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Global and regional orders and the changing geopolitics of energy

STUART HARRIS*¹

Attention by international relations scholars to the transformation underway stemming from the rise of China has not been matched by that given to the transformation underway in the international energy system. This article looks at three dimensions of that transformation: the end of cheap oil and the rising trend of energy prices; the changing role of the traditional international oil companies and the rise of national oil companies; and the growing energy importance of the Middle East and Russia. It looks at how these changes have already affected or are likely to affect three strategic relationships: US-Middle East; US-China; and Europe-Russia-US. It concludes that more attention needs to be given by scholars to what will be major changes in global geopolitical relationships with considerable consequences for the foreign policies of the major powers.

A level of per capita income in China and India comparable with that of the industrialised countries would, on today's economic model, require a level of energy use beyond the world's energy resource endowment and the absorptive capacity of the planet's ecosystem (IEA 2007: 215).

Transitions often lead to frictions and offer potential for conflict. Consequently, there has been considerable discussion among international relations specialists about the transition under way stemming from the rise of China. The transformation under way in energy geopolitics, however, has received less attention. Increased interest by scholars is being shown in energy alternatives but largely due to global climate change concerns.

The purpose of this article is to note various changes to the international energy system that are structural. Oil and natural gas are once again strategic commodities and it is difficult to look at international politics, or the foreign policies of major countries, without also looking at energy and the increasing competition for energy supplies. While the changing geopolitics may not lead to the dramatic events seen by some observers, there are consequent and

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significant changes under way in the international economic and political system and relations among major states.

This article discusses three global developments with significant geopolitical implications leading to considerable changes in power relations internationally with global and regional order consequences. It then looks briefly at their reflection in three central geopolitical relationships: the USA and the Middle East; the USA and China; and Europe, Russia and the USA. Finally, it looks briefly at the regional implications in Asia.

The first development is a wide, if not uncontested, acceptance that the era of cheap oil is over and that the long-term trend in energy prices is rising. The second is the changed role of the major international oil companies in supplying energy. The third is the growing energy importance of the Middle East, home to most of the world's remaining oil and, with Russia, gas reserves.

Expanding on the first of the three developments, low-cost oil has underpinned the growth in the world economy for over a century, and access to oil at affordable prices is still important. In the US domestic context, this has been expressed more generally as 'preserving the American way of life' based on continuing increases in material well-being, for which access to energy is a prerequisite (Bacevich 2005: 182). If more moderately, that judgement should not be limited to the USA.

Some stylised facts may help, since it is the rising trend in energy trade and prices that underpins the changing geopolitics. In the shorter term, oil and gas demand will assume their upwards trends as the global financial crisis recedes. Longer-term projections (in the International Energy Agency's [IEA] reference case assuming business as usual with no further change in existing policies) envisage that in the next 20 years, global oil demand will rise by about a quarter from 85 to around 105 million barrels a day (mbd). Oil import demand would grow by around a third from 41 mbd to 55 mbd by 2030 (EIA 2009; IEA 2008, 2009). Growth would come mostly from Asia, in particular from China and to a lesser extent India. Assumptions underpinning these projections are that prices will rise from current levels to US\$115 a barrel (in 2008 prices).²

This article deals principally with oil and gas. The international oil market is a global market and the gas market, via liquefied natural gas (LNG), is becoming global; global developments in both markets affect the Asia region. Oil is mainly used for transportation: globally, light motor vehicle numbers are projected to grow from the current 750 million to as high as 1.4 trillion or more by 2030, substantially due to growth in Asia (IEA 2007: 80). Together with expected growth in heavier-duty vehicles and despite related technological developments, given anything near this, oil prices—and other fossil fuel prices—will continue to trend upwards.

In practice, increased supply is not expected to be sufficient to hold trend prices down. The prospective peaking of liquid fuels production, a reality in due course, is subject to many different views regarding timing. In British Petroleum (BP)'s latest statistical review, its chief executive officer, Tony Hayward, said

that 'the world has enough proved reserves of oil, natural gas and coal to meet the world's needs for decades to come'. By including coal, however, some of the statement's relevance is lost; coal remains abundant in resource terms but faces environmental constraints. Yet, for the first time, in 2008 the level of global oil reserves reported fell slightly (BP 2009: 6).

The IEA has become less optimistic: its own and related detailed studies of oil field decline rates found declines proceeding considerably faster than previously assumed (IEA 2008: ch. 10; Sorrell *et al.* 2009: 58–67).³ Consequently, Fatih Birol, the IEA's chief economist, sees an oil problem emerging before 2020 (cited in Connor 2009). His concern is that not only will considerable additional oil need to be found to meet expected added demand but, even with no increase in demand, substantially more would need to be found simply to offset declines in existing fields. Many major fields, including North Sea fields (British and Norwegian) and those in Mexico, are declining, and insufficient new low-cost fields are emerging to replace them. The 2009 IEA annual outlook report presents its conclusions in a lower key, simply noting that the outlook for oil is less rosy than for gas and coal.⁴ It reinforces, nevertheless, the view of early problems and notes that some 25 percent of 2030 global liquid fuel requirements are projected to be met by natural gas liquids and non-conventional oil compared with just over 12 percent in 2008.⁵

It is important to be clear what peak oil means. While ultimately a resource problem will develop, earlier supply problems through investment gaps including spending on enhanced recovery to reduce decline rates seem likely. The impact could look like peak oil much before 2020. Rather than a peak, the oil resource problem seems more likely to be a drawn-out plateau with sizeable price spikes and price dips along the way.

