



Geopolitics of Energy[®]

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Inside Geopolitics of Energy

- **The Long-Term Evolution of the Global Energy Industry**
by Peter R. Odell

In accepting The Biennial OPEC Award – 2006, Peter R. Odell chose to discuss the most significant elements in the long-term evolution of the global energy industry. From his perspective, these elements include: oil and gas will continue to be a major part of the global energy mix through 2100; globalisation, liberalisation, market competition and dependence on speculative trading exchanges will soon fall out of favour; circumstances will lead to the demise of the "oil majors" and the continuing revival of state-owned oil and gas companies; and possibly the creation of a UN International Energy Organization designed to deal with world energy matters.

- **US-Iran Relations: Perils and Promises**
by Hooshang Amirahmadi

Since the 1979 Islamic Revolution and the subsequent taking of American hostages in Tehran, the US and Iran have been hostile towards one another. In this article, Hooshang Amirahmadi discusses US-Iran relations from the perspective of each, why Iran poses the most daunting foreign policy challenge for the Bush Administration, and the role of US public diplomacy in the uranium enrichment standoff. After discounting a number of unrealistic US options for dealing with Iran, Dr. Amirahmadi concludes that the only realistic one is for the US to normalize relations with Iran.

- **Fueling the Dragon: China-bound Pipelines are Russia's Most Realistic Asian Energy Option**
by Gabe Collins

In this article, Gabe Collins discusses the reasons why China is a more realistic destination for East Siberian oil than Japan, and the factors currently supporting and holding back a Sino-Russian energy partnership. Given China is a natural destination for Russian energy exports due to lower transportation costs, high Chinese energy demand growth, and both sides' desire to cement a strong political relationship, Mr. Collins concludes what remains unclear is the how and when of their energy partnership.

The Long-Term Evolution of the Global Energy Industry

*by Peter R. Odell**

Introduction

First and foremost may I express my appreciation of the honour which OPEC has bestowed upon me in the context of the criteria employed by its Governors in reaching their collective decision. This Award to me was totally unexpected and I will endeavour to ensure that my efforts to understand the international oil and gas industry continue to meet the criteria on which the award has been made.

Long-Term Evolution of the Energy Industry

On this occasion I thus take the opportunity briefly to set out what I perceive to be the most significant elements in the long-term evolution of the industry:

First, that the current 60% contribution of oil and gas to world energy supplies will be only modestly reduced by mid-century; thereafter, hydrocarbons' contribution to energy demand will slowly decline but will still account for over 40% in 2100. By then, however, natural gas will be two-and-a-half times more important than oil; though the latter will still be an industry larger than that of 2000, albeit one which will become up to 90% dependent on non-conventional oil. Natural gas will undoubtedly become the prime energy source by the second quarter of the 21st century ('streets' ahead of renewables) – initially through a near three-fold increase in conventional gas production by 2050 and, thereafter, through the rapid exploitation of prolific non-conventional gas supplies.

Second, that the ultimate physical sufficiency of global oil and gas resources is not in doubt so that one can ignore the present-day Jeremiahs. Their predecessors in the 1960s, the 70s and the 80s were all quickly proved wrong and a like-fate will overcome the so-called "peak oilers" by the end of the present decade. Any under-achievement in future oil and gas production will be the result of a combination of organisational, economic, political and environmental factors, all of which can be overcome, as they always have been in the past – except for very short-term lapses.

Third, that the current generally accepted wisdom favouring globalisation, liberalisation, market competition and dependence on speculative trading exchanges (such as NYMEX and the IPE) for price determination will soon fall from favour as a consequence of the turmoil which they have created over the past three years. This has been to the detriment of consumers the world over and is having adverse impacts on economic and social development in many countries, especially in the developing world. The continuing – albeit modest – expansion of the world's demand for oil now necessitates the establishment of an international oil organisation whereby order can be brought to the markets. The current unacceptability of this by policy makers in the OECD countries will hardly be relevant beyond the middle of the next decade, in the context of the rapidly declining importance of these countries in the global oil system.

