarcation point and the person who is best placed to bear that risk. We intend to review our approach to nominated pass through events, and risk allocation more generally, in the near future. As part of this broader review, we will consider in detail how risks should be allocated between service providers and their customers. We will consult widely on these matters as part of that review.*

The AER also flagged a new efficient risk allocation framework that it was seeking to explore:

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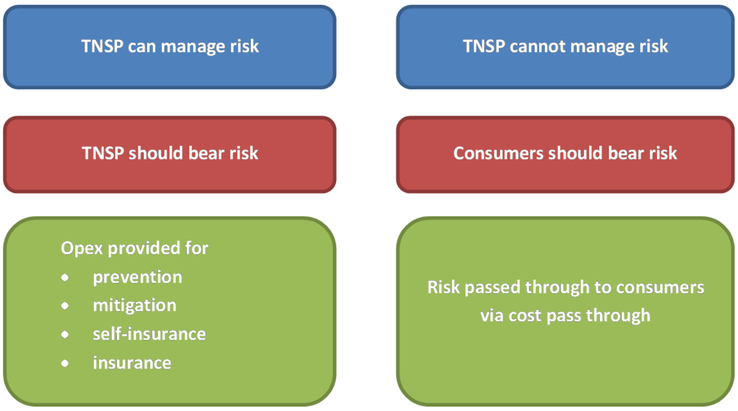
[1] Even if external insurance is available, it may not be 'effective' as the premium for an insurance policy covering a low-probability high-impact risk may be so high as to make it uneconomic to insure for the risk, or the likely impact of the event is likely to be of such a nature that the insurance would be insufficient to cover all of the business' costs. That is, a pass through event is generally only approved when the potential financial impact is sufficiently extreme it is deemed not insurable. Refer to AER, Final decision on ElectraNet Transmission determination 2013-14 to 2017-18 (April 2013), pp 190-191.

[2] AEMC, 2012, Cost pass through arrangements for Network Service Providers, Rule Determination, 2 August 2012, p i. See also AER, Final Decision: ElectraNet Transmission Determination 2013-14 to 2017-18, 30 April 2013, pp 190-191.



Source: AER draft determination, SP AusNet, page 310

The discussion in the SP AusNet determination suggests that the AER may be predisposed towards operating cost allowances where possible as this would provide greater incentive for the NSP to manage its risks and mitigate the cost of such risks, than would be the case under a cost pass through arrangement. On this basis, the AER's draft decision has indicated that it would expect SP AusNet to absorb internally any costs for natural disaster risks that are less than significant (or up to a certain dollar threshold) and that cost pass through would only be allowed for "major" natural disaster events.

4. NSW DNSP approach to risk management

4.1 Overview of risks faced by distribution businesses

Electricity DNSPs typically face various risks of differing nature across their business. These risks differ on various bases including the extent to which the risk can be controlled and managed, the likelihood of the event occurring and the likely magnitude or the impact of the risk (i.e. with these two factors driving the materiality of the risk).

As a result, the NSW DNSPs have an integrated risk management policy and framework in place. This provides for the proactive and systematic assessment / identification of risks and strategies for the prevention and mitigation of these risks to enable the effective delivery of the NSW DNSPs' respective Corporate Plans.

4.2 Summary of NSW DNSPs' approach to managing these types of risks

Ausgrid, Endeavour and Essential Energy implemented a revised common risk management policy and framework in 2012-13. The risk assessment process within the framework incorporated the use of the Bow-Tie methodology and a common risk matrix. This enabled the NSW DNSPs to identify and manage risks that could affect customers, the community, the environment, their people, assets and financial resources.

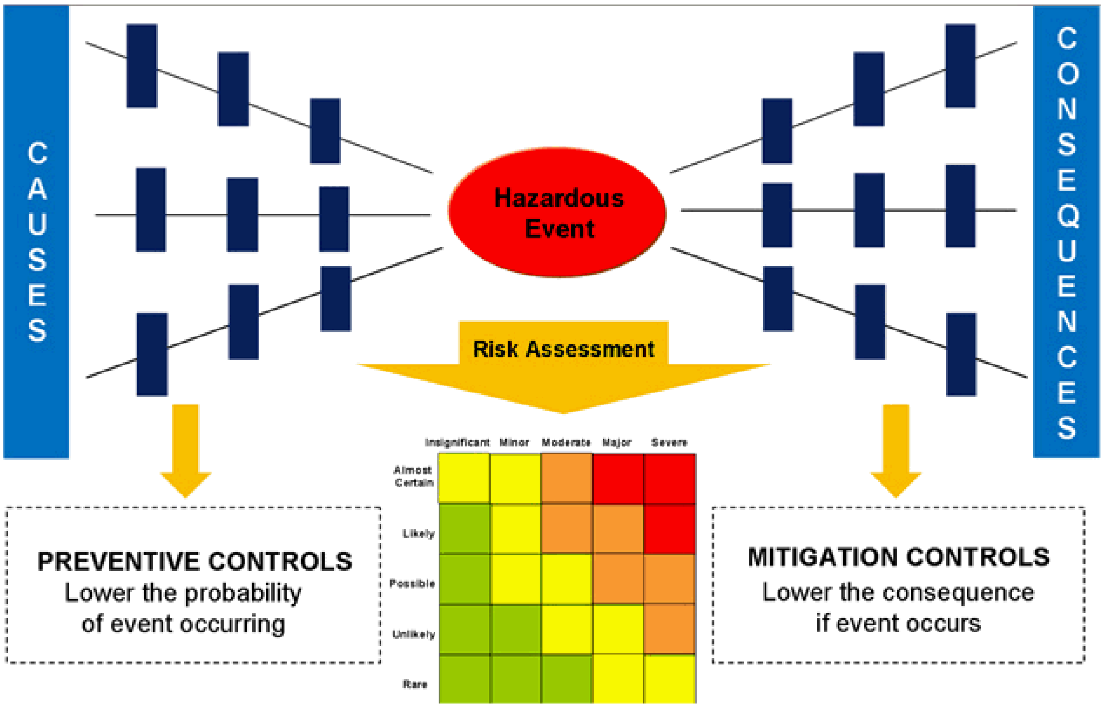
Utilising the framework, the NSW DNSPs reviewed the major risks to achieving their strategic objectives and developed and implemented action plans to help manage them. The outcomes of this work formed the NSW DNSPs' 2013-14 Risk Management Strategic Plans. These plans were developed to set objectives, priorities and timing of key initiatives to be delivered during the financial year across the following nine broad risk categories.

Business risk category	Description
Safety	Fatality/serious injury of employee or member of public
Network	Significant customer impact related to the network
Finance	Significant unbudgeted financial loss
Compliance	Liability associated with a dispute or material breach of legislation or licence
Reputation	Sustained public criticism of NSW DNSPs
Environment	Significant environmental incident
People	Failure to deliver performance through people
Strategy	Strategic objectives are not delivered and business opportunities are lost
ICT	Significant information communications technology (ICT) &/or organisational technology service failure

Source: NSW DNSPs

It includes a common set of business risk categories and hazardous events and a common risk matrix.