What will be hard to avoid are higher trend prices. As well as prices reflecting demand and supply imbalances, exploration, development and maintenance costs have risen (IEA 2008: 315–7). When found, moreover, new fields are commonly in more difficult areas—politically (Sudan, Nigeria) or geologically (offshore Angola, Brazil and the Arctic)—and, as already noted, greater reliance will be on non-conventional oil (from oil sands, oil shales, etc.) to meet expanded demand. The environmental impacts of non-conventional oil will be considerable; and in both cases costs will be higher. Costs of around US\$70 a barrel at site are common estimates of marginal costs and marginal costs determine market prices (McColl 2009: 4; Stuart *et al.* 2008).

The expectation was noted above that the investments to meet growing demand will likely fall well short of needs. The low oil prices in the 1990s, although helped by Asia's financial crisis, reflected an investment cycle; overinvestment and excess capacity following the 1970s–1980s oil crises were followed by subsequent underinvestment in the 1990s. When the global economic boom started in the 2000s, there was little spare capacity and prices spiked (Harris and Naughten 2006). While from past experience the cycle should now respond, and to some extent it has, it is constrained in the short run

by credit shortages and in the longer term by the second structural change—the changing role of oil companies.

With the rise of the national oil companies (NOCs), the importance of the international oil companies (IOCs), the once powerful ‘Seven Sisters’, has substantially diminished.⁶ Once custodians of much of the globe’s oil reserves (around 80 percent in the late 1960s) and the managers of much of the oil policy of the West and its access to Middle Eastern oil, the top seven IOCs today⁷ hold less than 4 percent of global oil reserves (Jaffe and Soligo 2007: 9). Between 80 and 90 percent of all reserves are held by NOCs. Of the top 10 companies in terms of oil reserves, only one is privately owned—Lukoil, a Russian company (Pirog 2007: 3).

NOCs are often instruments of foreign policy; even when not, they do not always follow economic incentives—or are not allowed to do so by their governments, who source their revenues from these companies. Often the companies are blocked from investing, or even from spending on maintenance, because of the state’s financial needs or social policy commitments. Some, such as Saudi Arabia’s Aramco, the largest NOC, are highly efficient, but elsewhere efficiency is often low because of lack of technology (including the effects of sanctions) or corruption. Consequently, even where reserves exist, they may not be effectively exploited—as in Iran.⁸

The third major structural change is in the geographic location of the energy sector. The remaining oil and gas reserves are increasingly concentrated in the potentially unstable Middle East and Persian Gulf, and in Central Asia and Russia. They account today for nearly two-thirds of existing oil reserves, notably in Saudi Arabia, Iran, Iraq, Kuwait, the United Arab Emirates, all OPEC (Organization of the Petroleum Exporting Countries) countries, and Russia; and just over 70 percent of natural gas reserves are in Russia, Iran and Qatar. The political significance of Africa, South America and the Caspian area is growing, but remains relatively small.

In these circumstances, the potential for energy conflicts—or resource wars—has been raised in the media by academic analysts and by political and institutional leaders such as Russian President Medvedev and head of the IEA, Noburo Tanaka. US reports refer to China’s increasing military capabilities as potentially applying to regional conflicts, including conflicts over resources. The Australian Defence White Paper talks of security risks from tensions over energy supply (Australian Government, Department of Defence 2009: 4.60, 4.63).

While energy is more likely a conflict amplifier than a cause, that amplification could be serious in areas such as the East China Sea, the Arctic Circle, and the Caspian Sea, where military aid from the USA, China and Russia is used extensively to buy loyalty. Mary Kaldor *et al.* (2007) note the disturbing effects of oil rents on countries with weak governmental systems and of ties between the governments and the oil companies. These issues are the micro-geopolitical concerns about within-country competition over control of resources and associated revenues.

The broader macro-geopolitical question relates to the impacts on the foreign policies of major states given the constraints they face in their energy dependencies. The two may overlap, however, as most major governments have pursued energy security policies in developing countries.

Concerns have also increased about vulnerabilities to interruption, and the price consequences, from various sources: terrorism, piracy, weather problems, accidents, political tensions or military conflict. The possibility of deliberate supply interruptions is small and, at times, fears may seem exaggerated. Yet, those perceiving themselves vulnerable may observe that deliberate disruptions have not been uncommon.