Fourth, that oil from non-OECD countries already accounts for almost 80% of world reserves and production, with most of this from state-owned or state controlled exploration and production facilities. Even the remaining four largest multi-national oil corporations already appear unable to secure significant new production rights, except as minority partners in state-run systems. This process is unlikely to be reversed, as all the large oil consuming nations of the developing world view self-sufficiency as a prime objective and will feel assured of this only in the context of nationally owned and operated companies.

Fifth, that in such potentially adverse circumstances for the oil majors, the fact that they have in recent years been pursuing policies which hardly endear them to countries in which expanding demands for energy are of the essence, is not helpful for their survival. The companies are seen

*The response by Peter R. Odell, Professor Emeritus of International Energy Studies, Erasmus University Rotterdam on the occasion of his acceptance of The Biennial OPEC Award – 2006 at the Third OPEC International Seminar in Vienna, Austria (September 12-15, 2006). Dr. Odell is a former editorial board member of *Geopolitics of Energy*.

as responsible for high prices, leading to high profits, from which extortionate remuneration is paid to their executives and shares are 'bought-back' to enhance their stock-markets' status; whilst they make too little investment in new upstream operations, as they cannot count on a rate of return in excess of 20%.

Sixth, that as with those 'majors' that have already failed to survive, so those remaining may well be playing out their last few years. A Chinese bid for Exxon and/or Chevron and/or a Russian bid for Shell and/or BP, backed by funds provided by the wealthy member countries of OPEC, seem likely to be only a matter of time. With the 'majors' gone, there will be concern in the main OECD countries for the future security of supplies. In this context one can reasonably forecast a revival and/or the resuscitation of their own state-owned oil and gas industries. The two currently booming and expanding state oil companies in OECD countries (viz. Statoil of Norway and ÖMV of Austria), could thus soon have new bedfellows; for example, a new British National Oil Corporation, a revived Petro-Canada and a de-privatised Total in France/Belgium.

Seventh, that above and beyond all these developments, we may anticipate the creation of a UN International Energy Organisation designed to deal with the world's 21st century energy matters. Such an organisation will, of course, include a major input from a now more-powerful-than-ever Organisation of Petroleum Exporting Countries, given its members' interests in tomorrow's much expanded and ordered global oil markets.

Eighth, that the world's continuing regionalised gas markets will massively expand. In Europe the current obsession for liberalisation will be inevitably abandoned, as producers wisely insist on long-term contracts to ensure *security of demand* in the context of importing nations' search for *security of supply*. The EU's current commitments to fully liberalised gas markets, in general; and, in particular, the UK's hopelessly failed experiment with "perfect competition" for securing infrastructural developments and low pricing – will not survive the present decade.

Post-2020, an ordered gas market will emerge, with continuing long-term benefits based on the near-limitless supplies available from a range of gas-rich countries from Russia, the Caspian region, the Middle East, North Africa and Norway; and on the consuming countries' overwhelming preferences for natural gas over the high-cost alternatives of renewables and/or nuclear power and the high CO₂ emission levels from the use of oil and coal. The establishment of a *Greater European Strategic Gas Authority* will be the precursor to similar developments in Latin America, sub-Saharan Africa, south-east Asia and the western Pacific Rim over the first quarter of the 21st century.

US-Iran Relations: Perils and Promises

*by Hooshang Amirahmadi**

For over a quarter of century, the US and Iran have been hostile towards each other. The problem began with the 1979 Islamic Revolution in Iran and the subsequent taking of American hostages in Tehran. Even before the Revolution, many Iranians were bitter toward the US for helping the British to overthrow their democratically elected Prime Minister Mohammad Mosadeq in 1953, and to support Shah Mohammad Reza Pahlavi, the dictator whom the Revolution overthrew. The bitterness that ensued turned into a fierce anti-Americanism during the Revolution and precipitated the storming of the American Embassy in Tehran by young Islamic radicals. Although the hostages were released unharmed after 444 days in captivity, this episode has created a negative ripple effect that continues today. From two friends and partners, the US and Iran have become two enemies, harming and demonizing each other ever since.

