



Canada Energy
Regulator

Régie de l'énergie
du Canada

Advancing Safety Culture: The Canadian Pipeline Industry Experience

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Research and Innovation

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Who is the CER?



Federal energy regulator of interprovincial and international pipelines and power lines, select offshore oil and gas exploration/production activities, and offshore renewables



Core Responsibilities include safety and environment oversight, energy adjudication, energy information, and engagement

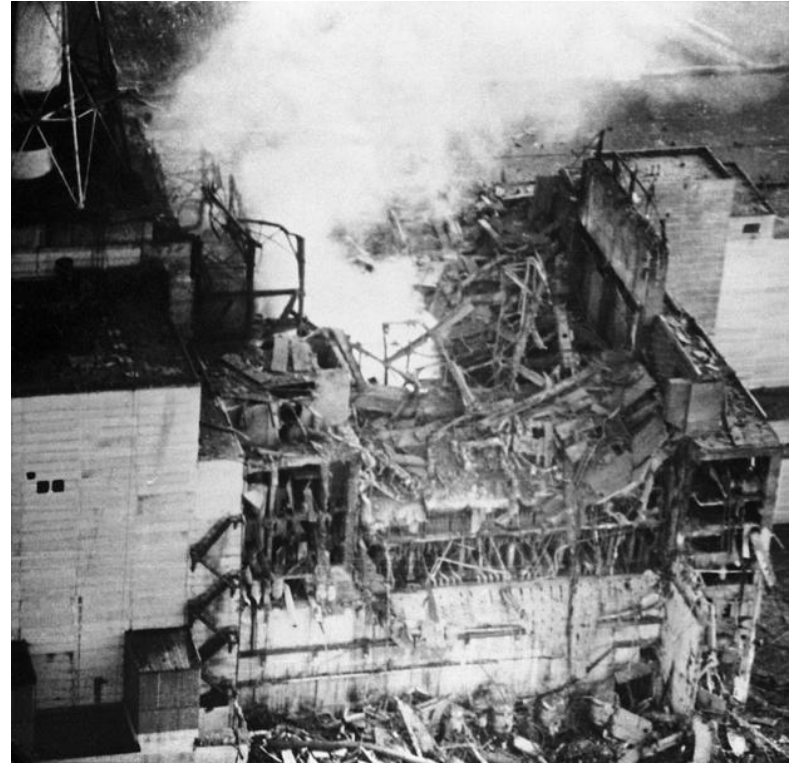


Compliance verification activities (i.e., inspections, audits) and enforcement actions are applied across multiple protection programs (i.e., safety, security, environmental protection, pipeline integrity, emergency management and damage prevention)



Safety Culture

“the attitudes, values, norms and beliefs, which a particular group of people share with respect to risk and safety”*



*Source: Mearns, K., Flin, R., Gordon, R. & Fleming, M. (1998). Measuring safety culture in the offshore oil industry. *Work and Stress*, 12(3), 238-254.



What Company Says It Will Do

- Safety is our top priority
- We empower employees to stop work if unsafe
- We're committed to learning and continual improvement

Disconnect



What Actually Gets Done in Practice

- Production targets override safety
- Employees fear repercussions for speaking up
- Lessons are not systematically applied



Our Philosophy

Meaningful improvements in safety culture need to develop organically inside organizations. Turning SC advancement into a “check the box” compliance activity is counterproductive.



Regulators can influence safety culture through...

Enforcement of
management system and
technical regs (OPR)

Clearly articulating our
expectations regarding
safety culture

Promotion and Guidance
(outreach, collaboration, and
sharing of practices & tools)

