Extracting Oil, Gas and Public Money in the Arctic: Case studies from Russia and Canada

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If it is needed, consider it’s done:
We will have gardens even here.
Let the snowstorm rage,
If needed, we will melt the ice.

From the Soviet song “Guys from 70° Latitude N” (1968)

Westward from the Davis Strait
'tis there 'twas said to lie,
A sea route to the orient, for which so many died,
Seeking gold and glory,
leaving weathered broken bones,
And a long forgotten lonely cairn of stones.

From the Canadian song “Northwest Passage” (1981)
The Arctic: Root causes of change

Q1. Are extractive industries in the Arctic market-driven? Or pushed by governments?
Q2. Can a “concerned citizen” make sense of it all based on public info?

Anthropogenic Climate Change

Demand for Resources

Government Policy?

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From the Canadian song “Northwest Passage” (1981)
Global Subsidies Initiative (GSI): Inventories of producer support
Roughly same method as OECD’s

<table>
<thead>
<tr>
<th>Country</th>
<th>Scope</th>
<th>Subsidies Identified</th>
<th>Value of Subsidies</th>
<th>Data year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>Upstream oil activities, 3 Provinces</td>
<td>63</td>
<td>$2.8 billion</td>
<td>2008</td>
</tr>
<tr>
<td>Norway</td>
<td>Upstream oil &amp; gas</td>
<td>9</td>
<td>$4 billion</td>
<td>2009</td>
</tr>
<tr>
<td>Russia</td>
<td>Upstream oil &amp; gas, Federal subsidies</td>
<td>30</td>
<td>$14.4 billion</td>
<td>2010</td>
</tr>
</tbody>
</table>

Structure of government support
Direct comparisons IMPOSSIBLE
due to differences in benchmarks and scopes

Canada (oil only), 2009
- Government Revenue Foregone: CAD 1536 million, 54%
- Provision of Goods and Services Below Market Value: CAD 840 million, 30%
- Direct and Indirect Transfer of Funds and Liabilities: CAD 466 million, 16%

Russia (oil & gas), 2010
- Direct and Indirect Transfer of Funds and Liabilities: US$284 million, 2%
- Government Revenue Foregone: US$3197 million, 22%

Norway (oil & gas), 2009
- Government Revenue Foregone: NOK 25017 million 98%
- Direct and Indirect Transfer of Funds and Liabilities: NOK 473 million, 1.9%
- Provision of Goods and Services Below Market Value: NOK 24 million, 0.1%

Russia (oil & gas), 2010
- Provision of Goods and Services Below Market Value: US$10909 million, 76%
Government Support to Extractives: Criteria for case study selection

- Our analysis can be useful to Arctic actors who lack such insights now
- Development has advanced (not a paper project)
- There is enough corporate and media reporting specific to projects
  - Prirazlomnoe (offshore oil), Yamal LNG (onshore gas) in Russia
  - Meadowbank mine (gold) in Canada
Yamal LNG & Prirazlomnoe study in partnership with WWF Russia
Commissioned to Sigra Group (Norway)
Yamal LNG (onshore gas)

- Discovered in 1974, production to start in 2017
- Capacity at 16.5 mln. tonnes of LNG (27 bln. cubic meter of gas) per year
- Corporate capital cost USD 26.9 bln., total cost at USD 33 billion
- 93% of gas already sold in future contracts
- Main market is Asia
- Owners: NOVATEK (60 %), Total (20 %) & CNPC (20 %). NOVATEK to sell 9 %

Source: Yamal LNG
Yamal LNG: very significant government support

- Icebreaker fleet
- LNG tankers
- Airport in Sabetta
- Sea port in Sabetta
- Dredging in the Bay of Ob
- Tax and royalty breaks
Prirazlomnoe (offshore oil)

- Discovered in 1989
- Development started in 1995
- Production started in 2013
- Most tax breaks granted in 2013

- 120 thousand tonnes of oil per day
- Capital cost USD 5.7 bln.
- Since 2006 100% owned by Gazprom