Figure 1: NSW DNSPs’ approach to organisational wide risk assessment



Source: NSW DNSPs

Under the NSW DNSPs’ risk management framework:

- The framework uses a Bow-Tie methodology to identify and assess any relevant risks and to understand the nature of these risks (e.g. likelihood, impacts)
- The framework identifies and implements risk controls which are either preventative controls (to lower the chance of the hazardous event happening) or mitigation controls (to lessen the consequences if it does)
- The NSW DNSPs maintain comprehensive insurance arrangements, which are regularly reviewed to align with the Bow-Tie risk assessments. In addition:
  - The insurance arrangements encompass a robust and thorough renewal and review process including forward strategic planning and gathering of updated risk information (including Bow -Tie updates) in order to "sell" their risks appropriately to the global insurance market
  - Advice is obtained from external risk and insurance brokers/consultants (currently Aon and Marsh) and the DNSPs’ own insurance specialists to establish the appropriate levels of coverage, implement appropriate insurance market negotiation strategies and to efficiently and effectively manage any claims. The insurance market is cyclical and subject to change, therefore the appropriate levels and types of coverage can vary each year in order to obtain insurance coverage on optimal terms from the market to align with risk treatment strategies
  - The NSW DNSPs take a coordinated approach to insurance with a Group Insurance Committee (GIC) overseeing the insurance renewal and review process. GIC membership is made up of senior group executives and senior executives from each network business, including the Group CFO, Group Executive Network Strategy, Board Secretary, General Managers Finance and Compliance and insurance specialists
- The framework includes a centralised corporate dashboard for high level risks, which identifies, captures and reports on a whole range of risks, including safety issues.

Table 1 summarises how NSW DNSPs align their risk management approach (i.e. risk controls and insurance policies) to address and manage the key risks that they face.

Table 1: Summary of NSW DNSPs' risk management approach

Risk	Description	Risk management approach
Asbestos	Liability for claims related to the impact of asbestos (both retrospectively and prospectively) on employees and third parties	There are two components to this risk, (1) the risk of exposure to customers and the community and (2) the risk of exposure to workers and contractors Insurance • (1) is dealt with via the Group Liability Insurance Scheme (GLIS) cover up to $50m with a deductible of $100k • There is also contractor asbestos removal liability insurance for Ausgrid only with cover up to $20m with a deductible of $50k (or $5k for a member of the public) • (2) is dealt with via the workers compensation arrangements – self-insurance for Ausgrid and Endeavour Energy and retro-paid loss policy with NSW WorkCover for Essential Energy Risk controls • Asbestos awareness plans and training • Asbestos safety management plan • Risk management policy & plan
Gradual pollution	Unintentional pollution of the surrounding environment from underground fuel tank leakage, transformer oil leakage, contamination from treated poles etc.	Insurance • None Risk controls • Environmental policy • Risk management policy and plan
Electric and magnetic fields (EMF)	Adverse health impacts caused by EMF and regulatory changes impacting the undertaking of "live-line" work	Insurance • GLIS Risk controls • Environmental policy • Monitoring of global research and developments
Business continuity	Future incidents / events that could significantly impact on the business' ability to continue business as usual	Insurance • Limited group cover through Industrial Special Risks (ISR) / property insurance– additional up to $50m (does not include loss of revenue, but covers extra costs of relocating business / re-setup etc.) Risk controls • Emergency evacuation plans • Incident management plans • Facility incident response plan • Business continuity plans
Theft of assets	Risk of theft from employees and external parties	Insurance • This risk is covered by the group ISR / property policy with varying deductibles by business and some specific risks Risk controls

Risk	Description	Risk management approach
		• CCTV • Secure premises and security patrols
Fraud	Theft, false accounting, bribery and corruption, deception and collusion	Insurance • This risk is covered by a Group crime policy with a limit of \$10m and a deductible of \$100k Risk controls • Inventory, bank and computer controls • Limited cash on premises • Audits and Information Security policy • Fraud management policy
Bomb Threat / Hoax, Terrorism, Earthquakes, Bushfire, Non-terrorist impact of planes and helicopters and substations		Insurance • These risks are covered by GLIS, with terrorism, earthquakes and property also being covered under the group property cover • Varying deductibles by business and some specific risks Risk controls • Emergency evacuation plans • Incident management plans • Business continuity plans • Security arrangements • Bushfire risk management plan • Strategic asset management plan
Insurer's credit	Potential for insurer to default on promise to pay claims as well as the loss of premium paid upfront	Insurance • None Risk controls • Use of multiple insurers where possible • Only accept insurers with an S&P rating of A- or higher • Regular reporting on credit worthiness from brokers
Counterparty credit	Probability of retailer defaulting on payment obligations	Insurance • None Risk controls • Existence of credit manager role • Risk management policy • Counterparty credit reviews • Security deposit if deemed appropriate
General public liability	Injuries or losses suffered by the general public as a result of negligence of business	Insurance • GLIS Risk controls • Network management framework • Public electrical safety awareness plan
Poles and lines	Exogenous incident causes damage to distribution network	Insurance • None

Risk	Description	Risk management approach
		Risk controls • Recovery actions against third parties • Vegetation controls • Regular inspections • Asset management plan (Strategic Asset Management Plan)
Power quality	Electricity supplied falls outside of statutory limits or perceived “good electricity practice”	Insurance • GLIS covers defective supply and failure to supply Risk controls • Maintenance of network • NECF / contractual arrangements
Workers compensation	Substantial increase in workers compensation claims as a result of a cause outside of the control of the business	Insurance • Ausgrid and Endeavour Energy self-insure • Essential Energy has a retro-paid loss policy with NSW WorkCover Risk controls • Safety strategic plan • Excess of loss for Ausgrid and Endeavour (anything above a certain amount, they have insurance for)

Source: EY in consultation with NSW DNSPs

Such prevention and mitigation controls, insurance arrangements and the Bow-Tie risk management framework more broadly can only provide full coverage to certain types of risks. This results in some residual risks, which are not compensated for (either fully or partially). There are two additional mechanisms which provide scope for compensating the DNSPs for bearing these risks.

4.3 Self-insurance

One approach to managing risks is self-insurance, which in this context refers to the setting aside of funds as compensation for potential losses in the future (refer to Section 3.1.1).

Only Ausgrid and Endeavour self-insure against any risks as defined by the AER. Both DNSPs use self-insurance to manage workers’ compensation risks. Essential does not self-insure against workers’ compensation and instead purchases external insurance to manage this risk.

The NSW DNSPs’ general approach has been to buy external insurance coverage for high-impact, unpredictable events (which cannot be forecasted reliably or accurately) where such market exists.

Consequently, the NSW DNSPs do not self-insure for amounts below insurance deductibles. The NSW DNSPs do not propose to change this approach for the forthcoming regulatory determination, as these amounts are:

- Relatively stable from year to year
- Not material
- Considered by the NSW DNSPs to be ‘business as usual’ costs.

The NSW DNSPs consider that relatively small claims of this nature do not warrant the administrative arrangements and costs associated with an insurance or self-insurance regime as they can be reliably and accurately forecasted. For example, claims for the cost of appliances that are damaged due to voltage spikes occur every year and, where justified, the repair / replacement costs are borne by the NSW DNSPs. These events occur in a relatively large volume and at low cost; therefore these costs can be forecasted and factored into prices.

Ausgrid and Endeavour self-insure for the risk associated with workers' compensation, consistent with the approach broadly adopted across the industry and the approach approved by the AER during the 2009-14 regulatory period. While workers' compensation also has many claims at low costs, Ausgrid and Endeavour Energy maintain self-insurance for three reasons:

1. It is governed under legislation due to the serious nature of the people safety risks

2. High cost, low probability events occur

3. It is cost effective to do so.

Therefore, EY understands that self-insurance is an efficient and appropriate approach for Ausgrid and Endeavour to manage this risk because it is a cost-effective alternative to purchasing external insurance that appropriately balances the allocation of the risk between the business and customers, given the nature of the risk.

