

2. High environmental degradation related to global diversification of fossil fuel extraction.

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As conventional sources of oil are reaching their peak, prices rise and make unconventional oil more attractive. This has led to the development of the Oil Sands in Alberta, drilling in the Gulf of Mexico, exploration of the Arctic Ocean and other riskier fossil fuel sources around the world. This oil is necessary to meet the demand from consumers but leads to environmental degradation.

The future of the Oil Sands Plenary Session addressed the Oil Sands from a regulatory, environmental and corporate perspective. It was the shared vision of the panellists that this activity in Alberta must continue to be developed sustainably for the benefit of the economy and the environment rather than a choice of one or the other. Reduced regional environmental impacts and the emissions of greenhouse gases from production must continue to be pursued. This is being addressed by most oil companies, at least to the point of regulatory requirements. Jennifer Grant from the Pembina Institute, however, shared a report published by the Royal Society of Canada that says, "The regulatory capacity of the Alberta and Canadian Governments does not appear to have kept pace with rapid expansion" (http://www.rsc.ca/expertpanels_reports.php). Greater governmental oversight is needed from the Government of Alberta, or intervention from the federal government through a National Energy Strategy. Public awareness and pressure on these governments is the only way to address these concerns. It must be noted, however, that this industry is an important part of the Canadian economy. Public awareness and policy are addressed in Unsolvables Energy Problems #3 and #10 respectively.

Although politicians may weigh economic benefits and environmental impacts, many have argued from a more ethical ideology. Canada only emits 2% of global GHG Emissions and Oil Sands production contributes only 5% of Canadian GHG Emissions, resulting in only a minor impact on global climate systems. This does not change the fact that the Oil Sands

enable countries to consume more fossil fuels as oppose to creating incentive to develop alternative energy sources. Without simultaneous action from all regions of the world, however, countries will be unwilling to put themselves in a less favourable position. Dr. Mark Jaccard noted that such united action is difficult, especially due to the fact of the "perception of equity", a barrier of using different standards directed by self interest. This issue is very interconnected with Unsolvable Energy Problem #6. Dr. Mark Jaccard and Dr. Rajendra Pachauri were both very adamant that a carbon tax is essential to addressing the issue region by region. This redistributes capital and success from fossil fuel development to renewable energy sources, levelling the playing field.

Similarly there is debate over the Northern Gateway Pipeline. Environmental risks are strongly being considered in this opportunity to export petroleum to Asia through a pipeline connecting Alberta and British Columbia. "[The Pipeline] would imply a lot of short term, immediate employment ... and provide a source of economic upturn. If you think irrespective of an election that is going to come four years down the lane, if you really think long term ... you should transition from hydrocarbon based non-renewable source of energy to renewable sources. But it's not going to happen overnight." Salman (Canadian Delegate)

