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# GAS TRANSMISSION SECURITY AND RELIABILITY

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# Presentation of Gas Industry Co's April 2016 'Gas Transmission Security and Reliability' Issues Paper'

## Why look at S&R?

- Economic risk
  - last major outage – October 2011 land slip near Pukearuhe
    - Put Maui pipeline out of action for 5 1/2 days
    - Cost NZ economy \$200m
- Major users are uneasy
  - lots of S&R information available, but difficult to interpret
- Timely to review
  - adequacy of disclosures supporting Price-Quality regime
  - 2017 Price-Quality reset
  - Upcoming review of Pipeline Regulations

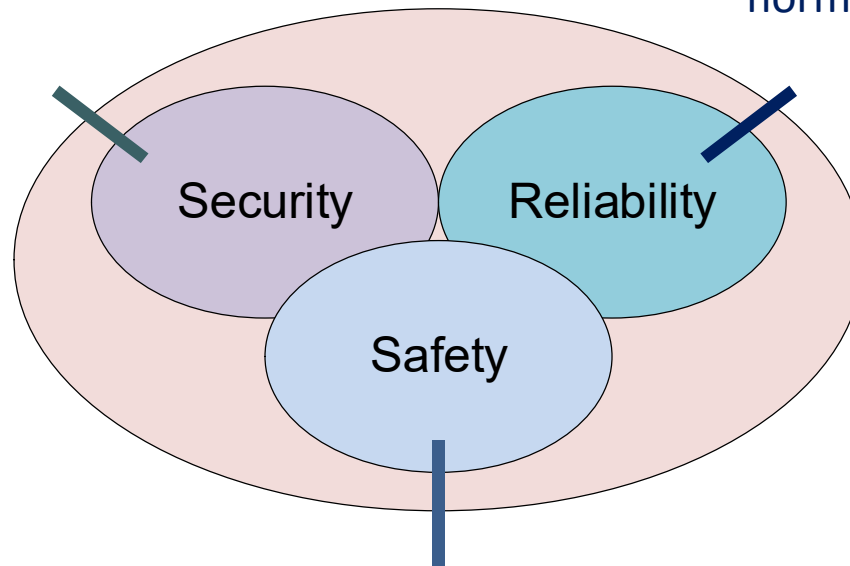
# Transmission Security and Reliability (S&R) Issues Paper - content

- The S&R paper:
  - introduces key concepts
  - reviews disclosed information
  - describes commercial and regulatory framework
  - proposes what is needed to achieve effective S/R
  - provides a gap analysis
  - draws conclusions and suggests actions
  - invites feedback