In contrast, Essential purchases external insurance to cover its workers' compensation risks, an approach that it has maintained since formation in 2001. Since then, Essential (and previously Country Energy) has been regularly reviewing this position and considering the merits of making an application to WorkCover for a self-insurers' licence to facilitate self-insurance.

- In 2006, Country Energy applied for a self-insurer's licence however this did not progress to finalisation

- In 2009, based upon actuarial advice, Country Energy successfully applied to participate in WorkCover's newly introduced retro paid loss scheme which was considered to offer significant benefits over the traditional fund managed arrangement

- Essential Energy currently still participates in the retro paid loss scheme and we understand is preparing a reapplication in 2014/15.

4.4 Pass through mechanism

There are limitations on the ability and appropriateness of self-insurance to efficiently manage the cost of certain risks (e.g. those risks which are low probability and high magnitude or are catastrophic in nature). Self-insurance is unlikely to be an appropriate mechanism if the costs of managing these risks were borne by consumers, as it would not be an efficient allocation of risk.

This is the purpose of a cost pass through event, which provides a mechanism for the costs of catastrophic, high magnitude events to be recovered on an ex-post basis, should the event occur.

Cl. 6.6.1 (a1) provides for two types of cost pass through events:

1. Those specifically defined under Cl. 6.6.1(a1)(1) to (4) of the Rules. These are listed below (collectively referred to as "defined cost pass through events" in this report):

    - A regulatory change event

    - A service standard event

    - A tax change event

    - A retailer insolvency event

2. The Rules also allow DNSPs to include additional pass through events (termed 'nominated pass through event') if they meet the nominated pass through event considerations:

The nominated pass through event considerations are:

(a) whether the event proposed is an event covered by a category of pass through event specified in clause 6.6.1(a1)(1) to(4) (in the case of a distribution determination) or clause 6A.7.3(a1)(1) to(4) (in the case of a transmission determination);

(b) whether the nature or type of event can be clearly identified at the time the determination is made for the service provider;

(c) whether a prudent service provider could reasonably prevent an event of that nature or type from occurring or substantially mitigate the cost impact of such an event;

(d) whether the relevant service provider could insure against the event, having regard to:

(1) the availability (including the extent of availability in terms of liability limits) of insurance against the event on reasonable commercial terms; or

(2) whether the event can be self-insured on the basis that:

(i) it is possible to calculate the self-insurance premium; and

(ii) the potential cost to the relevant service provider would not have a significant impact on the service provider's ability to provide network services; and.

(e) any other matter the AER considers relevant and which the AER has notified Network Service Providers is a nominated pass through event consideration.

4.4.1 NSW DNSP approach to cost pass through events

The NSW DNSPs undertook a thorough risk assessment of its operations to determine whether it is appropriate to manage any of its risk exposure via a nominated cost pass through event. This was based on the bow-tie risk analysis methodology, and then cross-checked against the each businesses' historical risk register.

From this analysis, the NSW DNSPs identified a number of residual risks which:

- Were exogenous and beyond its reasonable ability to control
- Were not compensated by any other mechanism under the regulatory framework
- Could not be fully mitigated or prevented despite the NSW DNSPs having prudent risk management measures in place
- Could not be insured against due to either a lack of external insurance or availability of insurance on commercial terms
- Could not be self insured against due to the low probability, high cost impact of the event making it problematic to calculate a reliable self insurance amount and unlikely that the NSW DNSPs would individually be able to pool enough risk to provide effective coverage.

The NSW DNSPs are proposing that the following events be nominated as cost pass through events to apply during their 2014-19 regulatory determination:

- Insurance cap event
- Natural disaster event
- Terrorism event
- Insurer's credit risk event.

The NSW DNSPs consider that managing their exposure to these risks via the pass through provisions represents the most prudent and efficient means for addressing these types of risks. This is because these events:

- Capture risks which are beyond their control to prevent/mitigate
- Cannot be effectively insured
- Have a low probability of occurrence
- Are likely to have significant cost impacts.

In proposing these events, the NSW DNSPs have had regard to the nominated pass through considerations in Chapter 10 of the Rules. The NSW DNSPs consider that each event meets the necessary requirements to be approved as a nominated cost pass through event.

5. Assessment of the NSW DNSPs' risk management approach

5.1 Industry practice

Whilst there are a number of risk management frameworks that exist, they generally contain similar fundamental elements.[3]

We have incorporated these elements into some key high-level principles, which are likely to be indicative of a risk management framework typically adopted by prudent network operators. We used these principles as the basis of our assessment of the risk management approaches of the NSW DNSPs. The following components are typically contained in a risk management document.

Table 2: Framework for assessing NSW DNSPs' risk management approach

Stage	Requirements
1. Identify and describe risks	• Risk committee group made up of representatives of the various subdivisions within each business meet on a regular basis (at least annually, or post any major "risk" event) to review existing risks and identify any new risks • Often risks may be grouped to make them more understandable as well as to identify that some are "known" risks with "identifiable" risk events whilst there are others within each grouping that are "unknown" • Qualitative descriptions of each risk and/or risk grouping are developed
2. Identify and describe controls	• For each risk / risk grouping, controls that guard against the incidence and / or severity of a risk are identified and described

3. Assessment of risks	• For each risk / risk grouping, a qualitative description of the risk event is developed
	• For each risk / risk grouping, a quantitative estimate of the risk event is developed – in particular:
	  • Inherent incidence (i.e. 1 in x years)
	  • Inherent severity (i.e. $10m cost to business)
	  • Residual incidence post the impact of the controls in place as described in 2 above
	  • Residual severity post the impact of controls in place
	• For each risk / risk grouping, the residual likelihood and severity is compared against the risk appetite of the business to ensure that the business is comfortable with the level of risk retained

4. Monitoring	• A centralised database that combines all risk events as well as risk indicators for each of the businesses
	  • A risk event is the occurrence of an event that significantly impacts the business
	  • A risk indicator is an ex-ante event (or series of ex-ante events) that heighten the risk of a risk event occurring
	• Each of the subdivisions within each business should have a person that is responsible for reporting the occurrence of a risk event or risk indicators to the centralised database
	• The database should also capture response times and other measures around the effectiveness of actions carried out by those with key roles in the risk management process

[3] We have drawn together the relevant key fundamental elements from various risk management frameworks which are likely to be most relevant for the NSW DNSPs.