In oil industry history, many countries, exporters and importers have used energy and energy infrastructure leverage, not always successfully. The USA and the Netherlands used such leverage against Japan just before World War II; the USA and its Western allies used it against the Soviet Union during the cold war (pipeline steel), and against South Africa, Serbia and Haiti; they also embargoed oil imports from Libya, Iran, Iraq, Sudan and Myanmar (Alhajji 2005; Pape 1997). As well as the Arab oil embargo of 1973, energy leverage has been used by Russia against Baltic and CIS states (Larsson 2006: 262–6). China cut supplies of oil to North Korea for three days in early 2003, ostensibly accidentally but seen widely as a message to Pyongyang on its nuclear weapons program. Moreover, Iran and Venezuela have threatened to cut off oil exports to the USA.

A second concern is the vulnerability of strategic transportation channels, notably from the Middle East and, with natural gas, from Russia. Security of transport of oil and gas has become a growing element of energy security. For sea lanes, various choke points around the world are seen as vulnerable—some 40 percent of all seaborne oil goes through the Hormuz Strait and almost 40 percent goes through the Malacca Straits.

In the competition for energy, where sovereignty is established and with globalisation and interdependence, the traditional objectives of territorial gains have largely given way to cooperation and working within existing institutional frameworks; for example, China is unlikely to use military power to gain energy in Central Asia. This may not be so, however, for ocean territory where sovereignty is disputed.

Changes in the global balance among the major powers include increased US energy import dependence. China, despite concerns about its growing economic power, sees itself as vulnerable to supply interruptions. Russia, feeling badly treated by the West in the Yeltsin years, has scrambled to become a great power again on its energy wealth. Despite the West's efforts to counter OPEC, Saudi Arabia in particular sees itself in the box seat.

Crucially, the geopolitical consequences of the changes reflect the differences between energy exporters and importers. For exporters, the potential exists to use energy as a means of influence—even ultimately as a weapon, offensively or as a deterrent. This is accompanied by substantially increased economic power

from higher energy revenues. Thus, OPEC revenues rose from US\$108 billion in 1998 to US\$968 billion in 2008 (US\$700 billion in the Middle East).⁹ This not only increases their power, but also the ability to fund extremist groups such as the Taliban (Lekic 2009). The Middle Eastern countries have become major investors overseas, often through large sovereign wealth funds. They have also used their funds for military purchases and to buy support elsewhere, as Venezuela has in Latin America.

Energy security is also likely to top or be close to the top of the security and foreign policy agendas, with policies aimed at reducing vulnerability, including providing concessions on non-energy issues. Access to Libya's oil reserves, for example, has been argued as a motive for Britain's release of the convicted Lockerbie bomber to Libya in August 2009 (de Borchgrave 2009; Rachman 2009).

The economic and budgetary vulnerability from higher energy costs will be particularly important for developing countries but will not be limited to them. The oil price spike in 2008–9 is argued to have contributed to turning the US economic slowdown into a recession (Hamilton 2009). Moreover, for developed energy-exporting countries, such as Canada, Dutch disease-type exchange rate problems may emerge.

Although political constraints from energy price rises may arise in many contexts, this article illustrates briefly the geopolitical consequences in several important relationships.

US–Middle East relations

In the USA, energy has been an important geopolitical issue, at least since World War I and the subsequent division of the Ottoman Empire. President Roosevelt established a relationship with King Ibn Saud of Saudi Arabia as World War II was ending to ensure continuing access to Saudi Arabian oil supplies to the USA and the Western allies at reasonable prices, in return for providing security to Saudi Arabia (Yergin 1991: 404–5). Links with Saudi Arabia remained central in US policy even after the Persian Gulf countries' 1970s reassertion of ownership and control of their energy resources.

The Roosevelt deal, however, has gradually fallen apart. For Saudi Arabia, various developments—9/11, the Iraq War, Iraq's Shia majority government, US–Israel policy—made the USA a source of insecurity rather than security. The Saudis, moreover, could not hold oil prices at reasonable levels (Ottway 2009).

Yet, US foreign policy has been constrained in several respects: it was for a long time limited by its need to contain the Soviet Union threat to Middle East oil, a policy known as the 'two pillars' policy—seeing Saudi Arabia and Iran (until 1979) as barriers to that threat.

Following the Carter Doctrine, effectively prompted by the 1979 Iranian Revolution, the US regional presence has become increasingly militarised. The

overall US policy objectives have remained largely unchanged from how Paul Wolfowitz (then US Undersecretary for Defence) specified them in 1992: ensuring access to Persian Gulf oil and providing support for Israel.¹⁰ Nuclear non-proliferation and counterterrorism objectives, however, have since been added.

The USA has tried to diversify oil imports away from the Middle East but that influences US policies towards countries in Africa and South America which offer substantial alternative supply sources. Developments in the Middle East, moreover, remain a vital US interest, not least because they will influence prices for all liquid fuel supplies.

The Middle East is also where Asian powers—China, Japan and India in particular—offer increased strategic competition, with expanded diplomatic, economic and defence assistance links. This responds as well to Saudi Arabia's 'looking East' policy, reflecting its interests in diversifying its export markets to Asia and to the developing interests of China (and India) in Iran, which Iran has reciprocated.

Related US policies have been weakened; the re-emerging regional importance of Iran has posed new challenges not just about its nuclear ambitions but about regional stability and its role in OPEC. Meanwhile, the regional resentments at the US military presence continue to help stimulate Islamic opposition.

