

# The Geopolitics of Oil in a Carbon-Constrained World

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## Introduction

Energy issues continue to make headlines in international politics. In May 2014, China placed an oil rig near the disputed Paracel islands, leading to multiple incidents between Vietnamese and Chinese ships. Russia's annexation of Crimea and the conflict in Ukraine has led the EU and the U.S. to adopt several sanctions, including energy sanctions, against Russia in an attempt, as UK Energy Minister Ed Davey put it, to *disarm Russia's energy weapon*.<sup>1</sup> Russia had halted its gas deliveries to Ukraine in June 2014, the third gas cut-off since January 2006.<sup>2</sup> Meanwhile, vast parts of Syria and Iraq are occupied by radical Islamist fighters known as Islamic State of Iraq and Syria (ISIS, also known as ISIL or IS), who reportedly generate \$1 to \$5 million daily from oil theft and sales from seized oil fields and refineries.<sup>3</sup>

Such events illustrate and nourish the continued relevance of a geopolitical view of energy markets and trade. The dominant image of energy geopolitics, reproduced in international news media and by vocal scholars, is revolving around a struggle for access to scarce oil and gas reserves. These energy battles are often forecast to become more prominent in the future as energy demand continues to soar, particularly in the emerging economies, while oil reserves shrink due to rapid depletion of existing fields and fewer discoveries. Faced with increasing scarcity, it is claimed that major consumers will eventually clash, potentially in an armed conflict, as they try to preserve their access to foreign oil and gas supplies in a global *race for what's left* (Klare, 2012). This supposedly inflates the power of energy-rich states, such as Russia, in international relations (Klare, 2009).

Our thesis is that this prevailing view of scarcity-induced conflict over oil and gas resources is lopsided. The argument is developed in two steps. First, we show that oil demand will decline in a 2°C scenario, resulting in excess oil reserves. Second, we argue that this oil abundance opens up a host of new geopolitical risks and threats.

## The Oil Market in a 2°C World

Rather than facing an imminent shortage of hydrocarbons, the world still hosts plenty of oil and gas resources (BP, 2014). This means that, in the coming years, oil production can still expand, although the unit cost of marginal production (also known as: short-run marginal cost) will likely rise (IEA, 2013). However, unabated fossil fuel consumption spells trouble for the ongoing efforts to mitigate climate change. Previous studies have shown that fossil fuel resource constraints are, in and of themselves, unlikely to limit future greenhouse gas emissions (Verbruggen and Al Marchohi, 2010; McCollum et al., 2014). Hence, to avoid dangerous climate change, a sizeable chunk of the world's fossil fuel reserves will need to be left in the ground. Rather than joining those voices who argue that we have entered a new age of plenty (Maugeri, 2012), we argue that the global drive towards decarbonization will result in a shrinking oil market.

This brings us to the questions: when will the demand peak occur, and next: at what rate will use of oil decline? The best answer to these questions is provided in chapter 6 (Clarke, Jiang et al., 2014) of working group III of the IPCC Assessment Report 5. The chapter discusses hundreds of future CO<sub>2</sub> and greenhouse gas (GHG) emission pathways as forecast by all accessible and verifiable models in the world. The hundreds of pathways are assembled into four Representative Concentration Pathways (RCP #, where the number # refers to the radiative forcing in W/m<sup>2</sup> around the year 2100 due to the concentration pathway). RCP 2.6 assumes that global annual GHG emissions (measured in CO<sub>2</sub>-equivalents) peak between 2010-2020, with emissions declining substantially thereafter. Emissions in RCP 4.5 peak around 2040, then decline. In RCP 6, emissions peak around 2080, then decline. In RCP 8.5, emissions continue to rise throughout the 21st century. Only RCP 2.6 covers pathways that are likely to maintain global temperature rise on earth below 2°C. An earlier study, coordinated by some of the IPCC working group III, chapter 6 lead authors, examined the implications for energy use and oil consumption of the four RCPs (Van Vuuren et al., 2011). It found that oil consumption is to drop sharply in RCP 2.6 before 2025, as is illustrated in Figure 1. Put differently, if the world is to abide by the Cancun pledge of limiting anthropogenic climate change to 2°C, global oil use is to decline sharply before 2025.

Falling oil demand in RCP 2.6 around 2020 implies that the oil market will not be characterized by scarcity and shortages, but by relative abundance. The specter of energy abundance does not strip hydrocarbons from their geopolitical

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See footnotes at end of text.