Stage	Requirements

5. Mitigation protocol	• Once a risk event has occurred, there is a set protocol that is applied to mitigate the cost / impact on the business. This will include:
	  • The person(s) responsible (the performance indicators under the contract of employment for these people may be modified to include measurements around their risk management role)
	  • What they need to do including notification, immediate actions, ongoing actions and finalization of the issue
	  • Who they need to get approval from
	  • Any additional reporting that needs to occur
	• There may also be protocol if a risk indicator or series of risk indicator events occurs

6. Feedback	• The feedback loop to the risk management process needs to incorporate key findings from risk events, risk indicators as well as any other information regarding controls, new business ventures or any other gaps in the previous framework into the risk management framework • This is important to ensure the continual improvement of the risk management framework, effective response times and actioning of issues as well as updated documentation around the process • The risk management framework should be reviewed by the risk committee at least annually as well as post any significant risk event.
7. Measurement of effectiveness	• On an annual basis, the effectiveness of the risk management process should be assessed using the data captured in the 'Monitoring' stage above.
8. Identify and describe risks	• Risk committee group made up of representatives of the various subdivisions within each business meet on a regular basis (at least annually, or post any major "risk" event) to review existing risks and identify any new risks • Often risks may be grouped to make them more understandable as well as to identify that some are "known" risks with "identifiable" risk events whilst there are others within each grouping that are "unknown" • Qualitative descriptions of each risk and/or risk grouping are developed

5.2 Review of NSW DNSPs' risk management frameworks

5.2.1 General observations

The NSW DNSPs each have a formal risk management framework with a Bow-Tie risk assessment process to identify and describe both risks and controls and perform assessments of each risk / risk grouping. This also includes a centralised corporate dashboard for high level risks, which identifies, captures and reports on a whole range of risks, including safety issues.

As part of the risk management framework:

- The DNSPs have a number of risk controls that they have in place in respect of seeking to prevent and mitigate. The effectiveness of these controls in minimising and managing risk is dependent on how these controls are implemented and executed in practice
- The DNSPs also have comprehensive insurance arrangements in place which cover at least a portion of a number of the key risks identified
  - We understand that the insurance position of the NSW DNSPs is reviewed regularly including forward strategic planning and based on updated risk information and market conditions

  - The NSW DNSPs rely on advice from external risk and insurance brokers and consultants (currently Aon and Marsh) and their own internal insurance specialists to establish the appropriate levels of coverage, to implement appropriate insurance market negotiation strategies and to efficiently and effectively manage any claims

  - The insurance market is cyclical and changeable therefore levels and types of coverage can vary each year in order to extract optimum terms from the insurance market to align with risk treatment strategies.

- A Group Insurance Committee (GIC) oversees the insurance process. GIC membership is made up of senior group executives and senior executives from each network business, including the Group CFO, Group Executive Network Strategy, Board Secretary, General Managers Finance and Compliance and insurance specialists.

At a high level, the risk controls and overall insurance arrangements that have been identified are broadly consistent with industry practice. To reflect "best practice", it is important that the implementation and execution of these controls in practice is maintained along with the tying in of the reporting of events with the controls in the risk management framework.

While the approach is sound from a broader risk management perspective, the application of the framework may also benefit by considering how the management of the risks fit from a regulatory context and specifically how the regulatory framework compensates for the risks being borne by the business. We acknowledge that risk management should be guided by operational and commercial factors and that the regulatory compensation should not be a priority. However it may be useful for the risk management framework to recognise how some of these costs are recovered through the regulatory process.

5.2.2 Summary of observations

Based on our review of the NSW DNSPs' risk management framework and consultations with relevant internal subject matter experts, at a high level, the risk controls and insurance arrangements which fall under NSW DNSPs' risk management framework appear to be appropriate from a commerciality perspective and are broadly in line with industry.

Refer to Appendix A for a detailed review of the commerciality of the risk controls and insurance arrangements that the NSW DNSPs currently have in place.

However there is still some portion of the NSW DNSPs' risks which cannot be fully covered by their risk management framework. As a result, there is a need for the use of self-insurance and cost pass through events to provide some compensation to the NSW DNSPs for bearing these risks.

5.3 NSW DNSPs' position on self-insurance and pass through

Based on the residual risks that are not fully covered by the risk management framework, Table 3 shows the NSW DNSPs' proposed approach to self-insurance and nominated cost pass through events for the forthcoming regulatory period.

Table 3: NSW DNSPs' position on self-insurance and pass through

	Self-insurance	Nominated cost pass through events
Ausgrid	Workers' compensation	The NSW DNSPs will propose 4 nominated cost pass through events: • Insurance cap event • Natural disaster event • Terrorism event • Insurer's credit risk event.
Endeavour	Workers' compensation	
Essential	None	

5.4 Assessment of self-insurance and pass through

Figure 2 shows the framework we used to assess the NSW DNSPs' proposed risks and determine the appropriate treatment of these risks in their regulatory proposals. It draws on the nominated pass through event considerations in the Rules.

The framework is comprised of a series of tests to determine how the NSW DNSPs should best seek to treat the costs of managing these risks based on:

1. The nature and profile of the risk which influences whether the risk is best borne by the DNSP or customers

2. Whether the risk is already compensated for in the opex or capex allowance or the WACC

3. Precedents established by the AER in approving or rejecting similar proposed risks in recent electricity determinations.

Specifically, the framework considers whether:

- The cost of bearing the risk has already been captured in the opex or capex allowance, the WACC or is defined in the Rules as a cost pass through event [pass through event consideration (a)]

- The risk can be clearly identified at the time of the determination [pass through event consideration (b)]

- The risk can be managed, controlled or mitigated [pass through event consideration (c)]

- The risk can be commercially insured at a reasonable cost or effectively self-insured [pass through event consideration (d)]

- There is a potentially large net negative asymmetric cost impact [pass through event consideration (e)]

- There is precedent for the AER approving similar proposals for self-insurance or nominated pass through events [pass through event consideration (e)].

Where relevant, our assessment disaggregates the components of the proposed risk and considers each component accordingly (e.g. where a DNSP's risk is only partially covered because its external insurance policy only covers the DNSP's costs up until a certain cap). Based on the outcome of our assessment, we recommend that the costs of managing the risk be compensated for through:

- The opex allowance, capex allowance or the regulated rate of return (where opex would include business as usual opex and the recovery of the costs of external insurance policies)

