

Presentation to the House of Lords Select
Committee on the Arctic

1st July, 2014

Arctic opportunities and risks - keeping the licence to operate

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Chief Executive
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Adapting to Change – UK Arctic Policy

- Respect, leadership and co-operation driven by science
- Work towards an Arctic that is safe and secure; well governed in conjunction with indigenous peoples and in line with international law; where policies are developed on the basis of sound science with full regard to the environment; and where only responsible development takes place.

Dr Dougal Goodman, The Foundation for Science and Technology

Aleqa Hammond Prime Minister of Greenland

"I come from a small place. My father was a hunter. We lived in a very traditional way. He fell through the ice when I was seven years old.

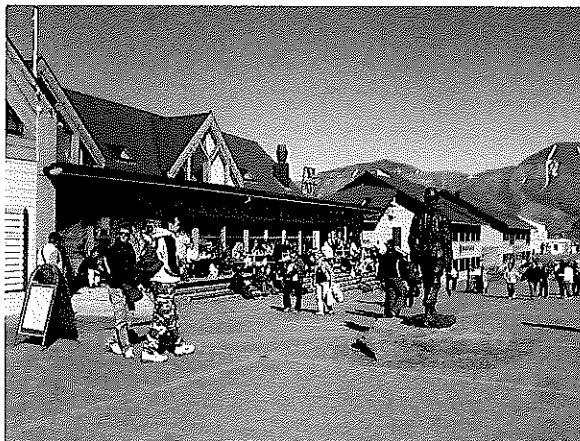
Making a living in a place like that was very hard for my mother and many other families. If your only option is subsistence fishing and hunting, paying for electricity and clothes for the children and ensuring a good worthy life for your family is very hard.

I think many would chose something different if they had an option."

Dr Dougal Goodman, The Foundation for Science and Technology

Longyearbyen, Capital of Svalbard

78.2 N, 15.6 E



Dr Dougal Goodman, The Foundation for Science and Technology

The Circumpolar North

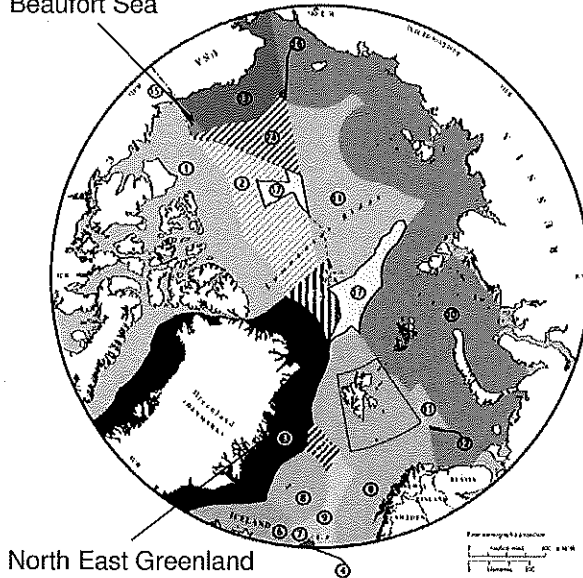
- A region of common concepts and attributes - vegetation, fauna, ice and snow, and sparseness of human habitation
- Not homogeneous in climate - Barents Sea quite different from the Kara Sea - or politically
- Arctic Council and Arctic Economic Council created to look for common ground
- Strong relationships between the indigenous communities



Armstrong, Rogers and Rowley 1978

Dr Dougal Goodman, The Foundation for Science and Technology

Beaufort Sea



All offshore areas for potential development in the short and medium term are in State controlled waters except for a wedge shaped area in the Beaufort Sea claimed by both the US and Canada

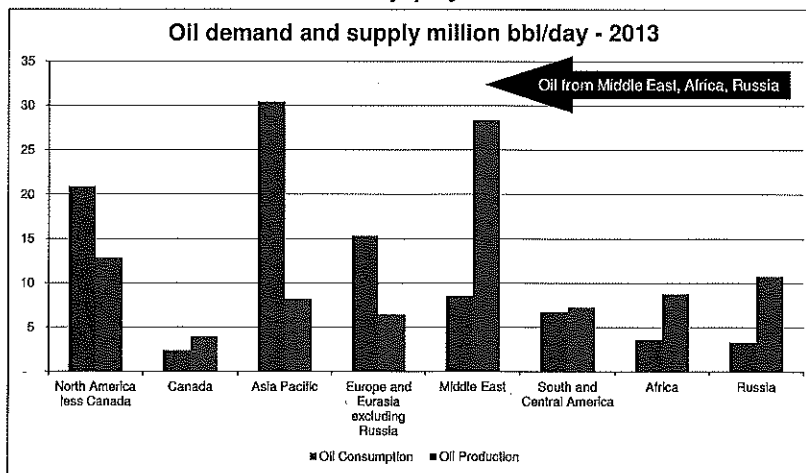
The UN Convention on the Law of the Sea provides an agreed mechanism for extending the zone for rights to resources beyond the seabed Exclusive Economic Zone.