# S&R are integral to 'pipeline integrity'

Capability to meet long-term and short-term changes in demand

Dependability of deliveries under normal operating conditions

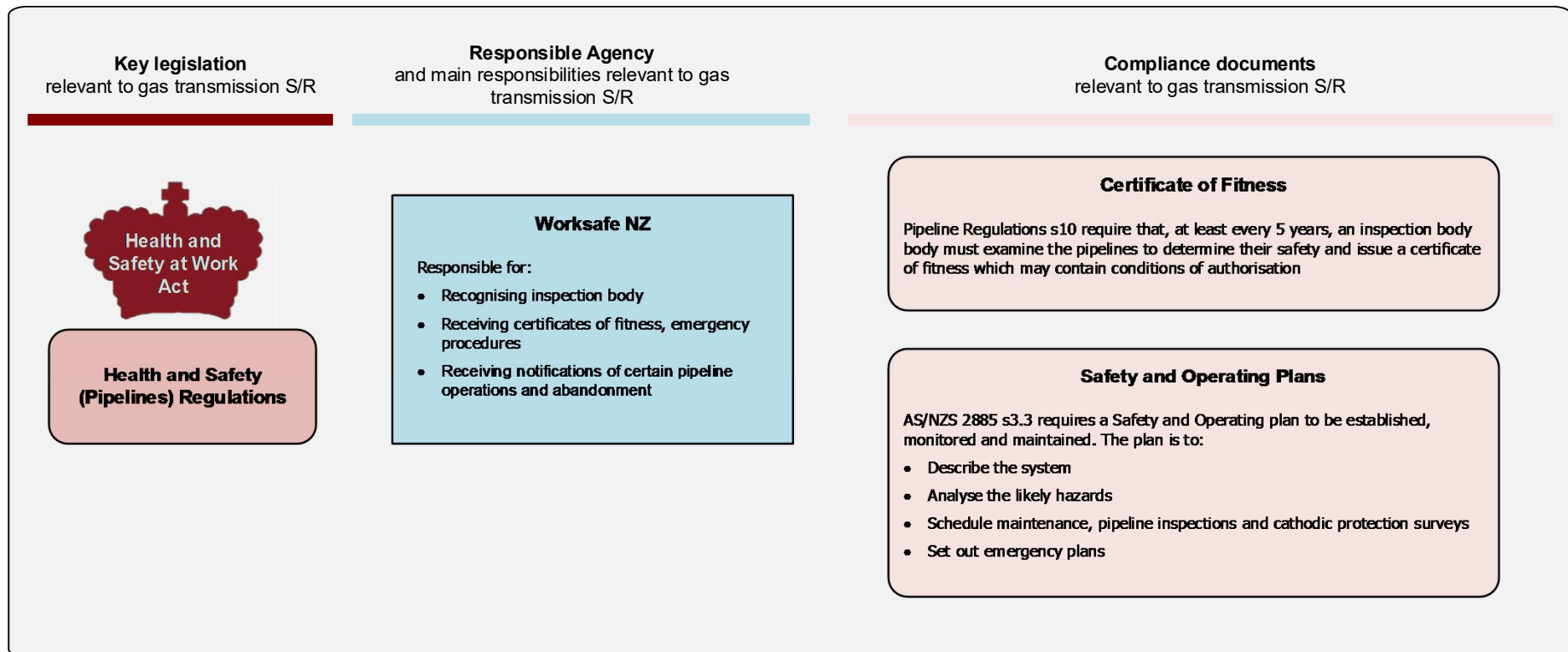


Potential to cause harm to people or property

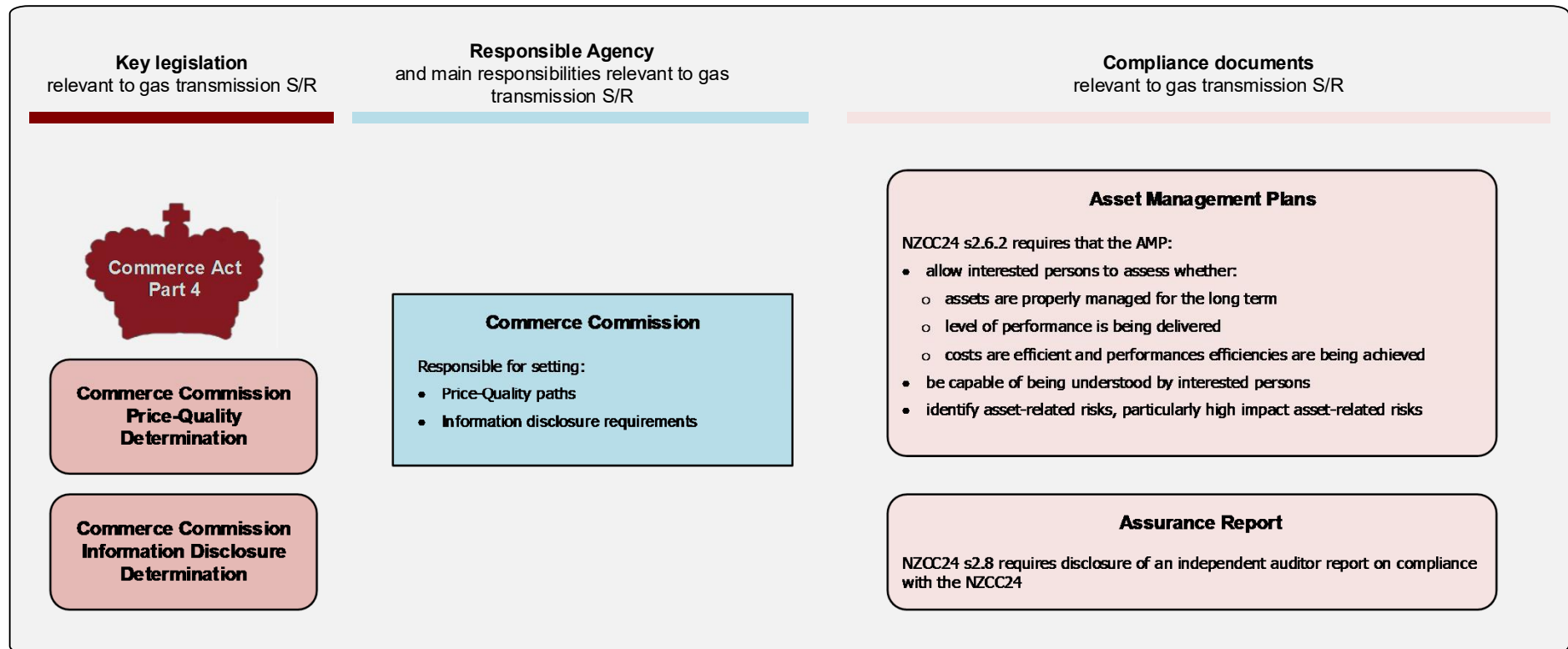
## Current S&R related disclosures

- Disclosures provide useful status and trend indicators
- Disclosures most closely related to S&R are:
  - RTEs, Unplanned Interruptions, Incidents and Emergencies, PREs and Compressor Availability
- But... difficult to interpret without an informed analysis:
  - Suggest results could be summarised in a 'dashboard' format, accompanied by GTB's interpretation of what they mean

