

# ARE ENVIRONMENTAL LAWS STIFLING INNOVATION?

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Legal Briefings - By **Madeleine Simpson**

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The mining industry faces increasing pressure from governments and communities to reduce the environmental impacts of mining operations. In response, the development of 'green technologies', such as improved recycling and wastewater treatment practices, has accelerated.

Despite this, the adoption of innovative technologies by mine operators remains sluggish, leading experts to conclude that there is an *"accumulated deficit of transformational innovation in the mining industry"* (Ernst & Young, 2014).

This deficit has been attributed to such diverse factors as the scale of mining operations, industry culture and risk aversion in the face of falling commodity prices. However, the Department of National Resources Canada (**NRCan**), as part of its 'Green Mining Initiative', has sought an alternative explanation. In taking a holistic view of mining innovation, NRCan has questioned the role that environmental law plays in supporting the adoption of green technologies.

NRCan's Green Mining Initiative (**GMI**) was announced in May 2009, and *"targets the development of innovative energy-efficient technologies required for mining to leave behind only clean water, rehabilitated landscapes and healthy ecosystems"* (NRCan, 2015). The GMI has overseen the implementation of groundbreaking industry innovations such as the installation of an automated mine ventilation system in an underground mine in Sudbury, Ontario, which reduced the project's energy consumption by 40%.

In order to continue this success, NRCan undertook to investigate whether there existed regulatory and legislative barriers to the implementation of green technology. Two studies, by Delphi Group (2010) and Myers Norris Penny (2011), were commissioned. Both studies concluded that while environmental regulations did not technically prevent the adoption of new technologies, they might nevertheless have that effect. There were two key reasons identified for this:

## 1. Uncertainty surrounding approvals for new technologies

Obtaining approval for a mining project often requires demonstration of the likely environmental impacts of that project. The use of new technologies without demonstrated environmental track records increases the risk of an approval being delayed or denied. Companies may be unable or unwilling to devote time and resources to producing evidence of a new technology's performance.

The GMI has addressed this by undertaking pre-competitive research, and supporting pilot and demonstration schemes for new technologies. This alleviates the burden on first movers by allowing industry to be "first to be second" in the implementation of new technologies.

## 2. Uncertainty as to regulatory requirements

Regulatory frameworks which are designed to be flexible may unintentionally create uncertainty. In the commissioned studies, members of the mining industry noted that terms such as 'green', 'world class' and 'clean air' used in environmental regulations were insufficiently prescriptive. Where companies are uncertain of the exact requirements of regulation, they may be less willing to risk investing in new technologies.

The commissioned studies recommended increasing communication and collaboration between government and industry. This would help make industry aware of governmental expectations, and avoid uncertainty about legislative requirements.

NRCan's vision of a future of "*clean water, rehabilitated landscapes and healthy ecosystems*" may indeed be a real possibility for the mining industry. However, the industry's ability to meet these expectations requires a framework for approvals conducive to the introduction of new technologies, and clear legislative requirements.

Arguably, the Queensland Government's focus on outcomes based conditioning instead of a traditional prescriptive approach is paving the way to achieving innovation in mining.

**This article was written by Madeline Simpson, Special Counsel, Brisbane.**

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