Dr Dougal Goodman, The Foundation for Science and Technology

Context for oil and gas development prospects in the Arctic

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Oil Demand and Supply

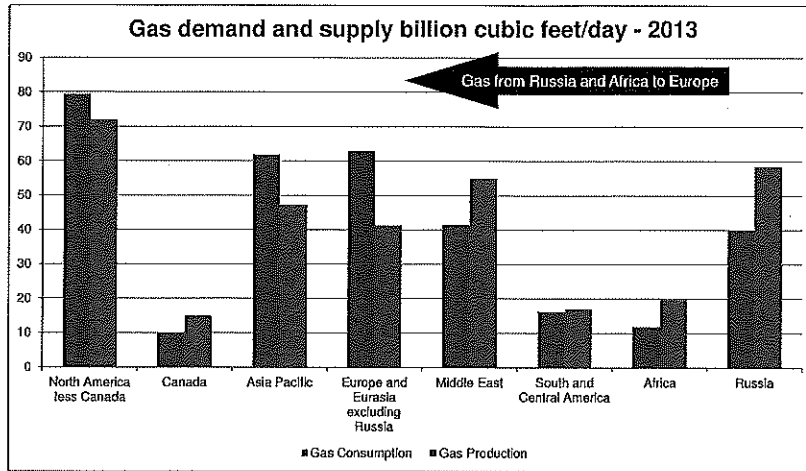


55% of oil demand and 61% of projected growth is from transport
Not easy to substitute transport fuel

BP Statistical Review 2014

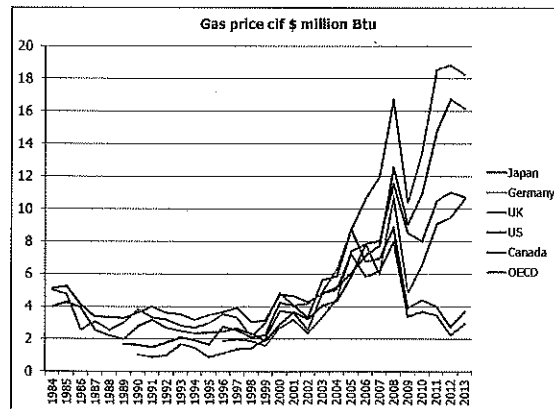
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Gas Demand and Supply



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Gas Price – impact of shale gas

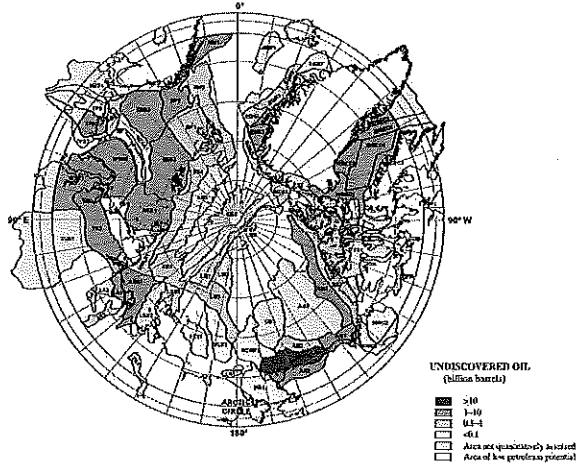


The US gas market has dramatically changed through the development of shale gas – tight oil is the next game changer

Dr Dougal Goodman, The Foundation for Science and Technology

Estimates of Oil Yet to Find

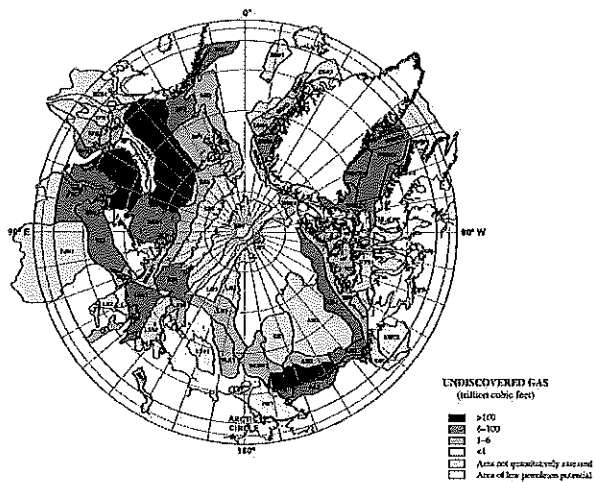
USGS estimate of mean conventional oil in the region is 90 billion bbls



Dr Dougal Goodman, The Foundation for Science and Technology

Estimates of Gas Yet to Find

USGS estimate of mean gas volume is 1,670 Trillion Cubic Feet



Dr Dougal Goodman, The Foundation for Science and Technology