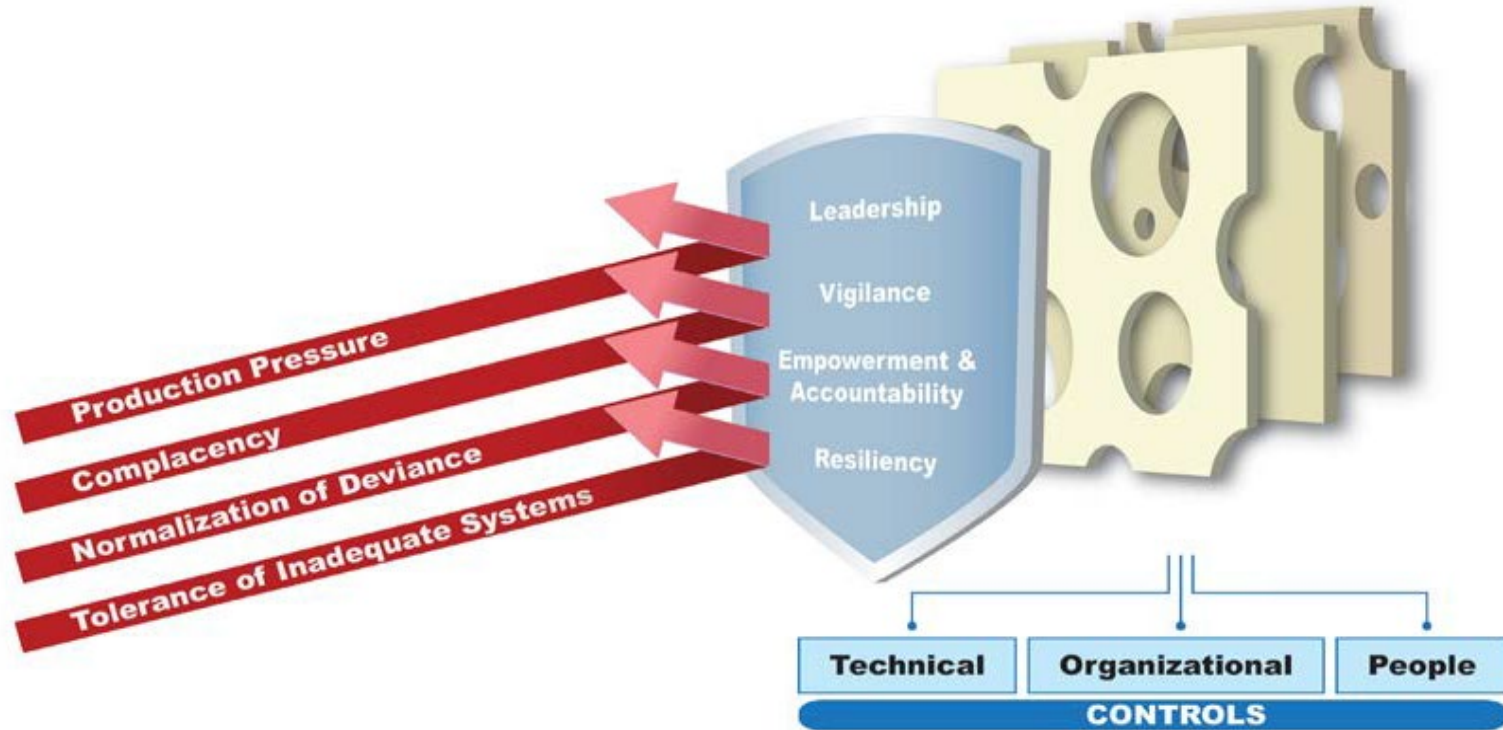


Statement on Safety Culture

- Companies are aware of and understand the role that culture plays in preventing catastrophic (organizational) accidents
- Leaders establish and foster a healthy safety culture through their actions and decisions
- Companies build and sustain a positive safety culture while continually scrutinizing their organizations for potential cultural threats



CER Safety Culture Framework





CER Safety Culture Strategic Goals

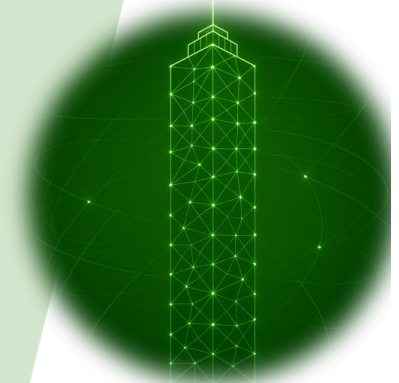
SYSTEM INFLUENCE



The CER will take a system-wide approach to influencing safety culture to further enhance industry's management of threats to people and the environment.

Focus is on **outreach and collaboration** across industry (e.g., workshops, developing guidance and tools).

COMPANY PERFORMANCE



The CER will enhance the understanding and detection of human and organizational factors (HOFs) to support effective risk management and improved safety culture maturity.

Focus is on **gathering and sharing insights and data** with individual companies to facilitate learning and improvement.