Currently, two "ultra" conservative governments in Washington and Tehran face each other. Will the "extremes meet"? Only time can tell but evidence suggests that this hostility will

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continue unabated, and Iran's nuclear program is providing the pretext. After Iran's negotiations with the EU Trio (Britain, France and Germany) collapsed in 2004, and the US and its European allies convinced the Board of the International Atomic Energy Agency (IAEA) on September 19, 2005 that it should report Iran to the UN Security Council for possible sanctions to stop its nuclear enrichment activities. Meanwhile, Russia and China, while maintaining serious reservations about sanctions against Iran, have joined the US-EU alliance in demanding that Tehran suspend uranium enrichment program as a precondition for a negotiated settlement of the nuclear crisis. The so-called 5+1 group (the five permanent members of the UN Security Council plus Germany) has invoked the Chapter Seven of the UN Charter that would authorize the use of force if Iran were to defy the demand. The basis for such an action would be Iran's concealment of its nuclear activities in the past and the lack of adequate transparency about its current intentions and activities. Both at the IAEA and at the Council, the US faces serious obstacles towards its attempts to punish Iran. Nonetheless, it is probable that the US and its allies will ultimately succeed in isolating and eventually confronting Iran unless Tehran abandons its enrichment program according to their schedule.

The latest chance for the opening of a new dialogue, provided by President Mahmoud Ahmadinejad's visit to the US to participate at the UN sessions in September 2005 was unwisely lost. Indeed, the speeches by the two presidents, while avoiding name-calling or direct threats, did not offer any hope that the situation would improve any time soon. Mr. Ahmadinejad warned against "unilateralism" and "pre-emptive" actions against other nations (presumably Iran), and Mr. Bush reiterated his now famous line that: "the rulers of the outlaw regimes ... will not be allowed to threaten the peace and stability of the world." In subsequent months, Mr. Ahmadinejad has followed a contradictory and unsuccessful approach that has included increased hostility toward Israel and offer of dialogue with the US (he called Holocaust a myth and said that Israel should be wiped off the map at the same time that he wrote a letter to Mr. Bush and asked for a debate with him). The only positive American overture has been an offer of indirect talks on the condition that Iran agree to suspend its uranium enrichment programs. Yet, as we shall argue below, both sides have no better option than to engage in an honest dialogue toward the normalization of relations. It is unfortunate that no state or international organization, including the UN, established to further peace and friendship among nations, feels obliged to mediate a rapprochement between Iran and the United States.

Perspectives and Options for the US

Secretary George Shultz in a private conversation with this author at his home on the Stanford University campus in summer of 2001 summarized the American view of Iran since the Revolution in four points. First, that Iran is a very important country; we should have never lost its partnership and now that we have, we need to regain it. Second, that no regime has harmed the US more than the Islamic Republic of Iran, and that it is going to be difficult, if not impossible, to mend relations with this regime. Third, that we understand that the Iranian religious leadership would change its behavior in areas of nuclear technology, terrorism, and Middle East peace if subjected to American military force, but that is not an option that we could entertain unless no other options were left. Finally, that there is only one mutually beneficial solution to our problem, to begin a dialogue that will help normalize relations, and that this dialogue has to begin with building confidence at the highest level.

Secretary Shultz made these remarks immediately before the September 11 tragedy. Since then the world has changed, particularly in the Middle East, and so have US-Iran relations. The American military has destroyed a terrorist regime in Afghanistan and a dictatorship in Iraq wrongfully alleged to have weapons of mass destruction and links with terrorist groups. Both countries remain politically unsettled and economically in shambles. Yet, after the successful elections there, the Bush administration has been able to absolve itself, at least partially, of its responsibility for this situation, and has increasingly paid attention to Iran. American forces are now stationed at a stone's throw from Iran's forces. Meanwhile, Washington has been threatening Iran with additional sanctions and the use of force, and according to certain reports, a small contingent of American intelligence forces might have already entered Iran. Iran's presidential elections in June of 2005, which produced an ultra-conservative religious administration, and the deadlock in negotiations over Iran's enrichment programs have in the meantime convinced Washington that it should adopt a more explicit regime change policy (see my article, "In the Name of the Iranian People - Regime Change or Regime Reform?" at <http://www.american-iranian.org/pubs/articles/InTheNameoftheIranianPeople-03-22-06.pdf>).

