

Karena Shaw and Ben Parfitt: Get the fracking facts on shale gas in B.C.

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By Karena Shaw and Ben Parfitt

Natural gas is not and never has been a clean fuel. Yet almost daily, industry and government alike assert that it is a vitally important "transition fuel" that must be harnessed in a global effort to lower global greenhouse gas emissions.

Premier Christy Clark and Energy Minister Rich Coleman have argued this for almost a year now. They want to export up to four trillion cubic feet of natural gas per year from B.C. Our gas, they say, could help booming Asian economies lower their dependence on dirty coal.

But peel away the green veneer of such assertions, and questions arise.

Will countries like China with their skyrocketing energy demands actually lower their coal consumption by switching to natural gas, or will they simply burn more coal and more gas? How can we produce vastly more gas here at home, when our government by law is committed to reduce greenhouse gas emissions? And what about other environmental costs

associated with such a stunning increase in gas exports, for example a massive rise in water use and subsequent water contamination?

Delve into such questions, and government and industry claims that B.C.'s Natural Gas Strategy provides a "solution" to today's vexing climate challenges appear to be not only unsubstantiated but reckless greenwashing.

Viewed narrowly, natural gas has advantages over coal and diesel fuel. When all three are combusted natural gas has fewer greenhouse gas emissions. But when the source for much of B.C.'s projected natural gas production is considered—shale rock—a broader view is required.

As the industry targets this new frontier, there will be sharp increases in hydraulic fracturing, or fracking, operations to free the trapped gas. This means that tremendous amounts of water, sand, and chemicals will be pressure-pumped deep underground using diesel-fired compressors to create cracks or fractures in the rock that allow the trapped gas to be released.

How much water? Well consider this: In northeast B.C. today, fracking operations at just one one shale gas pad with a dozen wells on it will toxify the equivalent of all the water in Saanich's Elk and Beaver lakes, where Canada's Olympic rowing teams train. This will have to be repeated thousands of times to achieve the government's export targets. Such realities underscore the need for the province to adhere to its commitments to renew B.C.'s century-old Water Act for 21st century realities, including climate change.

Currently, the greenhouse gas emissions associated with natural gas produced from such water-intensive operations are poorly understood. Debate revolves around numbers derived from wildly different computer models. Some models estimate that the emissions associated with shale gas production are only slightly higher than those for conventional gas, while others place them on par with coal.

Numbers derived from actual field studies are, however, distressingly rare. The only peer-reviewed field-based study, which occurred in Colorado, a state where fracking operations are well advanced, concluded that the higher estimates may be closer to the mark. In fact, the study found that models used by the U.S. Environmental Protection Agency, among others, underestimated actual emissions by as much as half.

This does not instill confidence that B.C. can meet its ambitious climate change goals, particularly should gas production in the province's remote Horn River Basin near Fort Nelson skyrocket. Such gas is unusually high in CO₂, which must be stripped away before the gas can be piped and used. Currently, the stripped CO₂ is simply vented to the atmosphere rather than captured and stored.

Public confidence is further undermined when neither the government nor industry appears keen to do field studies that would quantify the emissions associated with producing such gas, processing it, piping it to the coast, then liquefying it and pumping it onto tankers for shipment to Asian markets.

With both the government and Opposition expressing full or qualified support for as much as a quintupling of natural gas production in B.C., a top public policy priority should be to get the facts, especially when the future fate of our shared water resources is considered.

Recently, members of the Fort Nelson First Nation raised objections to a potentially massive

giveaway of water rights in their traditional territory to pave the way for accelerated shale gas production. Much like the absence of true field data on shale gas greenhouse gas emissions, the nation pointed to a dearth of baseline information on water resources in their territory.

A responsible government or government in waiting would acknowledge the obvious: we can't in good conscience proceed with a massive increase in gas exports in the absence of basic information—information that is obtainable given the will, and which the government should be obliged to publish.

Continued obfuscation simply increases future risks. And that is unacceptable.

Article Footer:

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