



United Energy Health, Safety and Environment

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HSE Team Overview



Our Role

- To manage the Governance of the UE and MG HSE Strategy to ensure alignment with corporate objectives
- To build a strong relationship with our external stakeholders and to maintain a proactive engagement and open communication.
- To manage all UE and MG HSE programs and initiatives to all employees
- To engage with our service providers and their subcontractors to monitor their HSE performance to ensure they are meeting HSE obligations in accordance with Service Delivery plans and the OMSA
- To develop and maintain overarching HSE management systems (policy and procedure) aligned to OHS 4801, EMS 14001 and AS Quality 9001
- To manage the development and delivery of HSE training

Managing Health Safety & Environment (HSE) Risks



Managing UE HSE risks involves four key steps:

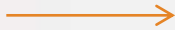
1. **Identifying hazards**—finding out what could cause harm
2. **Assessing risks** —understanding the nature of the harm that could be caused by the hazard, the consequence and the likelihood of it happening
3. **Controlling risks**—implementing the most effective control measure that is reasonably practicable in the circumstances
4. **Reviewing control measures**— ensuring control measures are working as planned.

HSE - Risk Register

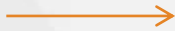
HSE Risk Register – Key Input / Outputs



**Previous Registers
& Engagements**



Key Stakeholders
(experience)



Benchmarking



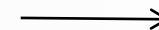
Incident learnings

A screenshot of a Risk Register table. A yellow rectangular box is overlaid on the table, containing the text 'Risk Register (60 HSE scenarios)'. Below this box, a grey rectangular box contains the text '(Scenario, Cause, Impact, Rating, Controls)'. The table itself is a grid with multiple columns and rows, some of which are highlighted in yellow and grey.

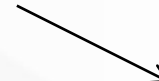
Central repository



Planning



**Prioritisation
of work**

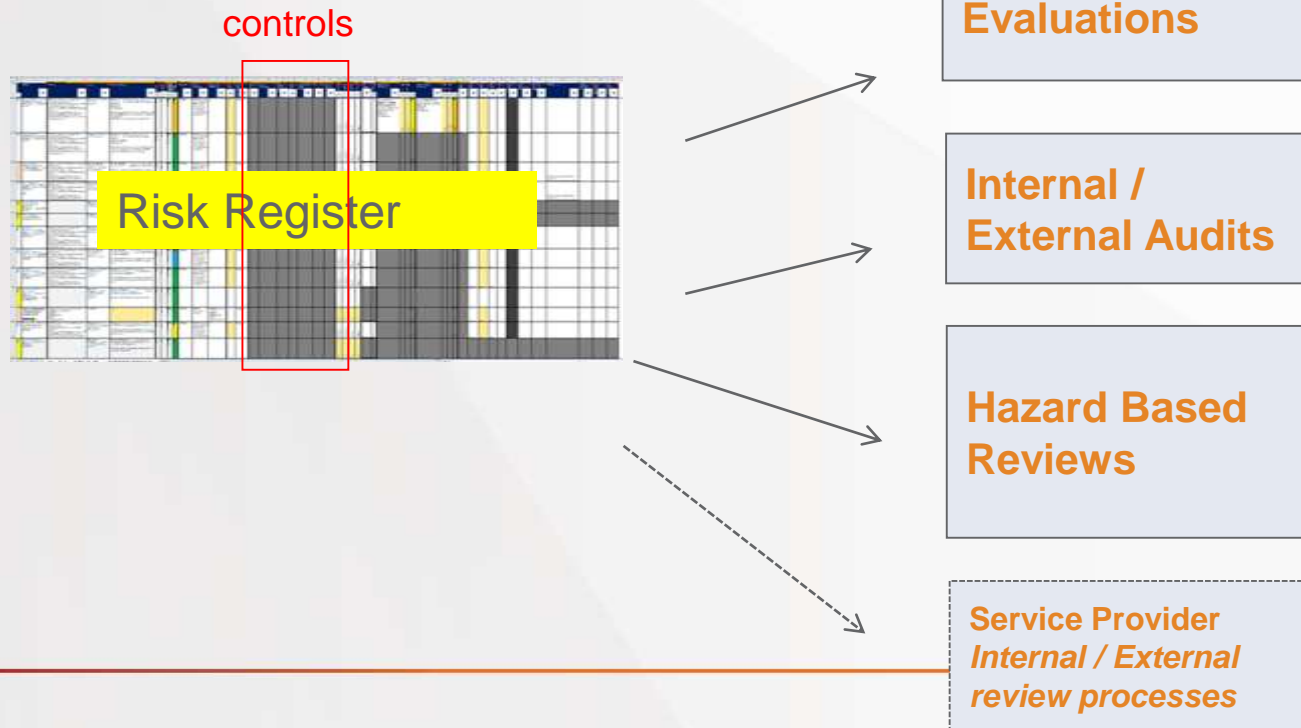


**Control
Effectiveness
Review
Program**

HSE Control – Effectiveness Reviews



Current Review Process



Asbestos Management

Asbestos - Legal & other Requirements



United Energy Asbestos Management

- Compliance Procedure
- Registers

Legal Acts & Codes

1. Identify, 2. Manage & 3. Remove and dispose

- OHS Act 2004
- OHS Regulations 2007
- Code - Managing asbestos in workplaces
- Code - Removing asbestos in workplaces

Asbestos Safety Eradication Agency (ASEA) Australian Government

- Established in July 2013
- Provides a national focus on asbestos issues
- Aim - prevent exposure / eliminate related disease
- Key Strategy:
 - Improve community awareness and best practice

UE NETWORK



UE Asset	No Of Assets
ZSS	46
Dist. Sub Station	~5000
Service Pillars	~1700
Pits	~3000



Zone substations
Low to moderate Health risk

Service pillars
Low risk



Distribution substation and kiosks
Low to moderate risk



Underground Pits
Low risk

Zone Substations



Zone Substation



Insulation conduit



Switchboard



Protection panel



LV cable trunk conduit



Arc shutes



Transformer door



Contaminated Land Management

Contaminated Land Management



EPA has made it clear since publishing its *Compliance and Enforcement Strategy* in June 2011 that it intends to strongly adhere to the 'polluter pays' principle.

