New Brunswick Anti-Shale Gas Alliance
Alliance anti-gaz de schiste du N.-B.

www.NoShaleGasNB.ca
Unconventional

Conventional

**Diagram:**
- **Unconventional**
  - Gas reservoir (sandstone)
  - Seal
  - Gas/source rock (shale, coalbed methane)

- **Conventional**
First frack in 1947 in a well in Grant County, Kansas. Approximately 1,000 gallons of fluid. Depth 800 metres (2,400 feet)
Encana in British Columbia

417 million gallons of water
78,400 tons of sand
8 million gallons of fracking chemicals
500 frac intervals
10,000 foot laterals
40,000 hp for fracking pumps
Example: Dallas/Fort Worth Airport Property, Barnett Shale Play

- 53 pads on 18,076 acres, 30 square miles
- Each red dot is a pad
- Each red line is a well
- Almost complete coverage
- Patchwork, mostly ideal units
- One developer
Grand Prairie Area, Alberta
Road Damage vs. Revenues

**TEXAS**
Revenue: $3.6B
Road Damage: $4.0B

**ARKANSAS**
Revenue: $182M
Road Damage: $450M

**PENNSYLVANIA**
Impact Fee Revenue: $204M
Funds to maintain roads: $3.5B

Externalities of shale: Road damage, 2013/04/01, Deborah Rogers, Energy Policy Forum
New Brunswick’s Tourism Industry

- Provides **35,000 jobs annually**
- Contributes over **$110 million in tax revenues** each year.
- Contributes as much to our province’s Gross Domestic Product as **forestry, fishing and agriculture** combined.
Emergency room visits up by 400% per month
Ambulance calls increased by 60%
Traumatic injuries increased by 200%
The 12 medical facilities’ combined debt rose by 46%

Well casing failure - cement failure
Unconventional

Existing Fractures

Conventional

Existing Well

GAS RESERVOIR (SANDSTONE)

GAS/SOURCE ROCK (SHALE, COALBED METHANE)
“The lessons provided by the history of science and technology concerning all major energy sources and many other industrial initiatives show that substantial environmental impacts were typically not anticipated.”
We will be Guinea Pigs or Unwilling Participants in Drug Studies

“One of the issues of greatest toxicological concern is that of the potential impact of untested mixtures of chemicals.”

(Goldstein et al., 2013)
Air Pollution

- Toxic air pollution
- Irreversible lung damage
- 24/7 exposure to airborne toxins
- Pollution travels hundreds of miles from source

“Water contamination is a possibility, air pollution is a certainty.”

Dr. Theo Colburn

“Natural Gas Operations from a Public Health Perspective”. Human and Ecological Risk Assessment, September, 2011
In New Brunswick, this means an increase from $156 million in 2008, to over $4 billion in 2031 due to lost productivity and healthcare costs from exposure to air pollution.
"IT MAY NOT BE A PERFECT WHEEL, BUT IT'S A STATE-OF-THE-ART WHEEL."
NS to Ban Transport of Fracking Wastewater

“If New Brunswick wants to do fracking ... don’t look to the province of Nova Scotia to deal with your fracking waste.”

NS Premier Stephen McNeill
CLIMATE CHANGE

FIVE YEARS AGO WE FEARED THE WORST. BUT IT’S LOOKING EVEN WORSE THAN THAT
The Reality

“We’re the first generation to feel the impacts of climate disruption, and the last generation that can do something about it.”
“What is perhaps more alarming is that where substantial adverse impacts were anticipated, these concerns were dismissed or ignored by those who embraced the expected positive benefits of the economic activities that produced those impacts.”
Cost of Extracting Shale Gas versus Selling Price

Average Annual Selling Price at Henry Hub - 2009-2014: $2.75 to $4.37

Cost of Extraction: $4 to $8
The Short Life of a Shale Gas Well

Industry debt has almost doubled over the last four years. Revenue gained just 5.6%.

The industry has not profited from the actual sale of gas, since 2009.

Costs exceed the cash from operations by many billions of dollars.

Expenses and dividends are met by borrowing and from the sale of company assets, not from sales of gas.

*Energy Information Agency, June 2014*
The largest producers have written off $35 billion in losses.