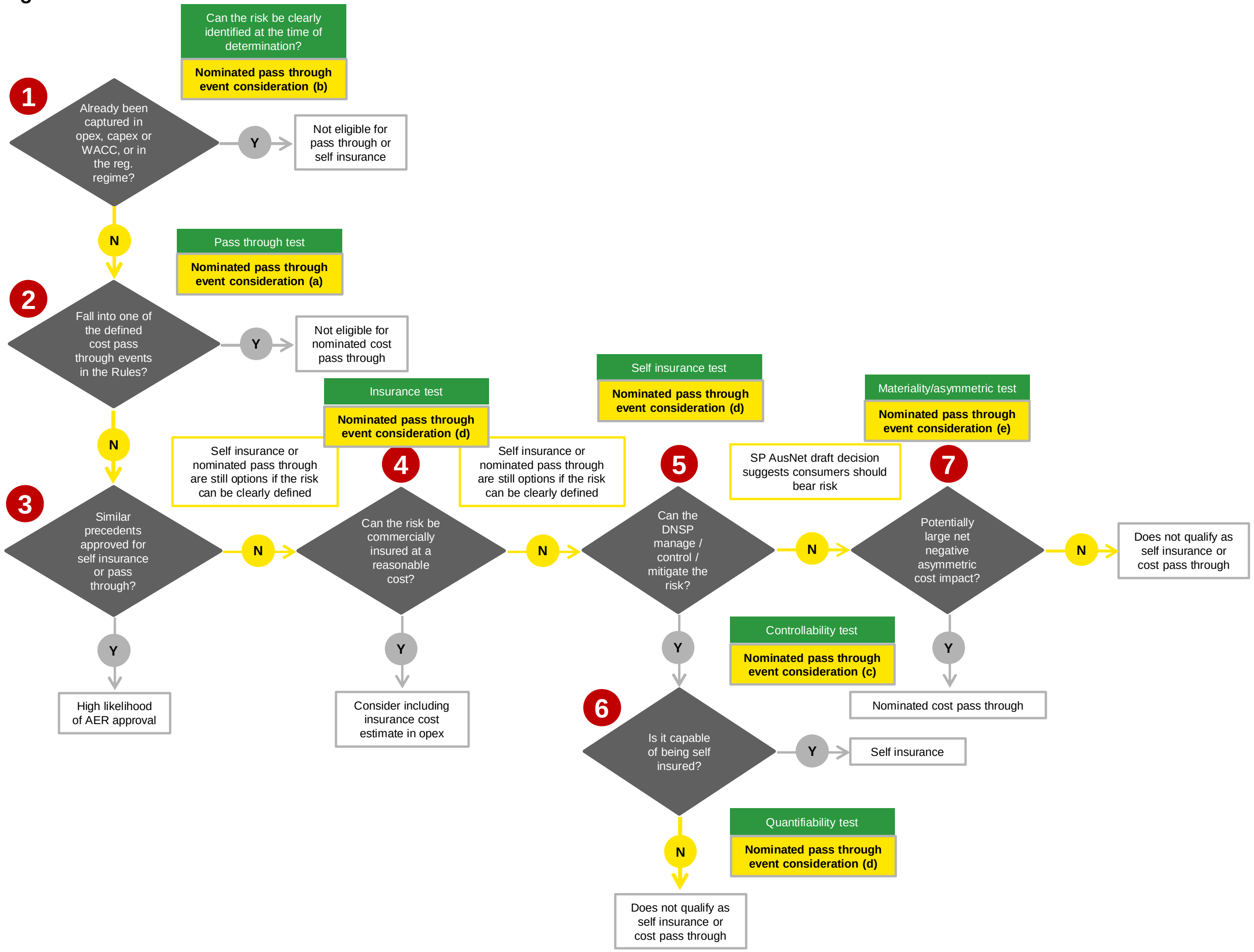
- Self-insurance allowance (i.e. recovered as part of the opex allowance)

- Pass through event (either defined in the Rules or a nominated pass through event).

Alternatively, our assessment may also conclude that the risk is best absorbed internally by the DNSP, and the costs of managing this are not recovered through any of the costs or mechanisms identified above.

We have undertaken a joint assessment of the NSW DNSPs' proposed risks from the perspective of the appropriate regulatory treatment and commercial practice because their approach is very similar. Where relevant, we have identified differences in the NSW DNSPs' proposed approach and assessed them individually.

Figure 2: Decision tree



Source: EY

5.4.1 Self-insurance

Ausgrid and Endeavour self-insure for the risk associated with workers' compensation, consistent with the approach approved by the AER during the 2009-14 regulatory period. Based on our review, at a high level, this approach appears to be appropriate taking into account:

- The size and profile of the businesses
- The nature of the risk
- The ability of these DNSPs to estimate an efficient self-insurance premium for workers' compensation and the extent to which it is predictable and measurable.

Self-insurance is an efficient and appropriate approach for Ausgrid and Endeavour to manage this risk because we understand it is a cost-effective alternative to purchasing insurance that efficiently balances the allocation of the risk between the business and customers, given the nature of the risk.

In contrast, Essential will purchase external insurance to cover its workers' compensation risks, which is also consistent with the approach approved by the AER during the 2009-14 regulatory period. This approach differs from that of Ausgrid and Endeavour because:

- Essential does not currently have a self-insurers' licence from WorkCover and is therefore unable to use self-insurance in this instance
- Essential is currently participating in WorkCover's retro paid loss scheme which according to external actuarial advice provided in 2009, offers significant benefits to Essential over traditional external arrangements

Essential also reviews its position with respect to managing workers' compensation risks on a regular basis, which includes considering the merits of external insurance versus self-insurance taking into account factors such insurance market conditions, its workers' compensation risk profile, etc. Following its most recent review, Essential is seeking to reapply for the retro paid loss scheme.

Based on this, Essential's approach to managing workers' compensation risks appears to be appropriate given there is a process to regularly review the appropriateness of its treatment of these risks within its broader risk management framework.

5.4.2 Pass through

We have reviewed the following NSW DNSPs' proposed nominated pass through events using our assessment process, with reference to the pass through event considerations in the Rules:

- Insurance cap event
- Natural disaster event
- Terrorism event
- Insurer's credit risk event.

Based on our review, we consider that the NSW DNSPs' proposed nominated cost pass through events is appropriate.

Table 4 provides details of our review.

Table 4: Assessment of NSW DNSPs' nominated cost pass through events

1) Insurance cap event

NER Pass Through Considerations	EY's assessment
a) whether the event proposed is an event covered by a category of *pass through event* specified in clause 6.6.1(a1)(1) to(4);	An insurance cap event is not covered by a category of pass through event specified in clause 6.6.1(a1)(1) to (4) of the Rules.
b) whether the nature or type of event can be clearly identified at the time the determination is made for the service provider;	Yes. The NSW DNSPs have been able to identify an insurance cap event. This has been previously accepted by the AER for the Victorian DNSPs, Aurora, Powerlink, ElectraNet and SP AusNet, and is defined as: *An insurance event occurs if:* *(a) the DNSP makes a claim on an insurance policy that it holds; and* *(b) the DNSP incurs costs beyond the policy limit for the relevant insurance policy; and* *(c) the DNSP must bear the costs that are in excess of the policy limit; and* *(d) the event materially increases the costs to the DNSP of providing direct control services.* *For the purpose of this event, an event is considered to materially increase costs where the event has an impact of one per cent of the smoothed forecast revenue of the regulatory year in which the costs are incurred.* *For the purpose of this event, a relevant insurance policy refers to the policy coverage provided through a DNSP ' s forecast operating expenditure allowance for an insured risk, as approved by the AER in its distribution determination and the reasons for the determination.*
c) whether a prudent service provider could reasonably prevent an event of that nature or type from occurring or substantially mitigate the cost impact of such an event;	EY considers that the ability of a prudent service provider to reasonably prevent this event or to mitigate the cost impact is likely to be limited. The NSW DNSPs' risk management framework at a high level appears to be sound and is consistent with industry practice. There are likely to be some events which are beyond the control of a prudent service provider which has a sound risk management framework in place. For these events which are not within a prudent service provider's control, available premiums to increase the insurance cover limit may be very high. This was noted in in Grid Australia's proposal to the AEMC, which suggested to include the 'Insurance