Source: Sigra Group
## Tax & Royalty Breaks

<table>
<thead>
<tr>
<th>YAMAL LNG</th>
<th><strong>Taxes (incl. royalty types)</strong></th>
<th>Granted exemptions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mineral extraction tax</td>
<td>Exemption for 250 bln. cubic meters of gas and 20 million tonnes of condensate during the first 12 years from the start of production</td>
</tr>
<tr>
<td></td>
<td>Export tax</td>
<td>Exemption for LNG and stable gas condensate from the project</td>
</tr>
<tr>
<td></td>
<td>Property tax</td>
<td>Exemption for 250 bln. cubic meters of gas and 20 million tonnes of condensate during the first 12 years from the start of production</td>
</tr>
<tr>
<td></td>
<td>Profit tax</td>
<td>Reduction from 18% to 13.5% for 250 bln. cubic meters of gas during the first 12 years from the start of production</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>PRIRAZLOMNOE (most tax breaks granted in 2013)</th>
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<tr>
<td></td>
<td>Mineral extraction tax</td>
<td>Exemption for 35 mln. tonnes of oil for 7 years starting from 1 January 2015</td>
</tr>
<tr>
<td></td>
<td>Export tax</td>
<td>Reduced rate, roughly 50% of the benchmark</td>
</tr>
<tr>
<td></td>
<td>Property tax</td>
<td>Full exemption</td>
</tr>
</tbody>
</table>

Yamal LNG Analysis

### Project economics including government investment into infrastructure

<table>
<thead>
<tr>
<th></th>
<th>Net Present Value @ 12% discount rate</th>
<th>Internal Rate of Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before taxes</td>
<td>1 813</td>
<td>13,0 %</td>
</tr>
<tr>
<td>After taxes, excluding tax breaks</td>
<td>- 10 962</td>
<td>4,4 %</td>
</tr>
<tr>
<td>After taxes, including tax breaks</td>
<td>- 585</td>
<td>11,6%</td>
</tr>
</tbody>
</table>

### Project economics excluding government investment into infrastructure (theoretical situation)

<table>
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<tr>
<th></th>
<th>Net Present Value</th>
<th>Internal Rate of Return</th>
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</thead>
<tbody>
<tr>
<td>Before taxes</td>
<td>- 3 825</td>
<td>10,1 %</td>
</tr>
<tr>
<td>After taxes, excluding tax breaks</td>
<td>- 16 312</td>
<td>2,1 %</td>
</tr>
<tr>
<td>After taxes, including tax breaks</td>
<td>- 5 811</td>
<td>8,9 %</td>
</tr>
</tbody>
</table>
### Project economics, 2002 base year

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<tr>
<th></th>
<th>Net Present Value @ 12 %</th>
<th>Internal Rate of Return</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before taxes</strong></td>
<td>2 766</td>
<td>19.3 %</td>
</tr>
<tr>
<td><strong>After taxes, excluding tax breaks</strong></td>
<td>-1 345</td>
<td>4.5 %</td>
</tr>
<tr>
<td><strong>After taxes, including tax breaks</strong></td>
<td>656</td>
<td>14.4 %</td>
</tr>
</tbody>
</table>

### Project economics, 2013 base year

<p>| | | |</p>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before taxes</strong></td>
<td>16 265</td>
<td>105.8 %</td>
</tr>
<tr>
<td><strong>After taxes, excluding tax breaks</strong></td>
<td>1 903</td>
<td>27.8 %</td>
</tr>
<tr>
<td><strong>After taxes, including tax breaks</strong></td>
<td>8 863</td>
<td>79.6 %</td>
</tr>
</tbody>
</table>
## Government Revenue
From Yamal LNG and Prirazlomnoe