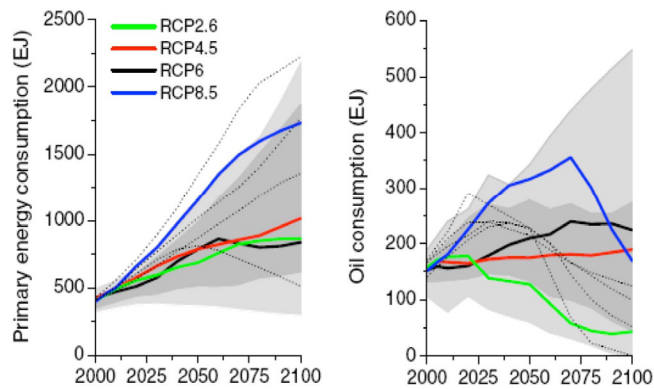


Figure 1. Development of primary energy consumption (direct equivalent) and oil consumption for the four RCPs. The grey area indicates the 98th and 90th percentiles (light/dark grey).

Source: Van Vuuren et al., 2011, p. 18 (Fig. 3).

cal and strategic relations around the world. In fact, energy abundance in itself could stir international conflicts. In the next paragraphs, the prospect of abundance-induced energy conflicts is illustrated with the case of oil because this still is the leading and most globalized energy commodity. We contend that ongoing and future oil conflicts are likely not revolving around the conquering of oil reserves, as is commonly thought, but around keeping the oil reserves of rival producers in the ground so as to sell as much of one's own reserves as possible to fill the remaining quota in a world of shrinking oil demand.

Oil abundance will, of course, affect major oil producers, be they oil exporters, their national oil companies, or the oil majors. Throughout its history, OPEC and especially the Gulf member states holding the largest, low-cost reserves, have been trying to keep the price of oil up, but not to levels where demand destruction would occur. Their main goal is to maximize the rents from oil extraction over a longer time span. This is different from the perspective of the *price hawks* within OPEC, holding much shorter time horizons and keen to maximize their oil export revenues today. The so-called *price doves*, of which Saudi Arabia is the main exponent, consider oil in the ground like having money in the bank.

The prospect of declining oil demand, imposed by shrinking carbon dioxide emissions quota, instigates oil exporters to sell more of their oil (Sinn, 2012). In a market fenced off from unfettered growth, oil exporters will compete with rival exporters for market shares. This competition stimulates a crude oil price collapse. Normally, this would lead to a recovery of the demand for oil by consumers. However, when climate policy-makers really support emissions reductions, they will fill the gap between a low crude price and high final end-use prices of oil products by higher levies. Waisman et al. (2013) find that, irrespective of the oil pricing strategy they choose (either flooding the market with oil to depress prices or cutting back production to trigger price increases and hence maintain revenues despite the drop of oil consumption), Middle-Eastern producers will face a significant drop in oil revenues in a 450 ppm stabilization scenario.

National Oil Companies (NOCs) differ from International Oil Companies (IOCs). The NOCs of net oil-exporting countries, which own the bulk of the global reserves, have the most to lose when oil demand shrinks. Often they operate not just on commercial terms but also serve other political, financial, social and strategic goals for their governments as well (Victor et al., 2013). IOCs, by contrast, are only accountable to their shareholders and put profitability first. They command much more flexibility in moving assets to other global business opportunities. IOCs ally with countries that guarantee safe property rights and high net profit margins. Their profits are less dependent on the height of the crude price than on the volumes of processed oil. In this way IOCs ally with *friendly* NOCs and countries that allow room for privately owned assets, protect investment, and uphold the rule of law.

#### Keeping *Hostile* Oil in the Ground

In a context of abundance, oil producers stand to benefit from situations in which their direct competitors cannot produce at full capacity, for some reason or another. The continued unrest in Libya, Syria, and Iraq, for instance, plays into the hands of all other oil exporters since it helps to keep oil prices high while also preventing large additional oil supplies from reaching international markets. In a *benign*

content, however. Quite the contrary, the existence of too much oil and gas could equally trigger geopolitical strife, conflict, and even war (Verbruggen and Van de Graaf, 2013). The *geopolitics of oil* – which can be defined as the *struggle to define who wins and who loses as oil moves from underground reserves to the point of consumption* (Bridge and Le Billon, 2013: p. 27) – thus revolves around organizing scarcity in the face of prodigious abundance. In the remainder of this article, we focus on how oil-exporting countries, particularly the large reserve holders in the Middle East, could react to the scenario of peak oil demand. Our aim is not to provide a full repertoire of possible counter-moves (quota agreements, price wars, economic diversification, etc.) but rather to illustrate the potential for conflict resulting from a structural oil glut.