NER Pass Through Considerations	EY's assessment
	Cap Event' in the NER, Grid Australia argued that: *For some events, particularly in the case of extreme forms of natural disaster, past claims experience is very limited and subject to wide variations depending on the severity of the event. In these circumstances it is difficult to estimate the probability of occurrence, and/or the costs that may result. As a consequence, insurance may only be available at a reasonable cost up to a cap, leaving network service providers (NSPs) with residual exposure to losses above the cover limit. Grid Australia also noted that the available premiums to increase the cover limit may be prohibitively priced.* Based on our review of the NSW DNSPs risk management framework, at a high level, we consider that the NSW DNSPs' have considered a range of measures to efficiently manage and mitigate the risk where possible and appropriate.
d) whether the relevant service provider could insure against the event, having regard to: 1) the availability (including the extent of availability in terms of liability limits) of insurance against the event on reasonable commercial terms; or 2) whether the event can be self-insured on the basis that: (i) it is possible to calculate the self-insurance premium; and (ii) the potential cost to the relevant service provider would not have a significant impact on the service provider's ability to provide *network services*; and	As stated in c) above, there are some events which are not likely to be within a prudent service provider's control. As a result, it may be difficult to estimate the probability/costs of occurrence or available premiums to increase the insurance cover limit may be very high. For these events it is therefore impossible to calculate a reliable self-insurance premium but the potential cost to the relevant service provider would have a significant impact on the provider's ability to provide network services. We have not undertaken detailed analysis to conclude whether the individual insurance covers currently in place are appropriate for each DNSP's individual business and risk profile. However at a high level, we consider that the NSW DNSPs have an appropriate level of insurance to address their exposure to the extent of the insurance cap on the basis that: • The NSW DNSPs have a sound overarching risk management framework with insurance arrangements which are regularly reviewed in line with current insurance market prices / conditions • The risk management framework has processes in place for the regular consideration and review of a range of measures to efficiently manage and mitigate the risk where possible and appropriate • As a result of the above, any residual risk is likely to be beyond their control of a prudent service provider • The risk is likely to have a potentially material and negative asymmetric cost

NER Pass Through Considerations	EY's assessment
	impact.
e) any other matter the *AER* considers relevant and which the *AER* has notified *Network Service Providers* is a nominated pass through event consideration.	Should a Natural Disaster Event be accepted as a pass through event, another criteria can be added to the definition of *an insurance event,* that *(e) the event cannot be categorised as a Natural Disaster Event.*

2) Natural disaster event

NER Pass Through Considerations	EY's assessment
a) whether the event proposed is an event covered by a category of *pass through event* specified in clause 6.6.1(a1)(1) to(4);	A natural disaster event is not covered by a category of pass through event specified in clause 6.6.1(a1)(1) to (4) of the Rules.
b) whether the nature or type of event can be clearly identified at the time the determination is made for the service provider;	Yes. The NSW DNSPs have been able to identify a natural disaster event. This has been previously accepted by the AER for the Victorian DNSPs, Aurora, Powerlink, ElectraNet and SP AusNet, is defined as: *A natural disaster event:* *Any major fire, flood, earthquake, or other natural disaster beyond the control of the DNSP (but excluding those events for which external insurance or self insurance has been included within the DNSP's forecast operating expenditure) that occurs during the forthcoming regulatory control period and materially increases the costs to the DNSP of providing direct control services.* *For the purpose of this event, an event is considered to materially increase costs where the event has an impact of one per cent of the smoothed forecast revenue of the regulatory year in which the costs are incurred.*
c) whether a prudent service provider could reasonably prevent an event of that nature or type from occurring or substantially mitigate the cost impact of such an event;	EY considers that the ability of a prudent service provider to reasonably prevent this event or to mitigate the cost impact is likely to be limited. The NSW DNSPs' risk management framework at a high level appears to be sound and is consistent with industry practice. There are likely to be some events which are beyond the control of a prudent service provider which has a sound risk management framework in place. For these events which are not within a prudent service provider's control, available premiums to increase the insurance cover limit may be very high. Refer to discussion in 'Insurance cap event' in (1) above. Based on our review of the NSW DNSPs risk management framework, at a high level, we consider that the NSW DNSPs' have considered a range of measures to efficiently manage and mitigate the risk where possible and appropriate.
d) whether the relevant service provider could insure against the event, having regard to: 1) the availability (including the extent of availability in terms of liability limits) of insurance against the event on reasonable commercial terms; or 2) whether the event can be self-insured on the basis that:	As stated in c) above, there are some events which are not likely to be within a prudent service provider's control. As a result, it may be difficult to estimate the probability/costs of occurrence or available premiums to increase the insurance cover limit may be very high. For these events it is therefore impossible to calculate a reliable self-insurance premium but the potential cost to the relevant service

NER Pass Through Considerations	EY's assessment
(i) it is possible to calculate the self-insurance premium; and (ii) the potential cost to the relevant service provider would not have a significant impact on the service provider's ability to provide *network services*; and	provider would have a significant impact on the provider's ability to provide network services. We have not undertaken detailed analysis to conclude whether the individual insurance covers currently in place are appropriate for each DNSP's individual business and risk profile. However at a high level, we consider that the NSW DNSPs have an appropriate level of insurance to address their exposure to the extent of the insurance cap on the basis that: ▶ The NSW DNSPs have a sound overarching risk management framework with insurance arrangements which are regularly reviewed in line with current insurance market prices / conditions ▶ The risk management framework has processes in place for the regular consideration and review of a range of measures to efficiently manage and mitigate the risk where possible and appropriate ▶ As a result of the above, any residual risk is likely to be beyond their control of a prudent service provider ▶ The risk is likely to have a potentially material and negative asymmetric cost impact.
e) any other matter the AER considers relevant and which the AER has notified Network Service Providers is a nominated pass through event consideration.	Should a Natural Disaster Event be accepted as a pass through event, another criteria can be added to the definition of *an insurance event,* that *(e) the event cannot be categorised as a Natural Disaster Event.*

3) Terrorism event

NER Pass Through Considerations	EY's assessment
a) whether the event proposed is an event covered by a category of *pass through event* specified in clause 6.6.1(a1)(1) to(4);	A terrorism event is not covered by a category of pass through event specified in clause 6.6.1(a1)(1) to (4) of the Rules.
b) whether the nature or type of event can be clearly identified at the time the determination is made for the service provider;	Yes. The nature and type of the event can be clearly identified at the time the AER makes its determination for the NSW DNSPs, as evidenced by the proposed definition and the fact that the event was previously prescribed in the Rules: *An act (including, but not limited to, the use of force or violence or the threat of force or violence) of any person or group of persons (whether acting alone or on behalf of in connection with any organisation or government), which from its nature or context is done for, or in connection with, political, religious, ideological, ethnic or similar purposes or reasons (including the intention to influence or intimidate any government and/or put the public, or any section of the public, in fear) and which materially increases the costs to a Transmission Network Service Provider of providing prescribed transmission services or the costs to a Distribution Network Service Provider of providing direct control services.*
c) whether a prudent service provider could reasonably prevent an event of that nature or type from occurring or substantially mitigate the cost impact of such an event;	The NSW DNSPs' ability to reasonably prevent a terrorism event from occurring and/or substantially mitigate the cost impact from the event is likely to be limited. The NSW DNSPs' risk management framework at a high level appears to be sound and is consistent with industry practice. However there are likely to be some events which are beyond the control of a prudent service provider which has a sound risk management framework in place. The NSW DNSPs have in place a number of risk controls and insurance arrangements, which would reduce the cost impact of such an event from occurring. However given the nature of such terrorism events, any preventative measures are likely to be limited in their impact. As a result, based on our review of the NSW DNSPs risk management framework, at a high level, we consider that the NSW DNSPs' have considered a range of measures to efficiently manage and mitigate the risk where possible and appropriate.
d) whether the relevant service provider could insure against the event, having regard to:	Ausgrid has commercial insurance cover losses that are likely to be triggered by an act of terrorism. However, Ausgrid does not have specific cover for terrorism or cyber terrorism, as the market for such insurance is still developing. Also other