While the Bush Administration has been struggling with a new Iran policy, a few think tanks and pressure groups have offered their recommendations. The Council on Foreign Relations has recommended that the US "selectively engage" Iran to address critical US concerns and broaden linkages between the Iranian population and the outside world. The Committee on Present Dangers has suggested that the US adopt a policy of engagement and regime change by opening a dialogue with Tehran, supporting the Iranian people, and simultaneously convincing the Supreme Leader Ali Khamanei to relinquish power. The Iran Policy Committee has recommended that the US consider a combination of coercive diplomacy, destabilization by the Iranian armed resistance group nicknamed MEK, and limited military operations to facilitate regime change. The Washington Institute for Near East Policy has recommended that the US work with the EU Trio on the nuclear matter but keep the option of surgical military strikes open, and simultaneously assist the opposition. Finally, the International Crisis Group has put forth the idea of a "grand bargain" with Iran, whereby the two countries agree to settle all outstanding disputes at once.

The American Iranian Council (AIC), a research and policy institute devoted to improving understanding and dialogue between the two countries, has recommended that the US and Iran undertake a number of "confidence-building measures" as a prelude to negotiations for establishing diplomatic ties without preconditions, except for the conditions of genuinely free elections in the future, protection of human rights, and the rule of law in Iran. They then should work judiciously toward resolving issues of mutual concern focusing on the more easily resolved issues and on common interests. For the process to move forward, both sides have to be sincere in their pursuit of a normal relationship and realistically address the key domestic and regional challenges their negotiations will face. In AIC's view, the policy recommendations offered by the think tanks and ad hoc committees mentioned above are unrealistic and thus unpractical. They are based on a mistaken view of Iran and the regime, propose options for the US while ignoring the Iranian side, and reflect the views of a select group of foreign policy technocrats while excluding input from the general public and other key participants.

The Iranian Challenge

Iran poses the most daunting foreign policy challenge for the Bush Administration. The President has said he is determined to halt Iran's nuclear ambitions, support for terrorism, and opposition to a peace settlement in the Middle East. He has also assured the Iranian people that the US is on their side as they seek liberty and freedom from the Islamic theocracy. These pronouncements are indicative of two American concerns: that the Islamic regime will not implode any time soon as some have predicted and Washington has hoped, and that its military-strategic power is growing while it remains an Islamic theocracy unfriendly to the US. Implied in the President's words is also the fact that American concern has shifted from Tehran's behavior to the regime itself. In the wake of the June 2005 presidential elections in Iran, this policy shift was solidly pursued by the US, leading to a policy of regime change with a minor proviso for regime reform.

The American concern about Iran's power and its theocracy, namely the Iranian regime, is understandable. The Islamic Republic of Iran is hostile to the US and its protégé, Israel, and it is building closer relations with America's future rivals for global leadership, particularly China, the Russian Federation, and India. From an American perspective, this easterly strategic orientation is not an acceptable position or ideology for Iran to assume in international relations given that Tehran can and intends to build nuclear bombs (even give them to Islamic terrorists), has huge oil and gas reserves, and benefits from a significant geo-political environment. Thus, Iran must understand that the US' problem with it is larger than the sum of American concerns with Tehran's behavior. This larger challenge is what Iran needs to address if it were to normalize relations with the US.

From an American perspective, the problem with Iran's power and position can be addressed in three ways: either by developing a partnership with that power, reducing it to a non-threatening size, or by changing the regime. It appears that the Bush Administration sees no chance of building a partnership with the regime, largely because of its animosity toward Israel and its theocratic state system, whose legitimacy the US has yet to recognize. That leaves the power reduction or regime change as the only two options. Thus, the immediate challenge facing the US is to prevent Iran from going nuclear. However, the nuclear issue, while important in itself, is also a pretext for the US to enter into a wider confrontation with Iran. Tehran is rightly convinced that

the US ultimately wants to change the Islamic regime, and with that pretext in mind, it is hesitant to give up its nuclear programs.

Tehran certainly considers its nuclear programs as a prestigious and scientific undertaking as well as a future defensive shield against foreign threat, considering the markedly different ways in which America has treated Iraq and North Korea. While such thinking on the part of Tehran, given its theocratic regime, should concern the US and Israel, among others, the threat posed by Iran is surely overblown in comparison to other nuclear threats that are being ignored or relegated to a lesser status. The major nuclear states continue to amass their stockpiles of nuclear bombs, and a massive amount of nuclear materials remain unprotected and unaccounted for within the former states of the USSR. Meanwhile, India, Pakistan and Israel remain outside the Non-Proliferation Treaty (NPT) and continue to build up their nuclear arsenal with complete lack of transparency. In our dynamic world, friends and enemies do not always remain the same. Today's friend could be tomorrow's enemy and vice-versa.