Yet, the US military presence is unlikely to be withdrawn. Apart from energy, anti-terrorism and Iran's instability, US protection for many countries in the region, including Saudi Arabia, remains important. Whether the US military presence increases or reduces the risks of disruptions to oil markets has been questioned (Gholz and Press 2007: 11). Nevertheless, a 2006 US Council on Foreign Relations report stressed the importance of a continuing US Middle East presence (Deutch and Schlesinger 2006: 29).

Absent major changes, OPEC countries, with some 62 percent of global oil reserves, and dominated by Middle Eastern producers, are expected to supply much of the added demand expected by 2030. The role of OPEC has changed considerably, however, since the oil price decline in the late 1990s. Until then, there had been a general acceptance that relatively low oil prices were good for producers and consumers. Thus, when oil shocks occurred, OPEC, usually under pressure from Saudi Arabia's capacity to increase production, would soften price spikes.

The oil price collapse in 1998 put great strain on OPEC governments. OPEC agreed to cut production, with the effect that prices rose. Arguing now that cheap oil was harmful to producers while price increases did not greatly affect consumers (OPEC 2009: 74), the idea of obtaining a floor price—around US\$50 a barrel in 2006—entered OPEC thinking (Jaffe and Soligo 2008). It later rose to around US\$70 in 2008–9. Moreover, this is consistent with Osama bin Laden's strong criticism of Saudi rulers for their earlier oil policies.

US–China relations

US and China oil policies

The USA and China are competitors in the liquid fuel market but they also have common interests. They are the two largest importers of energy: the USA imports about two-thirds and China just over half of their respective oil requirements. Given certain assumptions about the success of domestic energy policies, US import demand is not expected to grow significantly, if at all, but, for China in particular, dependency will increase substantially.¹¹

China and the USA share some common supply insecurities, including the reality that their global roles will be challenged by their energy import dependence. The long-standing US debate has reflected a desire to become more energy self-sufficient. An objective of the Obama administration remains to make America energy independent (*White House Blog* 2009). Since it only produces a third of its oil consumption and, at current production levels, its current proven reserves will last about 12 years, that seems increasingly improbable.

A largely mainstream view is that the USA should ensure that global energy markets continue to operate freely, in which case the USA would be able to access its energy requirements and enable others to do so as well. As other countries with growing appetites for oil and gas compete in the same markets to secure preferential market positions, greater foreign policy effort would be needed to maintain market openness at a time when US leverage could be diminishing.

Central to much of the US commentary has been concern at China's increased energy requirements and the actions that China is taking in response. Analysts point to risks that China and the USA will clash over fossil fuels in the Middle East and elsewhere (for example, Blumenthal and Lin 2006).

China's oil import dependence has put energy security high on China's foreign security policy agenda. In response, it pursues political relationships with oil- and gas-exporting countries in Russia, the Middle East, Africa and South America, looking for agreements for future oil and gas supplies; and, through its NOCs, it has engaged in mutual investment relationships in these countries, often seeking equity oil or gas shares.

These actions, however, are regarded as security threats by many US analysts and politicians; an influential advisory commission to Congress considered that China was reducing the oil available on the open international market (US–China Economic and Security Review Commission 2006). In practice, the fears have limited substance. Should tied oil return to China, it would mean less Chinese demand on the open market with the net effect being broadly equal. So far, for economic reasons, equity oil has often not been shipped to China, but sold on the open market. Nevertheless, while such investments and relationships developed with energy-exporting countries will probably not do much to ensure supply, the diplomatic and company relationships established

may reduce risks of supply interruptions. China, moreover, is not alone in such efforts, although it is more active.

The USA has generally, although not always, been comforted by the efforts of its oil companies and has at times used US government influence to gain access for its oil companies in oil-producing countries, including Russia. According to Klare (2008: 20–5), similar policies have been pursued by, among others, the Japanese, French and Italian governments.

US and other Western governments argue that China's investments in politically sensitive or geologically difficult areas, as in the Sudan, enable Western concerns about human rights abuses to be ignored. While such investments increase global oil production, this is often true.

Beyond simply the supply factor, both countries will face likely budgetary and balance of payments pressures as prices increase. The US Census Bureau balance of payments data show that in 2008, oil imports (net of exports) represented over 21 percent of the total value of merchandise imports for the USA; comparable Chinese data indicate 13 percent of merchandise imports. Although prices have fallen from their 2008 peaks (the 2008 average was US\$97 a barrel), they are widely expected to rise again when the economy recovers.

The USA, China and sea lanes

China imports less oil than the USA and a slightly larger share comes overland. Both, however, are heavily reliant on delivery by sea. A major difference, for China, is that China cannot protect its energy transport links. Chinese analysts see the USA with secure access to international oil and gas resources and with military bases around the world to ensure and protect that access and to deny it to others, including China, against which China would have little defence.

The USA claims it provides sea lane security as a public good. For importers, such as China, events such as the *Yinhe* interdiction, together with the bypassing of international law for the Proliferation Security Initiative, raise doubts about the global nature of that public good.