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Advancing Industry Safety Culture

Building industry maturity through SC focused dialogue and engagement



Statement on
Safety Culture with
framework and
suite of safety
culture indicators



Web based
external Learning
Portal with practical
tools and guidance
documents



CSA document
Human and
Organizational
Factors for Optimal
Pipeline
Performance



Outreach including
annual workshops
to promote
learning, sharing,
and networking



Feedback to
evaluate value
added by our
efforts to support
continual
improvement



Advancing Regulator Oversight Culture

Building maturity through system sight, learning and continual improvement



Compliance mentality as cultural phenomenon understood as contributing to industry dependency



Compliance and enforcement focus needs to evolve to include greater emphasis on education and promotion



Systems thinking maturity and reticence to oversimplify increasingly complex issues and workplace contexts



Joint SC and HOF journey – Learning together through dialogue and humility



Regulatory Experimentation – Thoughtful risk taking in relationship with industry partners and others



OECD Nuclear Energy Agency Finding

Each party influences the safety culture of the other through:

- the communications, relationships and behaviours of staff at the interface between the two organisations

... which are influenced by:

- the regulatory regime and the leadership, management and capability of each organisation

... and in turn are shaped by:

- each party's ability to learn and improve.

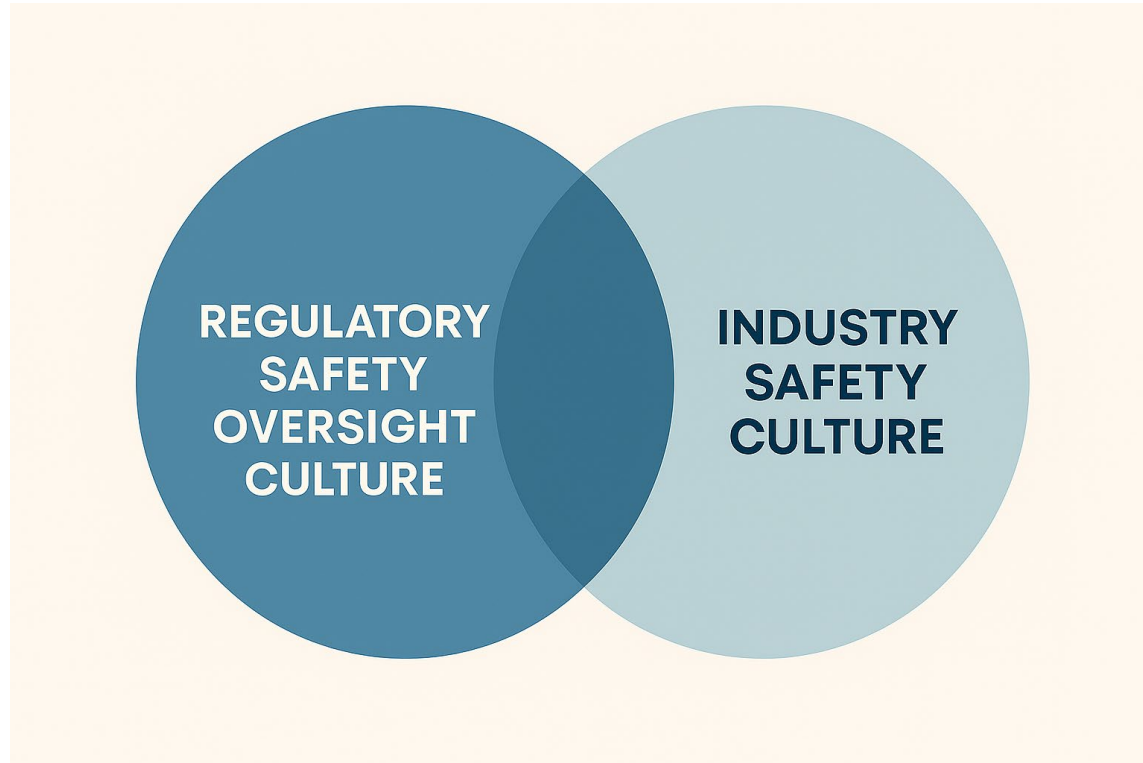




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Improving the Safety System





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Resources/References

CER Statement on Safety Culture (includes background and significance of safety culture, safety culture framework) <https://www.cer-rec.gc.ca/en/safety-environment/safety-culture/statement-safety-culture/>

CER Learning Portal (practical tools including safety moments and guidance documents)

<https://www.cer-rec.gc.ca/en/safety-environment/safety-culture/safety-culture-learning-portal>

DRF Safety Culture Dashboard

[DRF Safety Culture-V2 | Tableau Public](#)

Safety Culture 101 E-Learning Modules

English: <https://www.cer-rec.gc.ca/en/safety-environment/safety-culture/safety-culture-learning-portal/#s3>