# Requirements arising from H&S at Work Act/Regs

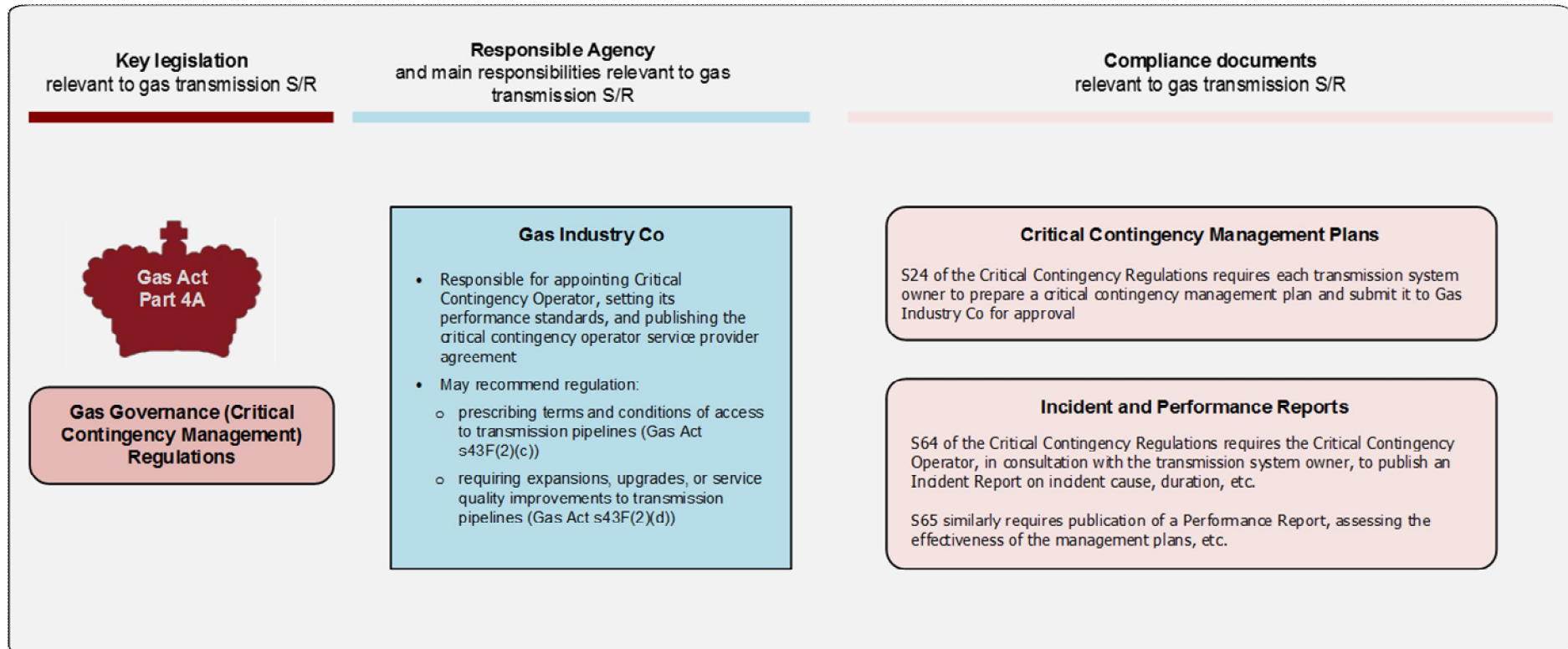


# Requirements arising from Part 4 of Commerce Act





# Requirements arising from Part 4A of Gas Act



# Asset Management Plans (AMPs) contain key S&R information

## AMPs:

1. must include information to enable interested persons to assess whether:
  - a. assets are being managed for the long term;
  - b. the required level of performance is being delivered; and
  - c. costs are efficient and performance efficiencies are being achieved.
2. must be capable of being understood by interested persons; and
3. should provide a sound basis for the on-going assessment of asset-related risks, particularly high impact asset-related risks.

Commerce Commission, Gas Transmission Information  
Disclosure Determination 2012 – (consolidated in 2015), s2.6.2

## Requirements for S&R (s4.2)

- Short-term security (ie meeting short-term changes in demand) requires arrangements for:
  - Allocating capacity
  - Managing pipeline pressures
  - Managing critical contingencies
- Long-term security (ie meeting long-term changes in demand) requires:
  - Design and build standards
  - Operating policies and plans for maintenance/renewal/upgrade
  - Back-stop legislation to enable efficient system expansion

## Requirements for S&R (s4.2)... continued...

- Reliability (ie the dependability of deliveries) requires:
  - Testing and maintenance standards
  - Active management of pipeline operations ('gas control')
  - Pipeline operating procedures (eg a balancing gas operating procedure)
  - Maintenance regimes
- Enhanced S&R (ie to meet the special needs of individual users and unusual investments) requires:
  - Ability for any end-user to discuss its S&R risks with GTB
  - Openness for GTB to negotiate bespoke S&R arrangements
  - Independent party who can order investment if necessary

## Gap analysis: short term security

Requirement	Satisfied by:
Capacity allocation arrangements	<ul style="list-style-type: none"> <li>• MDL's 'flow on nominations' regime</li> <li>• Vector's 'capacity reservation' regime.</li> </ul> <p>But... efficiency concerns (PEA's work)</p>
Pipeline pressure management	<ul style="list-style-type: none"> <li>• Maui pipeline pressures managed according to Maui Balancing Gas Instruction, Sept 2015</li> <li>• Vector's pipeline pressures passively managed to pressure set points</li> </ul> <p>But... underlying MBB arrangements subject to GIC review</p>
Critical contingency management arrangements	<ul style="list-style-type: none"> <li>• the Critical Contingency Regulations.</li> </ul> <p>Continuously improved through (CCO and GIC) critical contingency reviews</p>