Given that its sea-based imports will increase substantially, predominantly from the Persian Gulf, China's elites fear that a major interruption to its oil supplies, man-made or natural, would undermine the economy. Together with many in PLA (People's Liberation Army) circles reading, or misreading, Mahan, they argue the need for a blue-water navy to protect China's sea lanes against threats, particularly a blockade by the USA in the event of a conflict over Taiwan (Holmes and Yoshihara 2009).

Should China seek to protect its sea lanes, the US Department of Defense would see this as potentially challenging the US navy's accustomed role in protecting international sea lanes and as China being capable of involvement in territorial or resource wars. Although ultimately possible, China's navy has yet to move significantly in that direction (Cozad 2009).

While China's concern is widely, though not universally, held among its elites, concern about sea lane interdiction appears excessive. Chinese discussions of sea lane security have not defined precisely the nature of the threat nor the action that the PLA could take against it. China's fear is basically limited to the USA but, except in a global war, it would be difficult for even the USA to interrupt China's sea lanes (or pipelines), through which its energy flows (Cole 2008).

A US attack on oil shipping to China would involve attacking shipping of other nations, interfering with the third-country tankers (and third-country crews and content origin) and attacking pipelines of friendly or neutral countries. Moreover, the global market effect would immediately come into play—greatly increased shipping and insurance costs, and massive oil price spikes.¹² A recent study noting China's own energy resources and those from Russia and Central Asia, moreover, says that 'contrary to what appears to pass for conventional wisdom ... in the PRC [People's Republic of China], China is not fundamentally vulnerable to a maritime energy blockade in circumstances other than global war' (Collins and Murray 2008; see also Blair *et al.* 2006).

Nevertheless, China not only has a strong fear of a blockage of the Hormuz or Malacca Straits by the major powers, but also by pirates and terrorists. It wants to reduce its vulnerability to sea lane interdiction but its efforts often have geopolitical implications. Thus, its agreement with Myanmar to build an oil and gas pipeline from Myanmar to China goes against Western views of the appropriate treatment of Myanmar (Dasgupta 2009). It also raises India's concerns about China's influence on Myanmar. In addition, it stirs the Western media's interest in China's supposed strategy to establish bases for Indian Ocean surveillance. This was termed by a US defence consultant the 'String of Pearls', but the concept is based 'more on inferences US observers have drawn from Chinese activities in the region than on a coherent national strategy' (Holmes and Yoshihara 2008: 125).

So far, at least, at the official level, the USA and China seem inclined to recognise their common interests in unhampered movement of oil and gas resources and in energy cooperation rather than in unrestrained competition or implicit confrontation (see, for example, US Department of the Treasury 2009).

Russia–Europe relations

European dependence

Russia, the only United Nations Permanent Five net energy exporter, is the second largest oil exporter after Saudi Arabia, the largest exporter of natural gas and holds the world's largest reserves of natural gas. The combined effect of high energy prices and Putin's largely successful efforts to regain control of the natural gas industry and much of the oil industry has enabled Russia to project itself again as a great power. The Russian economy is now heavily dependent on the

energy sector; in 2007, the sector brought in some 60 percent of Russia's export income and around one half of Moscow's revenues (Oliker *et al.* 2009: 48).

Russia's energy policy reflects this dependence. Russia's 2003 foreign energy strategy included the objective of answering 'the strategic interests' of Russia, while being a reliable supplier to its main export market, Europe (Zysk 2009). It links economics and politics by seeking influence over resources where it can and by investing in energy infrastructure in Central Asia, Europe and elsewhere (Ministry of Energy of the Russian Federation 2003). Its 2009 security strategy has a broader coverage (Schroder 2009). Two major foreign policy objectives, however, are linked directly to energy: first, given Russia's dependence on energy exports, it seeks to maximise energy incomes and revenues and to maintain its monopolistic position on gas transportation through its pipelines and downstream infrastructure; and second, it seeks control over the 'near abroad', which it maintains in part through the latter's dependence on the pre-existing pipeline network largely centred on Russia.

A third foreign policy objective is also partly linked to energy. It looks for indirect political influence in Europe for political reasons, including using energy in constraining European Union (EU) and NATO influence on Russian borders. The EU has no effective common energy policy and Russia has been able to pursue a divide-and-rule process by developing closer energy relations notably with Germany and Italy.

As noted earlier, Russia has used its energy power directly for political purposes in the past. A Swedish study calculated that from 1991 on, over 30 of 55 energy interruptions had political underpinnings. They were essentially in the Yeltsin period when there was no coherent Russian energy policy, and against the Baltic States, Ukraine and Moldova (Hedenskog and Larsson 2007; see also Fredholm 2005). There have been further interruptions since Putin took office affecting the EU members Lithuania and the Czech Republic. Although there were possible alternative explanations, their timing (for Lithuania, the sale of a refinery to Poland in preference to Russia; for the Czech Republic, disputes over missile defence installations) led to arguments that they were political.

Gazprom, the national gas export company, has used its commercial power against customers resisting efforts to move gas prices towards global market rates rather than subsidised Soviet-era rates, by failing to repay outstanding debts or opposing Gazprom investment in energy infrastructure.