The view of Iran as a nuclear threat also ignores history and fact. Specifically, the nuclear state with closest link to terrorism is Pakistan, not Iran; even if Iran were to successfully develop a "second strike" nuclear capability, it would only use it defensively. In the last two hundred years or so, Iran has not initiated a single regional conflict. The only state toward which Iran remains hostile is Israel but, as the history demonstrates, much of the anger Iran directs toward Israel is rhetorical, some in response to Israeli rhetoric and others initiated by Tehran for domestic consumption. True, Iran is an authoritarian state but when was the last time an undemocratic state used a nuclear bomb against another state? The fear of regime collapse or change, even if that were to occur in Iran in the foreseeable future, and the consequent danger of nuclear materials falling into the wrong hands, is also overblown. Notably, regime collapse or change in the former USSR and in Pakistan has not led to nuclear disasters.

While prestige, science and defense are critical factors in Iran's decision to go nuclear, the country also needs to develop an alternative energy source despite its huge oil and gas reserves. Given Iran's climate and natural resources, nuclear energy may indeed be the best possible alternative. The argument that Iran does not need nuclear energy because of its huge oil and gas reserves is contrary to the findings of many Iran energy watchers. Most of Iran's natural gas is used for heating and gasification of the mature oil wells. Iranian oil is also consumed at a rate far above its production growth rate, leaving increasingly less crude oil for export. By 2025, Iran's population will surpass 100 million. Unless energy prices in Iran rise to the international level, a politically suicidal move for any regime, Iran could indeed become a net importer of oil products. Meanwhile, US sanctions have crippled Iran's ability to increase oil production at an appropriate rate. Oil export accounts for over 80 percent of Iran's foreign exchange earnings and Iran has an increasingly larger bill to pay for its required imports, including food and gasoline.

EU Dependency and US Public Diplomacy

The fact that Iran's nuclear issue is primarily used as a pretext by the Bush Administration to widen its conflict with the Islamic regime is also reflected in Washington's approach to the nuclear negotiations between Iran and the EU Trio. It should surprise no one that the Administration did not want to join the negotiations until the Europeans accepted the American position that Iran permanently halts uranium enrichment, a demand which the US anticipates Tehran would not accept unless forced. This was, indeed, what the Europeans told President Bush and Secretary of State Condoleezza Rice when they met their counterparts in Europe in the beginning of the negotiations between the Trio and Tehran in late 2003. The Trio told their American visitors that the negotiations with Iran would fail even if the US were to join, because Iran would not accept the EU-US condition. In that eventuality, the blame would fall upon the US if it refused to join the negotiations; otherwise, the Iranians would be blamed, in which case condemning Iran before the UN Security Council would be easier.

In accepting the US conditions, the EU Trio has surprised and dismayed Iran. According to sources in Tehran and New York, before the Foreign Ministers of the EU Trio flew to Tehran to begin nuclear negotiations in 2003, the Iranian authorities told them that Iran had two conditions. First, that the Trio would not ask Iran to forego uranium enrichment; and second, that the Trio would support Iran in case the US wanted to take it before the UN Security Council for "violating" the NPT. Both conditions, I am told, were accepted based on Iran's promise to come clean about its

nuclear programs. The Europeans even promised to help establish a direct dialogue between Iran and the US. It was based on this understanding that they signed the October 2004 agreement in Tehran, whereby Iran agreed to suspend uranium enrichment, resolve all questions about its nuclear programs, and allow the IAEA to conduct surprise inspections of Iran's nuclear sites. Significantly, President Bush welcomed the agreement as "a very positive development."

