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# Localizing governance of systemic risks: A case study of the Power of Siberia pipeline in Russia

Roman Sidortsov[a,b,*], Aytalina Ivanova[c], Florian Stammler[d,a]

[a] Scott Polar Research Institute, University of Cambridge, United Kingdom
[b] Institute for Energy and the Environment, Vermont Law School, United States
[c] Northeastern Federal University, Yakutsk, Russia
[d] Arctic Centre, University of Lapland, Finland

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ABSTRACT

For the past three decades, risk has occupied center stage in the energy discourse. Systemic risks have proven particularly challenging for government energy planners and corporate executives, as they are characterized by their complexity, uncertainty, ambiguity, and ability to causing ripple effects throughout economic, social, and political structures. In this article we analyze two approaches to governing systemic risks arising out of energy megaprojects, one mandated under the Russian legal and regulatory regime and one employed by the largely indigenous hunters, fishermen, and reindeer herders residing in the Sakha Republic. Our study focuses on the 4000-km-long natural gas transmission system "Power of Siberia" to be constructed in the sub-Arctic part of the region. We employ a complimentary and corroborative analysis of legal texts, fieldwork observations, semi-structured interviews, and transcripts of official meetings. We establish that the approach to risk taken by the people who occupy the land that the Power of Siberia traverses could provide a useful insight for handling systemic risks in connection with pipeline transportation systems. We also determine that the current Russian legal and regulatory regime fails to provide an adequate basis for governing such risks. We conclude the article by identifying four pathways for integrating valuable elements of the indigenous approach into the current legal and regulatory framework.



## 1. Introduction

The term "risk" is *en vogue* in the energy sector. Helge Lund, former President and CEO of Statoil, went as far as to declare that modern oil companies resemble risk management companies, and it is hard to disagree [1]. Oil and gas companies of Statoil's caliber manage complex supply chains, develop technologically advanced projects, and forge and maintain alliances with other energy companies, national governments, and local communities. They are doing this in the environment of price volatility and constantly changing geopolitical landscape.

Lund's statement is hardly an anomaly. "Risk" has become an operative word in virtually all industrial and service sectors. From bisphenol A contained in infant bottles to "too big to fail" financial institutions, risk has become the prism through which the pros and cons of economic activities are assessed. This "rise of risk" in the twentieth and twenty-first centuries is well researched, documented, and conceptualized. This is not said that people did not consider the consequences, both positive and negative, of engaging in various activities prior to the modern age; they certainly did. However, the rapid proliferation of science and technology in both the betterment and destruction of human lives, represented by industrialization and urbanization on one side and two world wars on the other, gave risk a defining role in modernity [2].

The overarching purpose of this article is it to contribute to the investigation of risk's role in the modern energy systems. In order to achieve this objective, we compared and contrasted two approaches to handling risks, one mandated under the applicable legal and regulatory regime in the Sakha Republic located in the Russian North-East and one employed by the largely indigenous

* Corresponding author at: Scott Polar Research Institute, University of Cambridge, United Kingdom.
*E-mail address:* rsidortsov@gmail.com (R. Sidortsov).

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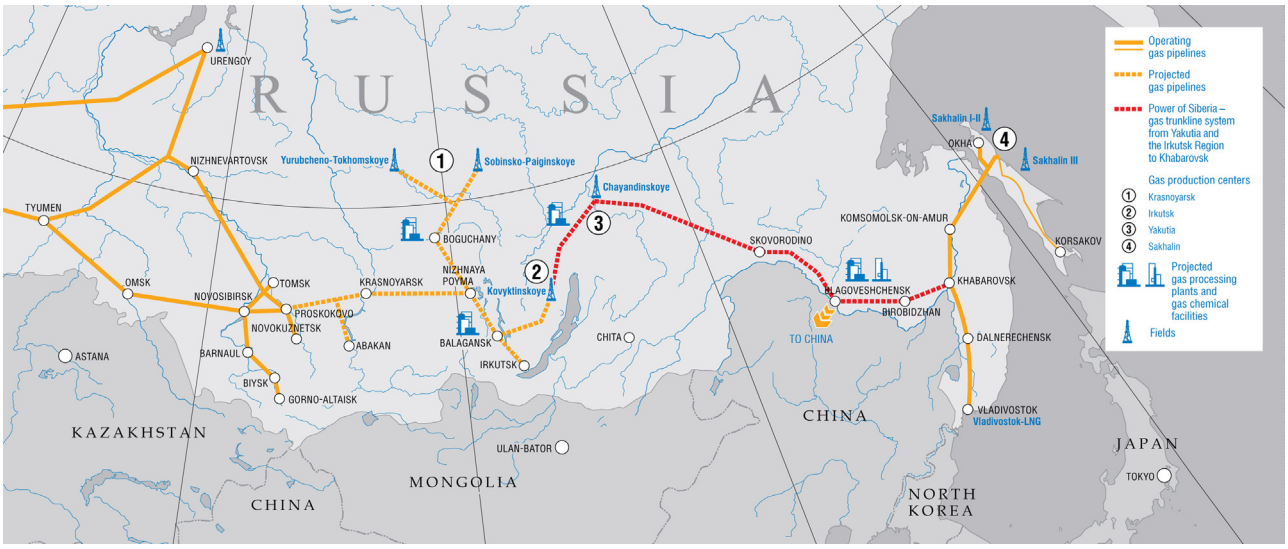


