MORE REGULATION! BUT WHAT PRICE SAFETY?
WHY WORRY?
NO REALLY, WHY??
NOTHING WRONG HERE?
Occupational Health and Safety Act of 1993

• Is to: “provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work...”
The management of electricity and distribution assets is complex operation

- Range of significant risks
- Constructed and developed over many decades – some assets eighty years old
- Lives extremely long
- Require significant routine maintenance
PROBLEMS

• Skills shortage - EDI Holdings say 50% of critical technical staff positions are vacant across 36 municipalities.

• Shortfall in funding for maintenance and replacement.

• Many utilities are operating without the appointment of the appointees required by the General Machinery Regulations.

• Little data is available on incident statistics.
SOME OBSERVATIONS

• Switching operations not undertaken in accordance with any written procedures
• No records of operating procedures or operations
• Permits to Work not issued
• Training in high voltage operating was not being undertaken.
• No complete and up to date single line diagrams available
• Access to outdoor high voltage substations unrestricted.
• 11kV networks were out of phase with adjacent interconnected networks
• Ground clearance of newly constructed 66kV overhead lines were below statutory requirements - by 2 metres.
SOME OBSERVATIONS (cont)

• No maintenance undertaken
• Repairs often of a temporary nature
• No spares - 11kV cable ends joined and the “joint” covered with a plastic bag
• Poor housekeeping in depots and substations
HOUSEKEEPING, WHAT’S THAT?
VICTORIA, AUSTRALIA

- Australian Energy Regulator (AER) is responsible for regulating distribution, transmission and the wholesale electricity market.
- Energy Safe Victoria is Victoria’s statutory independent electricity, gas and pipeline safety and technical regulator.
PB conducted Safety Audit of 5 distribution utilities and transmission company

- VESI privatised in 2001
- “Efficiencies” introduced as a result of privatisation
- Staff levels reduced
- Maintenance and replacement budgets cut
OBJECTIVES OF THE AUDIT

• To improve the level of electrical safety
• To ensure appropriate policies, procedures, processes and compliance systems in place
• Was legislation and regulations effective
• To verify knowledge and acceptance of their safety responsibilities.
• Increase public understanding and confidence
FINDINGS OF THE AUDIT

• In most areas the Network Operators were complying with the requirements of the Act and Regulations
• Certain areas of non-compliance were common
• All had quality management systems in place although some were better than others
FINDINGS OF THE AUDIT (cont)

• All of the DNOs had service lines under clearance
• All the Network Operators were using some work practices that do not comply with the Regulations
• Housekeeping at substations was found to be not in accordance with good industry practice.
FINDINGS OF THE AUDIT (cont)

- No requirement in the Green Book (the HV operating rules for the VESI) to “phase out” after breaking HV bridges - practice is to rely on the operator remembering the connection sequence.

- The condition and storage of portable earthing devices was not in accordance with good practice.
THE CURRENT POSITION

• Electricity Safety (Network Asset) Regulations revoked in December 2009
• Now mandatory for the distributors to have an all-embracing ESMS in place
• Major shift from largely prescriptive legislation to safety management schemes.
EXAMPLE OF "PROCESS-BASED" REGULATION.

Based on mandating a risk management process, Constituting: -
– risk identification
– risk assessments
– implementation of risk controls
– record-keeping
– auditing and updating requirements.
## COST IMPLICATIONS (AU$M)

<table>
<thead>
<tr>
<th></th>
<th>AGL</th>
<th>CitiPower</th>
<th>Powercor</th>
<th>TXU</th>
<th>United Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk Approach</td>
<td>23</td>
<td>20</td>
<td>80.6</td>
<td>57.3</td>
<td>45.2</td>
</tr>
<tr>
<td>Literal Compliance</td>
<td>270</td>
<td>143</td>
<td>742</td>
<td>480</td>
<td>74</td>
</tr>
</tbody>
</table>
THE ESMS IN SUMMARY

• ESMS must identify the person responsible for electricity supply network and the person responsible for the electricity safety management scheme.

• Must describe the electrical work or electrical installation to allow ESV to identify location, extent and scope and assess the risks that are associated with it.
• Requires that a formal safety assessment be undertaken and specify the required content of that safety assessment.

• Identify all elements of the regulations made under the authority of the Electricity Safety Act 1998 and from which the scheme operator seeks exemption.
IN SUMMARY ESMS SEEKS TO

• Address the problem that network asset operators are not using best practice, management based approaches to ensuring that dangers to workers and the public arising from network assets are minimized
• Reduce extremely high compliance costs
• Improve the reliability of supply
Thank you