NER Pass Through Considerations	EY's assessment
1) the availability (including the extent of availability in terms of liability limits) of insurance against the event on reasonable commercial terms; or 2) whether the event can be self-insured on the basis that: (i) it is possible to calculate the self-insurance premium; and (ii) the potential cost to the relevant service provider would not have a significant impact on the service provider's ability to provide *network services*; and	uninsured assets e.g. poles and wires are not insured. Ausgrid considers obtaining reasonable and commercially viable insurance cover for this type of risk on commercial grounds remains difficult. EY shares the view that for terrorism events that are beyond Ausgrid's control, it may be difficult to estimate the probability/costs of occurrence due to the lack of precedents, or available premiums to increase the insurance cover limit may be very high. For these events it is therefore impossible to calculate a reliable self-insurance premium but the potential cost to the relevant service provider would have a significant impact on the provider's ability to provide network services. We have not undertaken detailed analysis to conclude whether the individual insurance covers currently in place are appropriate for each DNSP's individual business and risk profile. However at a high level, we consider that the NSW DNSPs have an appropriate level of insurance to address their exposure to the extent of the insurance cap on the basis that: ▶ The NSW DNSPs have a sound overarching risk management framework with insurance arrangements which are regularly reviewed in line with current insurance market prices / conditions ▶ The risk management framework has processes in place for the regular consideration and review of a range of measures to efficiently manage and mitigate the risk where possible and appropriate ▶ As a result of the above, any residual risk is likely to be beyond their control of a prudent service provider ▶ The risk is likely to have a potentially material and negative asymmetric cost impact.
e) any other matter the AER considers relevant and which the AER has notified Network Service Providers is a nominated pass through event consideration.	Terrorism has been previously proposed for self-insurance by the NSW DNSPs for the 2009-2014 determination and was rejected as at the time, the Rules included this as a defined pass through amount. It has also recently been accepted by the AER as a nominated cost pass through in its determination on ElectraNet 2013-2018, where the event was defined precisely as it previously appeared in the Rules. The AER has noted that such events are by their nature not able to be self-insured due to the potential magnitude and low probability of such events.

4) Insurer's credit risk event

NER Pass Through Considerations	EY's assessment
a) whether the event proposed is an event covered by a category of *pass through event* specified in clause 6.6.1(a1)(1) to(4);	An insurer's credit risk event is not covered by a category of pass through event specified in clause 6.6.1(a1)(1) to (4) of the Rules.
b) whether the nature or type of event can be clearly identified at the time the determination is made for the service provider;	Yes. The NSW DNSPs have been able to identify an insurer's credit risk event. This has been accepted by the AER as a pass through event for the Victorian DNSPs and for Aurora in Tasmania for the current regulatory control period. The risk was defined as: *An event where the insolvency of the nominated insurers of the DNSP, as a result of which the DNSP:* *(a) Incurs materially higher or lower costs for insurance premiums than those allowed for in the distribution determination; or* *(b) In respect of a claim for a risk that would have been insured by DNSP's insurers, is subject to materially higher or lower claim limit or a materially higher or lower deductible than would have applied under that policy.* *For this purpose, an event is considered to materially increase or decrease costs where that event an impact of one per cent of the smoothed forecast revenue specified in the final decision in the years of the regulatory control period that the costs are incurred.*
c) whether a prudent service provider could reasonably prevent an event of that nature or type from occurring or substantially mitigate the cost impact of such an event;	The NSW DNSPs' risk management framework at a high level appears to be sound and is consistent with industry practice. There is likely to be some events which are beyond the control of a prudent service provider which has a sound risk management framework in place. In particular, the NSW DNSPs seek to mitigate the risk of any of insurer's becoming non-viable by regular monitoring and reporting by the broker of insurer Standard & Poor (S&P) rating movements. Our minimum acceptable insurer S & P rating is A-. In addition, multiple insurers are used on the liability and ISR insurance policies which spread the risks amongst several insurers and minimises the reliance on any one insurer. Based on our review of the NSW DNSPs risk management framework, at a high level, we consider that the NSW DNSPs' have considered a range of measures to efficiently

NER Pass Through Considerations	EY's assessment
	manage and mitigate the risk where possible and appropriate.
d) whether the relevant service provider could insure against the event, having regard to: 1) the availability (including the extent of availability in terms of liability limits) of insurance against the event on reasonable commercial terms; or 2) whether the event can be self-insured on the basis that: (i) it is possible to calculate the self-insurance premium; and (ii) the potential cost to the relevant service provider would not have a significant impact on the service provider's ability to provide *network services*; and	Given the risk mitigation strategies above, it may not be viable to commercially insure this risk with another insurer(s) or adopt a self-insurance regime. Therefore, it may be difficult to estimate the probability/costs of occurrence due to the lack of precedents. For these events it is therefore impossible to calculate a reliable self-insurance premium but the potential cost to the relevant service provider would have a significant impact on the provider's ability to provide network services. We have not undertaken detailed analysis to conclude whether the individual insurance covers currently in place are appropriate for each DNSP's individual business and risk profile. However at a high level, the NSW DNSPs appear to have an appropriate level of insurance to address their exposure to the extent of the insurance cap on the basis that: ▶ The NSW DNSPs have a sound overarching risk management framework with insurance arrangements which are regularly reviewed in line with current insurance market prices / conditions ▶ The risk management framework has processes in place for the regular consideration and review of a range of measures to efficiently manage and mitigate the risk where possible and appropriate ▶ As a result of the above, any residual risk is likely to be beyond their control of a prudent service provider ▶ The risk is likely to have a potentially material and negative asymmetric cost impact.
e) any other matter the AER considers relevant and which the AER has notified Network Service Providers is a nominated pass through event consideration.	'Insurers credit risk' has been accepted by the AER for self-insurance allowance for the NSW DNSPs in the current regulatory control period. The AER accepted 'insurers' credit risk' as a pass through event for the Victorian DNSPs and for Aurora in Tasmania for the current regulatory control period.

6. Recommended approach to regulatory proposal

Based on our analysis, we recommend the NSW DNSPs adopt the following actions in relation to the treatment of the proposed risks for their regulatory proposal.

1. Nominated pass through event
    a. Insurance cap event
    b. Natural disaster event
    c. Terrorism event
    d. Insurer's credit risk event
2. Self-insurance allowance for workers' compensation liabilities
3. Absorb risk internally
    a. Risk of gradual pollution
    b. Risk from losses from bomb threats and hoaxes
    c. Risk from pandemic illness
    d. Below deductible losses on external held insurance policies
    e. Residual risk of losses from insurer default (without being insolvent)
    f. Residual risk of losses from retailer default (without being insolvent)

Table 5 contains our recommended approach to presenting the risks in the regulatory proposal.