EPA's 2013 Contaminated Sites Strategy is intended to guide ...*those responsible for managing contaminated environments to better focus their efforts and resources.*

In response to the clear direction from the EPA, UE have embarked on a contaminated land management project.



Contaminated Land Management Plan



UE is developing a contaminated land management plan to enable the business to proactively plan for and manage the contamination risks association with the UE land portfolio. The project involves;

- a desktop assessment of key information available
- a potential risk categorization for the business's different land uses
- development of an environmental land database.
- Preliminary, and if required, detailed site assessments for selected potential high risk properties will be undertaken to inform appropriate management measures and remediation liability assessments.

Severe	Major	Moderate	Low
Depot	Kiosk Substations	Regulator Stations	Poles
Zone Substations	Ground Substations	Underground Network (gas)	Pillars
	Indoor / Underground Substations		Switch Stations / Distribution Cabinets
	Easements		Telecommunications
	Vacant (incl. 'Shells')		

UE Land Use
Risk Allocation



Noise Reduction Works

Noise



The State Environment Protection Policy (SEPP N-1) sets out noise levels requirements for business. UE has included noise as one of the determining criteria when selecting sites for new substations, purchasing new transformers, and designing new substations to comply with EPA noise emission requirements and minimise any noise impact to the community.

UE's strategy to manage noise mitigation is through the implementation of an **Environmental Improvement Plan** (EIP) that opportunistically, addresses the risk through:

- Annual programs to improve (reduce) the noise levels at noisy zone substations, or
- Opportunistic programs when major augmentation works are being undertaken,

Noise Reduction Works



Noise improvement works: Burwood Zone Substation - installation of a barrier to reduce the noise levels emitting from the air-conditioning fans



Noise Reduction Works – HSE Capital & Operating Expenditure

Budget	\$ (total for 5 years)	Details
Operating	50,000	Noise monitoring
Capex	860,000	Mitigation works at noisy zone substations (i.e. noise barriers / insulation)



Upgrading of Bunding at Zone Substations

Upgrading of bunding at Zone Substations

UE are running a program upgrading bunding at Zone Substations. Soil under the old transformer needs to be remediated (cleaned up) before the new bund is constructed. UE's program involves;

- All new bunds are built to meet current Victorian EPA requirements.
- UE are installing humeceptors at 15 Zone Substations identified as priority sites. These sites are programmed for action over the next three to four years in priority of risk and existing works programs.

Additionally UE has routine maintenance programs that undertake the immediate repair of identified leaks, steam cleaning, pumping and removal of oily waste water and general maintenance of oil containment and treatment facilities.



EPA-compliant transformer bund at Mentone Zone Substation



Triple Interceptor



EPA compliant bund



Upgrading of bunding – HSE Capital & Operating Expenditure

Budget	\$ (total for 5 years)	Details
Operating	n/a	n/a
Capex	1,529,000	Upgrading bunds to EPA standard, installing of hume and triple interceptors



Climate Resilience Works

ENA Tier 1 Climate Risk Assessment



UE is committed to ensuring its business is **resilient** to the impacts of **climate change** now and in the long term.

UE commissioned a climate change consulting firm to undertake a climate risk assessment following the steps of a tier 1 assessment in the **Electricity Network Association's (ENA) draft Guidance Manual on Climate Risk and Resilience**.

The findings of this assessment identify the priority areas of **vulnerability** and proposed **adaptation actions** for the business – potential adaptation roadmap for UE.

UE aims to continue responding to the impacts of climate change by embedding climate change considerations into existing asset management systems and decision making processes.



Potential adaptation roadmap for UE



Understand and Inform

Plan

Act / Invest

Adopt a climate adaptation policy

Short term
0 – 3 yrs

Tier 2 climate risk
assessment

Urban heat island
effect

Prioritisation of
capital works

Climate criteria in
investment decisions

Network monitoring

Equipment monitoring
devices

Comprehensive
network and climate
event modelling

Data, analysis and
reporting
requirements

Building a business
case

New data
management system

Network reporting
tools

Transformer
upgrades

Flood mapping

Industry innovations
and opportunities

Process and
procedure changes

Medium term
3 – 5 yrs

Review reliability
centred maintenance

Customer study /
urban growth plans

Model network
usage and customer
needs profile

Changes to standards

Complete cross arm
replacements

Install solar
generation and
battery storage

Assess new models
of distribution

Plan for urban co/tri
generation models

Install rapid current
limiters

Customer willingness
to pay program

Long term
+5 yrs

Network impacted
by sea level risk
inundation

Zone substation
investment

Action for the:



Climate Resilience Works – HSE Capital & Operating Expenditure

Budget	\$ (total for 5 years)	Details
Operating	300,000	Climate risk investigation
Capex	600,000	Climate resilience works – asset augmentation, adaptation responses