Those same sources also state that as former British Foreign Minister Jack Straw boarded the plane for Tehran, former Secretary of State Colin Powell called upon him to clarify the US position, namely that it would not settle for anything less than a full and permanent halt to all Iranian uranium enrichment activities. The week before the Trio left for Iran, Prime Minister Tony Blair of the UK visited and consulted with President Bush on the forthcoming negotiations with Iran and confirmed that all American concerns would be addressed. The Americans knew that the Europeans would eventually adopt the American position. The Iranian negotiators should also have known that the EU was either unwilling or incapable of handling a major international crisis independently of the US. In recent years, they had both the Bosnian and the Iraqi crises for reference. The EU dependence on the US when engaging in major international crises has a foundation in their economic, political, and military relations.

To cover up its dependent position, the EU now accuses Iran of negotiating in bad faith. The IAEA disagrees, though it faults Iran for the lack of transparency in intentions and certain information or actions. The Agency has found no evidence that Iran is intending to build nuclear bombs and is reluctant to declare Iran in violation of the NPT. While Iran had concealed its enrichment programs prior to negotiations with the Trio, it has since given detailed report of its nuclear activities and has allowed full inspections of all its suspected and declared sites. Iran has also signed the Agency's Additional Protocol for non-proliferation, allowing it unannounced site visits. Its ratification by the Iranian Parliament was made a precondition to the successful conclusion of Iran-EU negotiations.

The Bush administration's decision to join the EU Trio in supporting limited economic incentives for Iran to permanently halt uranium enrichment was and is designed with two purposes in mind: first, to change the spirit of the NPT without renegotiating it; and second, to win a public relations coup against Iran that would allow for the use of force if that were required. In 2002, President George W. Bush suggested that "rogue" states should not be allowed to enrich uranium even for peaceful purposes, although the NPT currently gives them that right. That idea, which did not meet with the approval of the non-Western members of the NPT during the UN 2005 Review Conference, was subsequently implemented when the EU Trio reversed its position and accepted the American argument against Iran, a signatory to the NPT.

The US' public relations ploy to sway public opinion toward the US position has been clearly articulated by President Bush and Secretary of State Rice. Referring to the US-EU joint carrot-and-stick Iran strategy, the Secretary of State told Reuters that, "This is about unifying the international community so that it's Iranians who are isolated, not the United States." And in President Bush's words, as quoted in the *New York Times*, "We are working with our friends to make sure not only the world hears that but that the negotiating strategy achieves the objective of pointing out where guilt needs to be, as well as achieving the objective of no nuclear weapons." The Bush administration has come under extreme pressure from domestic and international sources to give full diplomacy a chance before resorting to military means as a last option.

Unrealistic US Options

Thus, when President Bush says "all options" remain open, he signals that he is not contemplating serious diplomacy. The remaining options include UN-sponsored sanctions, regime change or reform, and a war, total or surgical, by the US or Israel. Multilateral sanctions, as the first phase of a "planned" confrontation, can weaken Iran only if they were to include embargos against Iranian oil for a protracted period. The US can hardly convince Europe, Japan, or China to accept such sanctions, as they all depend heavily on Iranian oil. Nor will Russia want to sacrifice its lucrative business with Tehran, as it expects to build several more nuclear plants for Iran. Besides, Iran has significant foreign exchange reserves and is not as dependent on oil today as it was in the past. Iran's non-oil trade with the EU is growing, and becoming increasingly more important than its oil trade with the European bloc.

Surgical military operations, parallel with or subsequent to sanctions, can inflict heavy damage on Iran. However, no matter how long they are sustained, such attacks can hardly dismantle all of Iran's nuclear or military infrastructures, which are dispersed over its large and complicated geography. Besides, if Iran were building nuclear bombs, it certainly would be doing so in places as yet uncovered. Surgical strikes would also increase domestic and international support for the regime, particularly if the use of force were to occur before UN-sponsored sanctions and diplomacy have been given an opportunity to succeed. Surgical strikes would also make Iran leave the NPT and would strengthen Tehran's resolve to build bombs quickly, actions that the religious right is currently advocating.

The futility of surgical strikes and UN-sponsored sanctions, if such sanctions were possible, is obvious: They will not resolve the Iranian power problem, will not lead to regime change, and will not help Iranians build a democracy. They will surely inflict heavy damage upon Iran, and increase regional tensions, as regional states and non-state actors are forced to take sides. Iran can also be expected to respond to any military attack, particularly if Israelis are involved, leading to further regional instability. If the US were to find sanctions and surgical strikes ineffective, it might adopt an explicit policy of regime change, which the pro-war Iranian opposition in exile and the American neoconservatives support.