#### A Race to Sell Oil

The prospect of a structural oil glut does not mean that oil is decoupled from geopolitics. The geography of oil and gas demand and supply will continue to inform much of the political

interpretation, such outages are the result of internal political dynamics (Hamilton, 2014). In Libya, for example, oil production was briefly restored after the 2011 toppling of the Gaddafi regime, yet strife among different clans and factions has since curbed the country's oil output.

A more *malign* interpretation, however, allows room for deliberate destabilization of rival oil producers by the Western friendly alliance. For example, the radical fighters known as IS (Islamic State) that have seized large parts of Syria and Iraq have allegedly received financing from Gulf petrostates (Marcel, 2014). Emboldened by their own tight oil revolution and the prospect of exporting oil again in the near term, the United States has taken the lead in setting up oil sanctions against Iran and recently also against Russia, backed up by financial sanctions. While it is questionable that the oil producers in the United States profit directly from these sanctions, they certainly helped to ease tensions in Riyadh about a U.S.-driven oil glut in the wake of the fracking revolution (Weinberg, 2014). The way the U.S. benefits from good relations is by having Riyadh as loyal purchaser of billions dollars U.S. weaponry, with money coughed up by European and Far Eastern industrialized countries.

Our unusual interpretation of recent events illustrates how the geopolitics of energy could evolve in the coming years. The central stake would not be to conquer foreign oil and gas fields, but to unlock or close production fields for global markets in order to obtain the maximum revenues (rents) from the limited oil quota allowed to be combusted by humans in the coming decades. Oil producers would be catalogued, as is now already done quite often in an implicit manner, in *friendly oil sources* and *hostile oil sources*. The first category refers to countries that accept and protect foreign investment. It is centered on the axis U.S. (with NATO allies) – Arab Gulf states (assembled in the Gulf Cooperation Council). Hostile oil is led by Iran with a few committed allies (e.g., Venezuela). Many oil producers are drifting in between, several of them dazed by violent events or aggression.

### Conclusion

Our heretical analysis of the crude oil markets and of recent geopolitical events highlights the effects of a structural abundance of fossil fuels. How to organize scarcity in the face of prodigious abundance (Bridge and Wood, 2010), has been a continuous issue in the international oil markets. The history of OPEC revolves around that issue. In light of the strict limits imposed by anthropogenic climate change, we find that abundance rather than scarcity will continue to inform much of the geopolitics of petroleum in the foreseeable years and decades. While the sharp drop in oil prices between June and December 2014 is not primarily related to climate policy, it offers large oil-exporting countries a taste of their fate if governments around the world get serious about climate change mitigation and start implementing credible oil substitution policies.

We outline two possible strategies for oil producers to follow in a world of abundant oil reserves and shrinking demand. One is to sell as much oil as possible, as rapidly as possible, in order to prevent one's own reserves from becoming stranded. Another, more aggressive strategy, is to ensure that rival producers' oil is kept underground. The latter may result from internal strife, conflict or plain warfare, or from organized international boycotts of oil and gas exports. These are possible moves and outcomes on the geopolitical chessboard, inviting further inquiry into the geopolitical consequences of energy abundance, decarbonization and climate change (see, among others, Dupont, 2008; Gleditsch, 2012; Jewell et al., 2014). This analysis also serves as a reminder that the transition to low-carbon energy sources is not just a *walk in the park* but a major socio-technical and political overhaul with winners and losers across the globe.

### Footnotes

<sup>1</sup> Naomi O'Leary, "G7 to begin reducing Russian energy dependency - Ed Davey," Reuters, May 6, 2014.

<sup>2</sup> Despite an agreement in late October, brokered by the EU, gas flows had yet to resume as of early December 2014. "Ukraine draws record high volume of gas from stocks," Reuters, December 4, 2014.

<sup>3</sup> Borzou Daragahi and Erika Solomon, "Fueling Isis Inc.," Financial Times, September 21, 2014.

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