Disputes with Georgia and the Ukraine, moreover, led to several significant supply cuts by Gazprom aimed at the two states, but which, as pipeline transit states, also affected many other European countries. Consequently, natural gas supply security has become an important political issue in Europe. For its part, Moscow expresses its need for demand security, reflecting the sharp fall in European gas imports following the financial crisis.

For Europe, in particular, as production of North Sea gas declines and with 12 new members of the EU—most from eastern Europe—reliance on gas from Russia or from Central Asian states through Russian pipelines has

increased. Overall, Europe imports well over a quarter of its gas needs from Russia, weighted heavily towards central and eastern Europe, and from a gas import dependence of around 60 percent today the EU expects an 80 percent import dependence by 2030, with much likely to be sourced from Russia, despite diversification efforts (IEA 2009: Table 13.4; *EurActiv.com* 2009).

Europe's energy diplomacy towards Russia is an important part of its Russia policy. Just how much political influence Europe's dependence on Russia gives, and will give in the future, is hard to measure. NATO members' opposition, arguably a first, to a US proposal personally put by President Bush to give Georgia and the Ukraine clear membership prospects at the NATO Summit in April 2008 has been taken as reflecting enhanced Russian influence on European members (*EurActiv.com* 2009).

The USA has been concerned about Russia's growing control over the region's energy export routes, making this a major geopolitical issue. Yet, as Wishnick (2009) argues, American policy goals—energy cooperation and regional security objectives involving links with regional leaders—tend to run counter to its objectives of support for democracy and the rule of law.

The EU is more pragmatic, 'viewing Russia and its neighbours as a potential energy supplier rather than as part of a much bigger diplomatic chess game' (Johnson 2005: 273). Europe and Russia can bring alternatives into play: for Russia, China, other North-East Asian customers and India as potential customers; for Europe, Central Asia, Algeria and other gas suppliers in Africa and elsewhere. None, however, is a major alternative. Gazprom's moves into Nigerian, Namibian and other LNG projects are designed to gain control of Africa's gas exports to Europe, and are part of Russia's objective to be an influential player in the global energy system (AFP 2009).

Central Asia is both a potential source of supply for Europe and a resource base for Russia to meet its European commitments; and a 'battle' of the pipelines continues. American pressures will remain strong, but with uneven European support. China is also looking for further involvement in Central Asian developments.

The Caspian Sea and Central Asia

Geopolitical interest in the Caspian Sea has arisen following the dissolution of the Soviet Union and recognition of sizeable oil and gas resources in and around the Caspian Sea. It has become an area of competition and, for some commentators, possible conflict among Russia, Iran and the eight post-Soviet states about proprietary rights over the energy resources, with critical legal arguments concerning, among other things, whether the Caspian is a sea or a lake.

Europe and, increasingly, China are competing with Russia and between themselves in the Caspian region. India, Japan and South Korea are also showing commercial interest in the area. While competition within the region is

important among the post-Soviet states, the significant geopolitical energy issues concern Russia, the EU and the USA.

The Clinton administration declared Central Asia and the Caspian a vital US national interest. It sought to build up the local states politically to offset Russia's influence, to diversify energy supply sources and to keep the international oil and gas markets open (Bromley 2005; Wishnick 2002, 2009). The USA worked diplomatically with European and other Western energy interests in developing Caspian energy resources and the USA provided economic and military aid. US efforts were encouraged by the local states that sought some independence from Russia through oil and gas pipeline arrangements that bypassed Russia.

A logical path for a Caspian pipeline avoiding Russia would be through Iran. Europe has seen Iran both as a source of gas and as a transit country for pipelines avoiding Russia—one reason for Europe's greater pragmatism compared with the USA on relations with Iran. Proposals to this effect were strongly opposed by the USA.¹³ Consequently, the USA devised and oversaw the building of an alternative—if more costly—pipeline through Georgia, but avoiding Russia.

Central Asia and the Caspian Sea are also of vital national interest for Russia and it has similarly provided military and other aid. Given the geography of the Caspian, oil and gas movements in the region are reliant on pipelines. With Russia a major player in Caspian energy developments, at least three Central Asian states have some dependence on Russian pipelines for energy transport.

As the USA moved towards invading Iraq and Putin gradually asserted control of Russia's energy industry, Russia strengthened its efforts to counter US influence. China, also concerned at US intrusion in the region, increasingly moved closer to Russia. In pursuing its 'going-out' policy, China has interests in Caspian oil and gas and has supported its companies, often successfully, in efforts to gain access to Caspian resources, notably in Kazakhstan. Russia, for its part, wants to reduce its dependence on Georgia and the Ukraine for gas exports to Europe; hence, its proposed gas pipeline (North Stream) from Russia to Germany and one (South Stream) ending in Italy.

Major European interests in Caspian natural gas are pursuing a proposed new pipeline to avoid crossing Russia and Georgia. This has led to competition between the European-planned pipeline (Nabucco), which, despite US displeasure, may involve Iranian gas, and Russia's South Stream pipeline. Both sides are also competing to tie up supplies from Azerbaijan to make their projected pipelines economic and provide a funding base.