<table>
<thead>
<tr>
<th>Expected government revenues from taxing Yamal LNG</th>
<th>Government take</th>
<th>Government revenues from taxes</th>
<th>NPV of government revenues @ 8 % discount rate</th>
<th>Gross Tax Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excluding tax breaks</td>
<td>77 %</td>
<td>51,648</td>
<td>19,224</td>
<td>92 %</td>
</tr>
<tr>
<td>Including tax breaks</td>
<td>24 %</td>
<td>15,852</td>
<td>4,351</td>
<td>27 %</td>
</tr>
</tbody>
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<table>
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<tr>
<th>Expected government revenues from Prirazlomnoe</th>
<th>Government take</th>
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<th>NPV of government revenues @ 8 % discount rate</th>
<th>Gross Tax Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excluding tax breaks</td>
<td>92 %</td>
<td>38,920</td>
<td>8,269</td>
<td>97 %</td>
</tr>
<tr>
<td>Including tax breaks</td>
<td>53 %</td>
<td>22,339</td>
<td>4,419</td>
<td>77 %</td>
</tr>
</tbody>
</table>
Why “Cherry-Picked” by Government?

- Strategic importance of both projects (remember glory?)
- Support to military yards through Prirazlomnoe in 1990ies
- Private interests in case of Yamal LNG
- Jobs and expected multiplier effects
- Community investments
- Environmental impacts
Conclusions for Russia

✓ The tax breaks granted to both projects seek to correct the shortcomings of the existing system of oil & gas taxation in Russia. However...

✓ Yamal LNG is not viable without massive government support into infrastructure development

✓ All costs are sunk costs, no point in granting tax breaks to Prirazlomnoe in 2013 and 2014

✓ The “manual control” approach creates further distortions and results in inefficient use of resources as well as underdevelopment of inherently viable fields that have not received such massive government support.
Meadowbank gold mine
Nunavut, Canada

- Discovered in 1987
- Development started in 2007
- Production started in 2010
- Peak production in 2012-2015 expected at 358,000 ounces per annum
- Mine life until 2020
- Capital cost CAD 1.5 bln.
- 100% owned by Agnico Eagle Mines Limited
Meadowbank gold mine: Fiscal treatment

- Complicated system of federal and regional taxes and their redistribution, for example, corporate income tax
- Royalties based on profit and not physical output
- Federal programs to support exploration
- Federal programs to support skill development of the local labour force
- Federal Contaminated Sites Action Plan
- Flow-through share deductions
- Accelerated depreciation & related
- Nunavut fuel tax rebate
Meadowbank gold mine: Benefits to Nunavut

- Rapidly growing and young population in Nunavut needs jobs, currently largely depends on federal subsidies
- Impact & Benefit Agreement (IBA= concluded with the Kivalliq Inuit Association

IBA includes provisions on the Minimum Inuit Employment Goal (MIEG), contracts and Income Enhancing Mechanisms (taxes, royalties and land lease fees to Nunavut), and community investments

![Chart showing financial benefits from 2008 to 2013, including MIEG Provision, Nunavut Based Contracts, and Income Enhancing Mechanisms.]
Q1. Are extractive industries in the Arctic market-driven? Or pushed by governments?

A1. Some projects are market-driven. For others, government support can be very significant.

Q2. Can a “concerned citizen” make sense of it all based on public info?

A2. No unless they have a model.
IISD’s Arctic Initiative: Looking at root causes beyond emotions

Tax revenues («golden eggs»)

What government policies can help extractive projects deliver both tax revenues and direct benefits to the society?

Direct benefits to the society: jobs, contacts, other («simple eggs»)
IISD’s Arctic Initiative

- IISD’s headquarters are in Canada, the current chair of the Arctic Council (offices in Winnipeg, Ottawa, New York, Geneva, Beijing)

- IISD’s Arctic Initiative has four areas of focus:
  - Climate change adaptation & food security
  - Extractive industries’ costs & benefits
  - Infrastructure development (incl. renewables)
  - Transformative knowledge – IISD-IASS breakout Session on 1 November at the Arctic Circle in Reykjavik
Thank you for your attention!

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www.iisd.org
Those who did not believe mean prophecies
And did not lie down in the snow to get a break
Will be rewarded for their solitude
By meeting their soul mates.

From the song “White Silence” by V. Vysotsky (1972)