Table 5: Recommended approach for NSW DNSPs in regulatory proposal – self-insurance and pass through

Category	Treatment	Coverage of NSW DNSPs' proposed risks	Comments
Nominated pass through event	Insurance cap event	Asbestos	Cover for above cap amounts of these risks
		Electric and magnetic fields	
		Theft of assets	
		Fraud	
		General public liability (this includes bushfire liability)	
		Risk of non-terrorist impact of planes and helicopters	
		Power quality	
		Substations	
	Insurer's credit risk event	Insurer's credit	Note only provides cover for default if insurer has been declared insolvent
	Natural disaster event	Earthquakes	Cover for major earthquakes only
		Bushfires – partial	Cover for naturally caused bushfires only
		Business continuity – partial	Cover for business continuity risks arising from tsunami and tropical cyclone events only
	Terrorism event	Bomb threat/hoax, terrorism – partial	Cover for terrorism risks only
		Business continuity – partial	Cover for business continuity risks arising from cyber-security events only
Self-insurance	Workers' compensation liabilities	Workers compensation	Cover for premiums
Uncovered and absorbed internally	Risk of gradual pollution	Gradual pollution	More appropriate for business to manage risk
	Risk of losses from bomb threats and hoaxes	Bomb threat/hoax, terrorism – partial	Residual risk uncovered
	Risk of losses from pandemic illness	Business continuity – partial	

	Workers' compensation risk associated with deviations from forecast	Workers' compensation – partial	
	Risk of damage to poles and lines	Poles and lines	
	Below deductible losses on external held insurance policies	Asbestos Electric and magnetic fields Theft of assets Fraud General public liability Risk of non-terrorist impact of planes and helicopters Power quality Substations Bushfire	
	Risk of losses from insurer default (without being insolvent)	Insurer's credit risk – partial	
	Risk of losses from retailer default (without being insolvent)	Counterparty credit risk – partial	

Appendix A Review of risk management approach

Table 6 details our review of the NSW DNSPs’ risk management approach and how it addresses the key risks from a commerciality perspective.

Table 6: Review of NSW DNSPs’ risk management approach

Risk	Description	Risk management approach	EY review
Asbestos	Liability for claims related to the impact of asbestos (both retrospectively and prospectively) on employees and third parties	There are two components to this risk, (1) the risk of exposure to customers and the community and (2) the risk of exposure to workers and contractors Insurance • (1) is dealt with via the Group Liability Insurance Scheme (GLIS) cover up to $50m with a deductible of $100k • There is also contractor asbestos removal liability insurance for Ausgrid only with cover up to $20m with a deductible of $50k (or $5k for a member of the public) • (2) is dealt with via the workers compensation arrangements – self-insurance for Ausgrid and Endeavour Energy and retro-paid loss policy with NSW WorkCover for Essential Energy Risk controls • Asbestos awareness plans and training • Asbestos safety management plan • Risk management policy & plan	• The level of insurance and risk controls implemented do not appear unreasonable given the nature of asbestos risks and how they are dealt by other companies across a number of industries • The residual risk after allowing for controls and insurance is considered low given the very low incidence of asbestos claims
Gradual pollution	Unintentional pollution of the surrounding environment from underground fuel tank leakage, transformer oil leakage, contamination from treated poles etc.	Insurance • None Risk controls • Environmental policy • Risk management policy and plan	• We understand the retained exposure is perceived as within the tolerance of the businesses and that there have not been any major incidents across the business
Electric and magnetic fields (EMF)	Adverse health impacts caused by EMF and regulatory changes impacting the undertaking of “live-line” work	Insurance • GLIS Risk controls • Environmental policy • Monitoring of global research and developments	• The residual exposure (up to the level of the deductible and beyond the limit) does not appear unreasonable given the pooling of this risk with others under GLIS cover which implies that it falls within the business’ tolerance • To our knowledge, there is

			no palatable market for insurance for the adverse effect of regulatory change and hence it is not unreasonable for a business to retain this risk
Business continuity	Future incidents / events that could significantly impact on the business' ability to continue business as usual	Insurance • Limited group cover through Industrial Special Risks (ISR) / property insurance– additional up to $50m (does not include loss of revenue, but covers extra costs of relocating business / re-setup etc.) Risk controls • Emergency evacuation plans • Incident management plans • Facility incident response plan • Business continuity plans	• Group insurance coverage and controls appear reasonable based on the type of business
Theft of assets	Risk of theft from employees and external parties	Insurance • This risk is covered by the group ISR / property policy with varying deductibles by business and some specific risks Risk controls • CCTV • Secure premises and security patrols	• Insurance coverage and controls are reasonable and in-line with most industries
Fraud	Theft, false accounting, bribery and corruption, deception and collusion	Insurance • This risk is covered by a Group crime policy with a limit of $10m and a deductible of $100k Risk controls • Inventory, bank and computer controls • Limited cash on premises • Audits and Information Security policy • Fraud management policy	• Insurance coverage and controls are reasonable and in-line with most industries
Bomb Threat / Hoax, Terrorism, Earthquakes, Bushfire, Non-terrorist impact of planes and helicopters and substations		Insurance • These risks are covered by GLIS, with terrorism, earthquakes and property also being covered under the group property cover • Varying deductibles by business and some specific risks Risk controls • Emergency evacuation plans • Incident management plans • Business continuity plans	• Insurance coverage and controls are reasonable and in-line with most industries

		• Security arrangements • Bushfire risk management plan • Strategic asset management plan	
Insurer's credit	Potential for insurer to default on promise to pay claims as well as the loss of premium paid upfront	Insurance • None Risk controls • Use of multiple insurers where possible • Only accept insurers with an S&P rating of A- or higher • Regular reporting on credit worthiness from brokers	• The key approaches to minimizing this risk are to spread the risk amongst as many insurers as commercially possible and to assess the credit risk associated with the insurers on as commercially objective a basis as possible • Given that the businesses appear to do both of the above within what is commercially possible, it is reasonable to retain this risk
Counterparty credit	Probability of retailer defaulting on payment obligations	Insurance • None Risk controls • Existence of credit manager role • Risk management policy • Counterparty credit reviews • Security deposit if deemed appropriate	• The businesses had previously consulted with their broker in regards to credit insurance; however the businesses assessed that this risk could be managed internally and opted not to purchase this insurance. This position is subject to review on a regular basis and there is also a prescribed pass through event that covers this • Whilst this is not an unreasonable judgment it is worth noting that the risk of default may be concentrated if the number of creditors is low
General public liability	Injuries or losses suffered by the general public as a result of negligence of business	Insurance • GLIS Risk controls • Network management framework • Public electrical safety awareness plan	• Insurance coverage and controls are reasonable and in-line with most industries
Poles and lines	Exogenous incident causes damage to distribution network	Insurance • None Risk controls • Recovery actions against third parties • Vegetation controls • Regular inspections • Asset management plan (Strategic Asset Management Plan)	• The businesses have decided to not insure against this risk as they are able to diversify the risk within their own businesses across a large area of region. • The businesses have further noted that there is a lack of insurer capacity. Hence, the businesses consider that purchasing insurance is not financially viable. • This approach appears reasonable, as the businesses are able to

			diversify this risk without the need for purchasing external insurance.
Power quality	Electricity supplied falls outside of statutory limits or perceived "good electricity practice"	Insurance • GLIS covers defective supply and failure to supply Risk controls • Maintenance of network • NECF / contractual arrangements	• The insurance arrangements for this risk appear to be reasonable • It is unclear as to the extent of testing of power that is undertaken within the maintenance of the network design
Workers compensation	Substantial increase in workers compensation claims as a result of a cause outside of the control of the business	Insurance • Ausgrid and Endeavour Energy self-insure whilst Essential Energy have a retro-paid loss policy with NSW WorkCover Risk controls • Safety strategic plan • Excess of loss for Ausgrid and Endeavour (anything above a certain amount, they have insurance for)	• These arrangements appear reasonable given the sizes of the businesses and the safety training and protocol as part of the businesses' Safety strategic plan. •

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The Report may only be relied upon by Ausgrid, Endeavour Energy and Essential Energy pursuant to the terms and conditions referred to in the Contract. Any commercial decisions taken by Ausgrid, Endeavour Energy and Essential Energy are not within the scope of our duty of care and in making such decisions you should take into account the limitations of the scope of our work and other factors, commercial or otherwise, of which you should be aware of from sources other than our work.