Personal Perspectives on the Alberta Oilsands

Alberta Energy Tour

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Area of oil sands operations

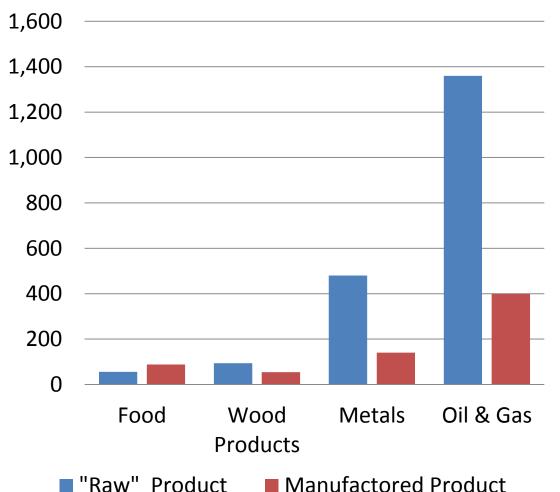


Natural resources are an essential source of valued-added jobs for Canada.

Canadian businesses are not fully capturing the benefit from energysector supply chains.

Industry recognizes its impact on the environment, and in many cases has a strong financial interest to reduce energy and water use.

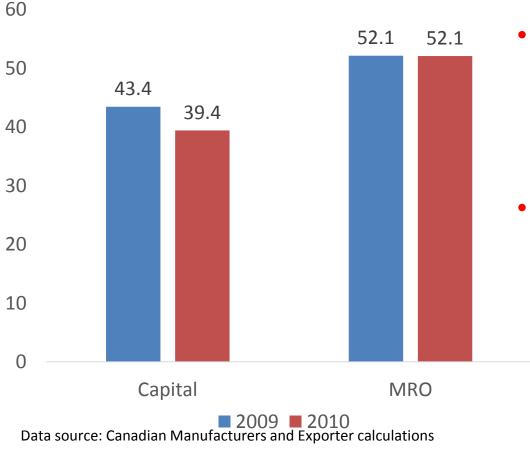
Natural resources *are* a source of valued-added jobs



- Resources sectors tend to create more value added per worker than manufacturing or processing industries.
- For example, oil and gas extraction created \$1.36 *million* per job in 2010, 15 times higher than the national average for all sectors and more than triple the value added per job per year in the petroleum products refining sector.

Source: University of Calgary School of Public Policy

Canadians are not making the most of energy supply chains



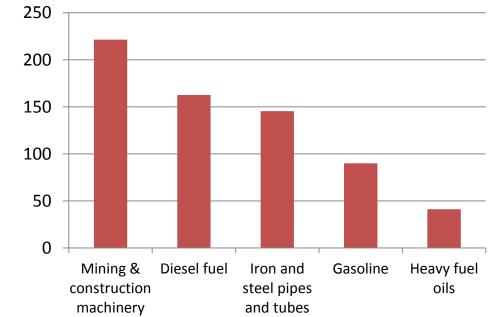
 Only 43% of total manufacturing supply chains into the oil sands in 2010 came from Canadian operations, down from 46.1% in 2009.

This decline cost Canadian manufacturers \$634 million in lost sales

using Statistics Canada data

British Columbia

Top 5 Industries for Manufacturing Sales in NB Generated by Oil Sands, 2010



Source: Canadian Manufacturers and Exporters, 2014

•The direct and indirect impacts of capital investment and MRO expenditures in the oil sands generated the following economic impacts in BC in 2010:

•\$717 million in GDP to the provincial economy

•\$185 million in manufacturing output

•7,556 direct and indirect jobs

•\$32.4 million in provincial and municipal government revenues, not including income taxes

•An estimated \$298 million in wages and salaries

•BC manufacturer's supply chain penetration fell between 2009 and 2010. Had BC manufacturers maintained their 2009 levels of supply chain access, they would have generated \$230 million in sales instead of \$185 million.

Canadians need oil for more then filling their gas tanks

Find the 10 items in this picture **made with oil.**

Medical science can make the seemingly impossible possible, largely thanks to modern technology – much of which relies on oil. Oil is an important component of everything from vitamin capsules and antiseptics to heart valves and artificial limbs. And because so many of the things we rely on every day depend on oil, we want to ensure that it's transported in the safest way possible – through the Energy East Pipeline.