Can the US change the Iranian regime? Three possible paths exist to regime change in Iran: an internal military coup, a US military invasion, and a takeover by the opposition. None of these approaches will work in the current Iranian environment even if the US were to use them in combination with sanctions and surgical strikes. The first is a non-starter. Americans and the opposition groups have not been able to cultivate trusted friends among the high ranks of the military, the regime has established a tight grip over them after a few attempted coups in the early 1980s, and the Iranian generals are not as popular with the people and are less ambitious than their Pakistani and Turkish counterparts.

An invasion of Iran, if it were to happen, would only occur as a follow up to surgical strikes, is feasible and would reduce Iran's military power in the short term. The regime itself, however, would certainly survive the invasion, even if it sustains enormous casualties. The invasion would also impose unbearable costs and casualty upon the US. The Islamic regime has over a million men and women under arms and can mobilize another million easily. These forces include devoted Moslems who are fiercely loyal to the regime. The Iranian territory is vast and formidable, and the Iranian population is 70 million strong and is generally nationalistic and patriotic. American forces can hardly march into Tehran under such conditions, and as long as the regime controls Tehran, it will last.

The American use of the Iranian pro-war opposition for an invasion would not help either, as they are small in size and unpopular with the Iranian people. Autonomy-seeking or separatist forces among the ethnic communities (Kurds, Baluchis, Arabs, and Azeris) are also weak, and most regional states will not offer meaningful support to the US because they befriend Iran or fear a possible retaliation from Iran. The Administration should also not count upon the Iranian people to rise up against the regime in the middle of a war waged against them. Save for a small fraction, they dislike war and revolution and would unite in the face of outside threats. Any American invasion would surely produce an anti-American backlash among a potentially friendly Iranian population.

The regime would also unleash its Islamic supporters in the region against the US and Israel. At home, it would most likely impose a military government on the country and martial law in Tehran. The younger generation, which has been moving away from radical Islam, could be agitated using an Islamic or fascistic ideology and organized for war actions with far-reaching regional consequences. The attack would also strengthen the regime's resolve to build nuclear bombs. As a result of the security-military conditions, any reform or human rights movement would be considered contrary to Iran's national security and would be forcefully crushed. The Iranian bombs would become a reality before an Iranian democracy.

Alternatively, the US can also provide the exiled opposition with material and logistical support to change the regime in Tehran. The royalists, led by Reza Pahlavi, the son of the deposed

Shah, used to be a favorite of the Fox News Channel and the Israeli lobby groups. Now many in the neoconservative movement, and a recent Iran Policy Committee, are lobbying to enlist MEK to destabilize Tehran. This group, which is considered a "terrorist group" by the US State Department's own designation, was formerly pro-Saddam and is now under American protection in Iraq. Some members of Congress are also supporting a premature and impractical proposal by certain exile groups for a national referendum to change the Iranian constitution and, by extension, the regime. Still other allegedly informed Iranian opposition figures have called for "smart sanctions" against the leaders of the regime in the hope of forcing them into compromise with the West over the nuclear issue and democratic reforms.

For some time, the Bush administration has been assisting the exiled opposition and its California television stations to destabilize Tehran. Escalating such support will not make a qualitative difference in the ability of the exiled opposition to change the regime or even its constitution. They are small, divided, disorganized, without vision, unpopular with the Iranian people, and unfamiliar with the domestic political terrain. Worse yet, they are essentially middle class intelligentsia focused on democracy, ignorant of the needs and aspirations of the upper and lower class Iranians. Significantly, the key domestic opposition groups and personalities do not support the exiled opposition. They prefer a homegrown democracy to an American-led regime change.

A Realistic US Option

Even though sanctions, surgical strikes, and the various other approaches to regime change, alone or in combination, will not work, the Islamic Republic has an incentive to accept a negotiated settlement with the US and the Iranian people. Regime reform and normalization of US-Iran relations are possible, and as I shall argue, they are the two sides of the same movement. Tehran is under both internal and external pressure, the regime is divided about its future direction, the reform movement is strong among the greater population, and the Iranian people both desire normal relations with the US and demand democratic change. Two parallel movements can increase the chance for a negotiated settlement: for the US to give the nuclear negotiations a real chance to succeed, and for the regime to allow its opposition to unconditionally participate in free and fair future elections.