Impact on order in the Asia region¹⁴

As noted, expected increases in oil and gas demand will come largely from Asia, with North-East Asia, especially, being a substantial and the most rapidly

growing importing region. With increased energy prices, political stability in poorer regional developing countries will be at risk. While these developments have important direct and indirect impacts on regional countries, their geopolitical implications are not easily identified.

For major regional power relations among China, India, the USA and Japan, however, the reality is that each is a major net energy importer with comparable, if not equivalent, political and economic impacts and constraints. So far, competitive differences among them are largely outweighed by cooperation to maintain open markets, introduce more efficient technologies and develop cleaner energies reflecting both energy supply and global climate change objectives. That cooperative process may come under strain as resource pressures increase. As noted earlier, where borders, particularly ocean borders, are disputed, conflicts are possible: the South China Sea may come back into contention with higher energy prices, while tensions over drilling in the East China Sea remain.

For an energy exporter, Russia's stated energy policy objectives include expanding energy exports to China, other North-East and South-East Asian countries, and India (Page 2006). These objectives are aimed at diversifying its markets, reducing dependence on European markets, exercising influence on Europe, and increasing its political and diplomatic influence in North-East Asia and beyond. Putin has argued that barriers to Russia's desired energy upstream acquisitions in Europe demonstrate unfair competition and that energy supplies might be diverted to Asia 'if Russia's ambitions in the European market are thwarted' according to David Clark, Chairman of the Russia Foundation, in evidence to a UK parliamentary enquiry (Clark 2007). How far it can sow this 'creative doubt' (Lo 2008: 139) in European minds in the short run is unclear. Some Asian pipeline developments are in progress, but Russian decision making has been dilatory only partly because of competition between China and Japan over pipeline routes.

Several states in the region—such as Malaysia, Indonesia and Vietnam—which have been net exporters, have become or will become substantial net importers as their domestic demand increases. The region will depend increasingly upon international oil and gas markets remaining open and transparent. Although energy markets, on the production side, operate imperfectly, for both oil and gas, distribution markets are largely competitive. Oil is fungible and will normally be available at the going price for some substantial time to come. Even as LNG markets become more globally oriented, however, gas trade remains largely regional, as sales by Australia and Indonesia to North and South-East Asia indicate.

Do the changes discussed earlier affect the view that global power has been shifting to Asia? Energy, although important, is only one factor, if a crucial one, shaping the capacity to exercise power and influence. All the major global power centres, except Russia, moreover, are affected in much the same manner by the changes outlined and relative positions have not been changed greatly

among them. Russia, although potentially gaining, is handicapped in economic, political and demographic ways in exercising enhanced power and influence globally or in Asia.

Conclusion

This article has asked how far changing geopolitics of energy would affect global and regional order, including relationships among the major powers. It points to major structural changes in the international energy system, notably a long-term rise in energy prices, the greater role of NOCs, and the growing importance of the Middle East and Russia. It is argued here that these changes will have increasing international relations implications for the major powers. To contemplate what might eventuate, this article has looked at how energy developments have already affected balance-of-power relationships and related foreign policies. In summary, it is suggested that Russia, the Middle East and OPEC have already been empowered and could become more so. The USA, China, Japan and India, together with Europe, share the reality that their global roles will be challenged by their energy import dependence.

While all countries have some constraints on their foreign policies, precise causal linkages are often difficult to demonstrate. In one case—Japan—the link is clear. Its earlier ‘going-out’ policy in the 1960s, like China’s today, led to Middle East investments in energy projects; despite this, Japan became a target of the Arab oil embargo of 1973 for supporting Israel. As a consequence, it changed its policy towards Israel as, similarly, did the EU (Yergin 1991: 628–9). Japan’s resource deficiencies—not just oil—shaped much of its foreign policy, from the Yoshida Doctrine to its omnidirectional and comprehensive security policies. More generally, for oil imports, it relied on the USA to keep the international system open, but its vulnerability could perhaps help explain its limited role in the international system. Usually, however, how vulnerabilities actually influence foreign policies seems less clear-cut.

The EU is potentially, and perhaps actually, constrained by its dependence on Russian energy, particularly gas, supplies. Russia’s coercive use of energy has been largely limited to countries that were formerly part of the Soviet Union. Nevertheless, a power relationship exists with a long-term implied vulnerability, illustrated by the Putin threat to divert supplies, which influences and perhaps determines policy positions.

The prospective US–China relationship is likely to be driven by the broader political relationships and is difficult to predict analytically. In the China–Russia ‘strategic partnership’, despite consumer–producer complementarities, and however one judges the existing balance, Russia’s energy strength should enhance its influence. There are limits, however, to how far Russia can play the China card against Europe since China will not want undue dependence on Russia’s area of influence.

For the USA, its foreign policy has long been substantially influenced by energy. It aimed to ensure the availability of reasonably priced energy for itself and for its Western allies for much of the post-World War II period, seeking less to control world oil as such than to exercise a control that has been beneficial to many states, including its economic competitors (Bromley 2005).

