Petroleum 2

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A geographical principle

- What goes on in society, economy, politics
  - “Process”
- Relates to/creates landscape, place, region
  - “Patterns”
  - The *patterns* of Canadian urban neighbourhood relate to wider *processes*
Space-economy

- The economy not only takes place
  - It creates places, landscapes, regions
  - It arranges space
- The economy depends upon the spaces
  - The landscape sustains the economy
- The landscape is a space-economy
Petroleum

- **Petroleum tends to dominate landscape**
  - Needs of the industry trump the rights of landowners
  - Oilpatch incomes, jobs distort the local economy, housing market
  - Power in society reconfigures around the power of petroleum
  - *Landscape reorganizes around dependence on petroleum*
Petroleum

• Oil
  – Liquid fuels, lubricants, sealants, paving materials

• Natural gas
  – Fuel
  – Most petrochemicals, plastics, pesticides etc.,
Petroleum

• Conventional
  – Oil & gas reserves recoverable through traditional extraction techniques
  – Cheap to extract, rapidly depleting

• Non-conventional
  – Petroleum sources only recoverable with complex technologies
  – Expensive, remain more abundant
Petroleum

- Alberta’s conventional oil & gas output declining
- But exploitation of non-conventional sources growing
  - Tar-sands and oil shales
  - Oil & gas fracking
Natural Gas

• Conventional gas production peaked in North America in 2001
• Meeting N. American gas demand from conventional reserves requires gas imports
  – From Caspian Basin, Niger Delta, Persian Gulf
  – And natural gas shipping, ports
Natural Gas

- Halifax NS gains a major natural gas shipping trade in the 2000s
  - Thanks to NAFTA, serves USA too
  - Halifax picks up petrochemical facilities based on imported gas
Natural Gas

• But demand for natural gas stimulated unconventional gas production
  – Gas fracking

• Fracking technology opens up vast new reserves in North America
  – But with new and serious environmental and social costs
Old Oil & Gas Fields

• Being revived by fracking
  – water extraction, gravel, trucking
• Most are unserved by pipelines
• Have to move the petroleum by railway cars
  – Old branch lines becoming active again or storing tanker cars
  – 28000% increase in rail tanker traffic in Canada since 2009
Lac Megantic Disaster 2013

• An accident involving a train carrying fracked petroleum from the Bakken field

• Kills 50 in Lac Megantic, QC, destroys its downtown, public buildings, archives
Lac Megantic Disaster 2013

- The same train passed through Toronto hours before
  - North of Dupont St, close to the City Archives
  - 10,000 people/sq km in this area
Newfoundland & Labrador

• Has significant reserves of offshore oil & gas
  – Hebron gas field off Labrador
  – Hibernia, White Rose, Terra Nova oil & gas fields off Newfoundland

• Newfoundland & Labrador has passed BC to become Canada’s second largest petroleum producer after Alberta
Newfoundland & Labrador

• In a petroleum boom
  – Terra Nova field shipping serviced out of Bay Bulls and Marystown, St Johns

• Newfoundlanders skilled in Alberta’s oil patch returning home
Natural Gas

- The Peace River country straddling Alberta and BC contains huge reserves of natural gas
  - Conventional and frackable
  - Creating landscape
  - Creating opposition “domestic terrorism”
Petroleum

• Landscapes economically dependent on petroleum as a fuel to drive the space-economy
  – Petroleum-producing places
  – Petroleum-consuming places

• Petroleum:
  – Economic process connects to landscape pattern