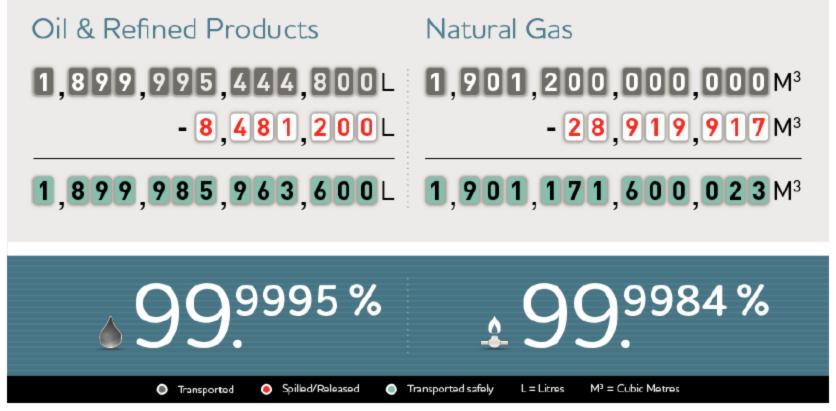
The more you know about oil, the more the pipeline makes sense.

EnergyEastPipeline.com

DID YOU FIND THEM? Heart monitor • Bandages • Plastic tubing • Latex gloves • Intravenous (IV) drip • Scissor handles • Bedding • Anaesthetic machine • Blood pressure monitor • Plastic tray



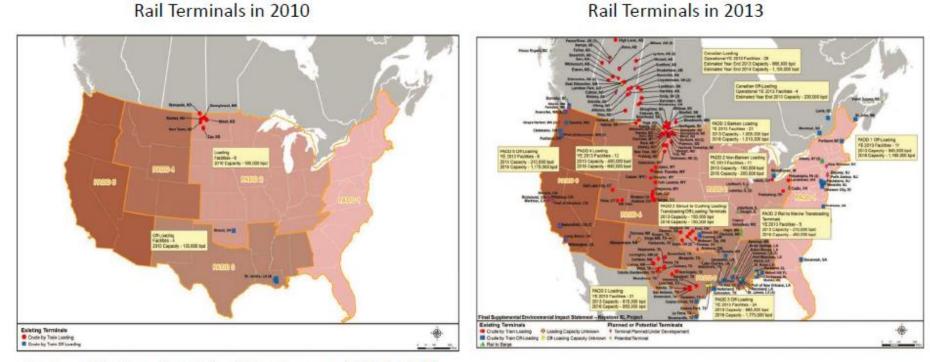
Products arrive safely



Source: CEPA member data

*Between 2002 - 2013

Incredible increase in rail terminals in North America reflect the shortage of pipelines



Source: US State Dept. Final Supplemental EIS for KXL

Pipelines Enable Prosperity

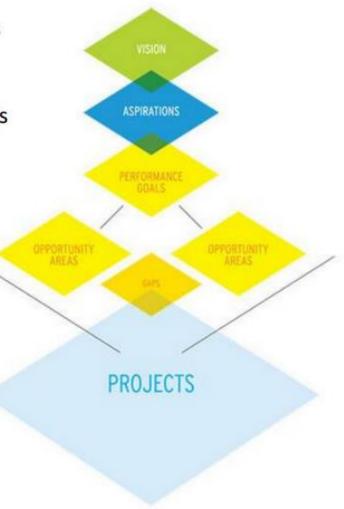


Contraction and a second se

Oil sands operators are working together to find solutions

Canada's Oil Sands Innovation Alliance (COSIA) is an alliance of oil sands producers focused on accelerating the pace of improvement in environmental performance in Canada's oil sands through collaborative action and innovation.

- An alliance of 13 oil sands producers, representing 90 per cent of production from the Canadian oil sands
- Four environmental priority areas;
 - Water
 - Tailings
 - Land
 - Greenhouse Gas Emissions



Oil sands emissions

At 24% of Canada's emissions, the oil & gas sector have the largest share of Canada's GHG emissions. It is also the fastest growing source of Canada's emissions.

Producing gasoline from crude oil or bitumen production and getting it to gas stations account for only 20 to 30% of life cycle emissions. Most of the emissions— 70 to 80%—arise when gasoline is used power cars or trucks.

The emissions from the entire oil sands industry (61 Megatons of CO2 equivalent in 2012) is about the same as the three dirtiest coal plants in the United States (Scherer, James H Miller Jr, and Rockport), which together emit about 58 Megatons of CO2 equivalent.