## Gap analysis: long term security

Requirement	Satisfied by:
Design and build standards	<ul style="list-style-type: none"> <li>• AS/NZS 2885 standard under HSE Pipeline Regulations</li> <li>• Certificate of Fitness provides assurance of compliance</li> </ul> <p>But... some stakeholders believe an additional security standard (eg n-1 redundancy) may also be required and worth paying for</p>
Operating policies and plans for maintenance / renewal / upgrade	<ul style="list-style-type: none"> <li>• GTBs publish AMPs (as required by Information Disclosure Determination)</li> <li>• GTBs have PIMPs (as required by AS/NZS 2885)</li> </ul> <p>But... some stakeholders do not think the AMPs are adequate and that PIMPs should be published</p>
Back-stop legislation to enable efficient system expansion	<ul style="list-style-type: none"> <li>• Investment arrangements provided for in Part 4 of Commerce Act (including CPP for large investments)</li> <li>• s43F(2)(d) of the Gas Act allows for GIC to recommend regulations to require investment</li> </ul> <p>But... CPP may be too expensive, and Gas Act provision is untested</p>

## Gap analysis: reliability

Requirement	Satisfied by:
Testing and maintenance standards	<ul style="list-style-type: none"> <li>• Required by HSE Pipelines Regulations, MPOC and VTC (AS/NZS 2885, NZS 5259, NZS 5442 etc)</li> <li>• Reviewed during Certificate of Fitness process</li> </ul>
Active management of pipeline operations	<ul style="list-style-type: none"> <li>• Gas Control centre operating to RPO standard</li> </ul>
Pipeline operating procedures (eg a balancing gas operating procedure)	<ul style="list-style-type: none"> <li>• Each GTB has operating procedures and PIMPs</li> <li>• Reviewed during Certificate of Fitness process</li> </ul> <p>But... PIMPs and some operating procedures are not public</p>
Maintenance regimes	<ul style="list-style-type: none"> <li>• Maintenance regime described in AMPs and reviewed during Certificate of Fitness process</li> </ul> <p>But... some stakeholders do not think the AMPs are adequate and that PIMPs should be published</p>

## Gap analysis: enhanced S&R

Requirement	Satisfied by:
Ability for any end-user to discuss its S&R risks with GTB	<ul style="list-style-type: none"> <li>• GTBs have previously done this and are willing</li> </ul>
Openness for GTB to negotiate bespoke S&R arrangements	<ul style="list-style-type: none"> <li>• GTBs have previously done this and are willing</li> </ul>
Independent party who can order investment if necessary	<ul style="list-style-type: none"> <li>• s43F(2)(d) of the Gas Act provides that Gas Industry Co may recommend that regulations be introduced to enable an investment to be made</li> </ul> <p>But... this provision is untested and it may be difficult to require parties who do not value the marginal increase in enhanced S&amp;R to pay for it</p>



## Conclusions of S&R issues paper

- Primary responsibility for transmission S&R lies with GTBs, operating within HSW Act/Commerce Act/Gas Act framework
- Regulatory agencies – WorkSafe NZ/MBIE/Commerce Commission/GIC – have well defined roles with very little overlap
- GTB's have strong incentives – reputational, commercial and statutory – to deliver effective S&R
- All arrangements necessary for S&R are in place... but
  - Some untested (CPP arrangements, and Gas Act s43F(2)(d))
  - Some under GIC review (capacity allocation and balancing)
  - Some information disclosures can be improved

# Suggested action points

- The new GTB:
  - address the capacity allocation issues identified by the PEA
  - work with stakeholders to improve AMPs and other disclosures
  - work with any end-user who wants to assess S&R of its deliveries
- GIC:
  - review new balancing arrangements
  - continue to work with CC to ensure no duplication
- GIC and stakeholders:
  - work with CC on IM Review and Price-Quality reset to allow for appropriate constraints/incentives on investment

# Feedback

- Submissions invited by 5pm on Friday 10 June 2016