Yet, with its dependence on Saudi Arabia, the USA has been unable to pursue its declaratory objectives on social and political issues, such as democracy and good governance, human rights, the rights of women and the financing of Islamic extremism—items of high priority in US-stated foreign policy.

In Central Asia, the US priority to energy relations, together with aid linked to establishing bases in Central Asia, has diminished the effectiveness of its political reform agenda and strengthened authoritarian governments. This outcome is reinforced by the high energy revenues in several of these countries.

The Council on Foreign Relations report cited earlier said that ‘America’s growing dependence on imported energy increases [its] strategic vulnerability and constrains its ability to pursue foreign policy and national security objectives’ (Deutch and Schlesinger 2006: 3). In arguing for energy independence, President Obama has stated that America’s dependence on oil is one of the most serious threats the USA has faced and a challenge to its foreign policy.

How far, moreover, will US foreign policy and the USA’s role as a hegemon be constrained with import dependence nearing two-thirds of its oil consumption? This is already reflected in import costs, accounting for around a fifth of its total import bill and likely to grow. That links to concerns about US long-term debt and the future of the dollar (NIC 2009: 93–4).

While the USA sees an open, transparent marketplace as critical to US energy security and global stability, given its changed relations with the Middle East and the lessened influence of the IOCs, how far can it ensure it remaining in place? The various difficulties will include the resourcing implications. For example, the US Department of Defense’s oil use comes close to that of countries such as Greece. The US strategic concept of a 1000-ship navy already points to some resource constraints.

The control exercised by the USA in the past commonly involved a military presence and military and other aid to countries on which future oil supplies depend. Frequently these were authoritarian states—in the Gulf and Central Asia, or Angola, or states experiencing civil or ethnic strife, such as Nigeria and Chad. Freedom House’s 2008 report noted that energy needs were distorting relationships between democracies consuming hydrocarbons and the authoritarian states that produced them. Energy dependence, it said, was promoting short-term approaches to such states (Walker and Goehring 2008: 1). It saw the Central Asian states as significant among such states.

Given the major transformation under way in energy geopolitics, greater attention needs to be given to its geopolitical implications as the energy market tightens. In particular, maintaining open oil and gas markets will be critical not just for the USA, but also for other countries including China and other Asian

countries. In a more multipolar world, this need could sustain a US leadership role that can be matched by no other country, including China, India or Russia, or by the EU. That, however, will almost certainly need increasing cooperation with other major powers, including especially China. The examples of Germany and Italy, however, illustrate the difficulties of cooperative action (in their case a common European energy policy) when energy pressures become strong. Yet, absent effective leadership to sustain such cooperation, the possibility is that the greater the pressure of demand on a slower-growing or ultimately diminishing supply, the more some governments seeking energy security may see the issue as a zero-sum game, which could ultimately lead to interstate tensions and possibly conflict.

The quotation at the beginning of this article links energy supply constraints with the problem of climate change. Debate continues over which is the more urgent problem and the two problems will become increasingly interlinked over time in ways that are not simple. While recent experience shows that increasing energy prices have reduced energy consumption, increased energy prices will also encourage production of energy from sources, such as tar sands or synthetic fuels, producing increased amounts of carbon. Relations among the major powers will be influenced by the effects, or expected effects, of climate change. At this stage, however, with the continuing uncertainties about how states will be affected, the geopolitical consequences remain difficult to identify.

Notes

1. Comments from Chris Reus-Smit, Pamela Harris and two anonymous reviewers have improved an earlier draft of this article.
2. The US Energy Information Administration assumed a price of US\$130 a barrel for 2030 at 2007 prices in its comparable case (EIA 2009). Both institutions provide a range of projections—both higher and lower.
3. A somewhat more optimistic view, based on assumed lower decline rates (4.5% percent) and more responsive investment, is in an IHS CERA (Cambridge Energy Research Associates) report (Jackson 2009).
4. Questions have arisen about pressure being applied on the IEA (Macalister 2009).
5. These include natural gas liquids, shale oils, etc., but not biofuels.
6. ‘Seven Sisters’ was a derisive term coined in the early 1950s by Enrico Mattei, president of the Italian oil company ENI: they were Esso, Shell, BP, Gulf, Texaco, Mobil and Chevron.
7. The seven are ExxonMobil, BP, Shell, Chevron, Total, ENI and Conoco-Phillips.
8. Useful references on NOCs include Jaffe and Soligo (2007), Marcel (2006) and Pirog (2007).
9. Based on EIA (US Energy Information Administration) data.
10. In his ‘Limited Contingency Study’, discussed in Mann (2004: 79–84).
11. Japan, of course, has been almost totally dependent on imports of oil for many years.
12. Only by targeting China’s three major east coast ports or terminals could significant diplomatic repercussions be avoided and such targeting would still be vulnerable to local air and missile defences.
13. One reason for US nuclear cooperation with India was to counter an Iran–Pakistan–India pipeline proposal.
14. Useful discussions of regional energy issues can be found in Harris (2009) and Wesley (2007).

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