75 of the 97 energy exploration and production companies rated by Standard & Poor, are below investment grade (‘junk’ status)

80 percent of the 115 firms tracked by Moody's Investors Service are below investment grade.
Existing New Brunswick Wellfields

<table>
<thead>
<tr>
<th>Stoney Creek Field</th>
<th>McCully Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 producing oil wells</td>
<td>29 Producing gas wells</td>
</tr>
<tr>
<td>2 employees</td>
<td>8 Employees (in NB)</td>
</tr>
</tbody>
</table>

Corridor Resources has yet to pay income tax in New Brunswick
THE TRUTH
ABOUT
JOB CREATION

INVEST $1,000,000 IN THE FOLLOWING INDUSTRIES, YOU GET THIS MANY JOBS:

- Natural Gas: 5
- Coal: 7
- Smart Grid: 12
- Wind: 13
- Solar: 14
- Biomass: 16
- Building Retrofits: 17
- Mass Transit/Freight Rail: 22

Source: Political Economy Research Institute at the University of Massachusetts
“Shale drilling has made little difference in job growth in any of the six states we studied.”

“...fewer than four new direct shale-related jobs have been created for each new well drilled.”

Stephen Herzenberg, executive director of the Keystone Research Center in Pennsylvania.
“We know this because we now have data on what happened, not what industry supporters hoped would happen.”

Stephen Herzenberg, executive director of the Keystone Research Center in Pennsylvania.
“Industry supporters have exaggerated the jobs impact in order to minimize, or avoid altogether, taxation, regulation and even careful examination of shale drilling.”

Frank Mauro, executive director of the Fiscal Policy Institute in New York.
Massachusetts DIRECT jobs from Clean Energy Industry

KEY FINDINGS OF THE 2013 MA CLEAN ENERGY INDUSTRY STUDY

- 5,557 clean energy firms
- 79,994 clean energy workers
- 11.8% employment growth rate from 2012 to 2013

In every geographical region, economic sector, and income class.

Massachusetts Clean Energy Center
Jobs in a Clean Energy Economy

- Plumbers/ Pipe fitters
- Electricians/HVAC contractors
- Carpenters/contractors for energy efficiency retrofits
- Sales personnel
- Energy auditors...
Jobs in a Clean Energy Economy

• Entrepreneurs/small businesses
• Managers
• Engineers
• Architects
• Machinists
• Factory Workers
• Deliverymen, Installers and Maintenance Personnel
Shale gas is not a bridge to the future; it is a bridge to nowhere and a gangplank to disaster.
Community Groups for a Moratorium

- Citizens Coalition for Clean Air, Saint John
- Concerned Citizens of Penobsquis
- Corn Hill Area Residents Association
- Conservation Council NB, Fredericton & Moncton
- Council of Canadians, Atlantic, Fredericton, Moncton, Saint John
- Darling Island Fracking Intervention
- Friends of Mount Carleton
- Hampton Water First
- Harvey Action Team
- No Shale Gas, Cocagne
- Maliseet Grand Council
- Memramcook Action
- Moncton Anti-Fracking
- New Brunswickers Against Fracking
- Our Environment, Our Choice, Kent County
- Parents Against Everyday Poisons, Memramcook
- Penniac Anti-Shale Org.
- Petitcodiac Watershed Alliance
- Quality of Life, Hampton/Norton
- Sierra Club, Atlantic NB
- SikniktukMikmaq Rights Coalition
- Stanley Area Action Group
- Sustainable Energy Group, Woodstock
- Tantramar Alliance Against Hydro-Fracking
- Taymouth Environmental Action
- Upper Miramichi Stewardship Alliance
- Upriver Environment Watch
- Water and Environmental Protection for Albert County
Unions, Agricultural Groups and Churches Calling for a Moratorium

- UNIFOR – Canada’s largest energy union with 300,000 members
- Canadian Union of Public Employees (CUPE) - 30,000 members
- Public Service Alliance of Canada – Atlantic Region
- NB National Farmers Union
- Federation of Rural New Brunswickers
- Really Local Harvest Co-operative – South-east NB
- Maritime Conference of the United Church of Canada
- KAIROS – Saint John and area chapter
Municipal and Governing Bodies That Have Called for a Moratorium

- Association francophone des municipalités du Nouveau-Brunswick (51 municipalities)
- Kent Co. Regional Service Commission (14 municipalities)
  - Moncton
  - Hillsborough
  - Alma
  - Sussex Corner
  - Port Elgin
  - Bathurst
  - Quispamsis
  - Minto
  - Sackville
  - Memramcook
  - Hampton
  - Stanley
- Wolastoqiyik First Nations Chiefs and Band Councils of NB, Mi’kmaq and Maliseet Grand Councils
NB Health Professionals that have Called for a Moratorium

- NB College of Family Physicians
- Medical Doctors at Moncton Hospital
- Medical Doctors at Georges Dumont Hospital
- Medical Staff - Sackville Memorial
- Concerned Physicians of Rexton and Richibucto
- New Brunswick Nurses Union
- New Brunswick Lung Association