



Pipeline versus Rail Transport

Data Types: Geology, production, environmental statistics

Challenge Details: Crude or refined oil and gas products need to be transported in large volumes over great distances. Overland transportation typically makes use of pipeline or rail modes of transportation. However, plans to develop new pipelines in order to accommodate increased production capacity from unconventional resource development have increasingly been met with stiff public opposition.

This opposition to pipeline expansion can lead to the unintended consequence of increasing reliance on rail transportation, which is less safe. One aspect of such opposition is addressing the *Prophecy of the Black Snake*, interpreted by some to be a gas pipeline, which is embedded in Indigenous cultural beliefs.

In this context, it is useful to consider the regulatory framework (or lack thereof) for other types of land use. For example, recent proposals to install a Calgary–Edmonton or Toronto–Montreal hyperloop system would involve land use and environmental impacts similar to pipelines, yet there is no existing regulatory framework for the development of hyperloop corridors.

Competing public perception, sociopolitical, economic and regulatory aspects of these different types of developments will be major factors with respect to innovation, investment and environmental consequences.

Questions:

- (1) Given the environmental, economic and internationally political risks, how might transportation of oil and gas products by rail and by pipeline be evaluated?
- (2) How do applicable regulatory processes in Canada compare with other jurisdictions?
- (3) Given the (remote) locations of most unconventional oil and gas extraction sites, what is the spatial correlation of pipeline risk to increase in tight gas production?
- (4) What are the economic and political implications of limited export capacity?

THINK  TANK



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