**Fig. 1.** Gazrpom's Natural Gas Production Fields, Exploration Areas, and Transmission and Processing Facilities in Eastern Russia.
Source: gazprom.com[3]

hunters, fishermen, and reindeer herders residing in the province.[1] Our investigation targeted systemic risks arising out of large energy projects and uses the 4000 km-long natural gas transmission system "Power of Siberia" as a case study (Fig. 1). Our ambition was to utilize risk theory, and the concept of risk governance in particular, as the departure point, and combine legal and ethnographic analysis to investigate the "prescribed" and "implemented" or "applied" models of dealing with systemic risks associated with energy megaprojects.

We attempted to fuse the data and analysis that came from four different studies that span five years. We relied on the following sources of data: (1) results of our fieldwork in the Neryungryi and Aldanski districts (ulusy) of the Sakha Republic conducted in November 2014 and January–February 2015; (2) texts of the applicable federal and regional laws and regulations enacted and promulgated to assess various impacts of energy projects; and (3) 99 publicly available transcripts of Russian presidential official meetings, speeches, and remarks between November 2008 and March 2015 in which matters pertinent to the energy sector were discussed.

Reindeer herders, hunters, and fishermen of the Neryungryi and Aldanski districts of the Sakha Republic are ethnically either Yakut (Sakha) or Evenki. Only the latter of which are officially recognized as indigenous, while the former count as a non-Russian "titular nation" that has its own administrative unit in the Russian Federation called Republic of Sakha (Yakutia). The latter is Russia's largest territorial unit, where nearly one million people inhabit a territory of just over 3 million km$^2$ [4]. While they officially all live in settlements, such as the villages of Iengra and Khatystyr, they lead a mobile lifestyle, spending much time in the forest. They often also live in the bigger towns of Neryungryi and Aldan, where all the administration and infrastructure are concentrated. This multi-sited lifestyle influences their perception of industrial development and its associated risks. They easily navigate between "two worlds" that are as different as the concrete blocks of a socialist city from the expanses and trails in the taiga. This capacity to switch worlds (settings), which has also been mentioned in the ethnographic literature from the Russian Arctic, enables them to make local knowledge more relevant for industrial development settings [5,6].

Fieldwork was carried out using a novel interdisciplinary approach, where an anthropologist and a legal scholar together visited the places of planned construction and ongoing industrial development. Past experience has shown that local people are particularly concerned with the regulatory framework for industrial development, and their rights to participate in decision making and implementation, during the project appraisal, planning, formal environmental impact assessment (EIA), and construction phases of industrial projects [7]. Thus, the fieldwork benefited from having a legal specialist and a local livelihood specialist on hand to provide insight into local ways of dealing with risk associated with industry projects.

Following anthropological ethics and local sensitivities, we kept our fieldwork approach consciously inductive. The fieldworkers lived for a limited time in the same places and contexts as their research partners, thus gaining substantial insights into the principles and most pressing questions of local life. This crucial background information significantly informed our thinking and, later, our way of writing. The number of person-days in the field (in this case 45), formal interviews (14 for this research), or direct quotes in the article cannot reflect the foundations on which this data is based. Quantification of such data gained through participant observation rather distorts than emphasizes the evidence gained from fieldwork. Though scientists may find participant observation data problematic, as they believe it lacks transparency and testability by outsiders, such data reveals typical and in-depth principles of local perceptions of risks, priorities, and development [8].

Insights gained from living with the people crucially informed the way we conducted semi-structured and unstructured interviews with people in South Yakutia in the catchment area of the Power of Siberia pipeline. The interviewees were chosen based on their ability to give us typical and deep insights into every relevant group of local people. For example, when interviewing representatives from two major mining companies in Neryungryi, we chose to speak with those who deal with company social policies and local content. At the municipal government level, we chose to interview employees who are responsible for representing indigenous peoples during industry public hearings. Two inhabitants of

[1] The proper name of the region is the Republic Sakha (Yakutia). The Sakha Republic is a sub-sovereign and territorial unit within the Russian Federation. In this article, we use Sakha and Yakutia interchangeably.

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