Proponents of regime change, even those favoring reform, fear that a change of US policy in favor of engagement would effectively represent an American acceptance of the political status quo in Iran, prolonging the regime's life and destroying any hope for democracy. This is an essentially anti-American argument. Those on the political right, including the Royalists, the MEK, and other so-called pro-democracy individuals, take an instrumental view of the US, and wish to use American power to destroy the regime in Tehran just as certain exile Iraqi opposition leaders used the US military to destroy Saddam Hossein and his regime. These groups are friendly neither to American interests nor to Iranian democracy, since they disregard the exorbitant price Americans would have to pay for a military victory over Iran, and the colossal cost the Iranians would incur if the US were to invade Iran.

Those on the political left who oppose engagement or the normalization of diplomatic relations have been making an anti-American argument of their own, based upon the Stalinist dogma that "American imperialism" is anti-democratic and pro-dictatorship. They point to past US support for dictatorships, but fail to recognize the fact that in the post-Cold War period, America has done more to undermine dictators than any other world power or democratic state. The experience of the last 25 years also suggests that no nation has become democratic while lacking diplomatic relations with the US. No anti-American model of democracy can exist, for at least two reasons: first, such a model would necessarily be antagonistic to the American philosophy that America means democracy; and second, such anti-American regimes often use their stance against the US to marginalize or completely destroy democratic movements within their own countries.

While diplomatic ties with the US have often been a necessary condition for the transition from a society controlled by a dictator to a democracy, they are not sufficient on their own for this transition. Two other factors have also been influential: economic interaction and sustained pressure for democracy and human rights, or in President Bush's words, "freedom and liberty." Since the late 1970s, in roughly 30 authoritarian regimes where these conditions were met, societies have moved toward democracy. Examples include South Korea, Eastern Europe, Russia and South Africa. In contrast, where these conditions were not met, authoritarian regimes remained in power. Examples

include Cuba and North Korea, along, of course, with Iran, where broken diplomatic ties with the US and economic sanctions have encouraged a drift towards conservatism, making these countries “depots for the tyrants,” again quoting the President.

Critics will point to Egypt and Saudi Arabia, among other states, in which these conditions have been met but in which the regimes remain authoritarian. Ironically, most these countries are either Islamic, oil-producing, or both. The truth is that the mixture of Islam, oil, and an authoritarian political culture has proven to be an immense obstacle to democratization. Reforming Islam to accept a democratic secular role, diversifying oil-based economies to increase state dependency on the population, and advancing a coalition-based political process are necessary prerequisites to democratic regime reform. Ironically, countries like Egypt and Saudi Arabia, which have diplomatic ties with the US, have a better chance to become democratic than Iran or North Korea, which have minimal or no diplomatic relations with the US. Internal collapse or the use of foreign force against these regimes is of course possible, but neither of these options would guarantee a democratic transition.

While those focused against regime change or regime reform make essentially anti-American arguments against US-Iran engagement, the more hawkish anti-Iran groups take the view that such “appeasing” approaches would leave Iran’s growing military power unchecked, thus endangering any prospects for peace in the region. The intellectual basis for the sanctions against Tehran is the idea that a weaker Iran is a better Iran. The ultimate result of the sanctions, however, has not only been a weaker Iran but also a more aggressive and less democratic Iran. These same hawks now advocate military attacks on Iran’s nuclear and military installations. They argue that, in the absence of balancing regional forces, the destruction of Iran’s power by the US is the only option to check Iran’s regional ambitions. They conveniently ignore the nuclear states around Iran while exaggerating the threat posed by a strong Iran.

As mentioned above, Iran has not initiated any regional conflicts over the last two centuries or so even though it has been in large part ruled by non-democratic regimes. Significantly, whenever Iran has been weaker, the region surrounding it has been proportionately less stable. If the 1979 Revolution had not weakened Iran, Saddam Hossein would have not invaded Iran in 1980, a war which then created a domino effect that engulfed the region, the effects of which are still being felt. In contrast, a stronger Iran has often acted as an anchor of regional stability. A stronger, friendlier and more democratic Iran would surely be preferable to a weaker, dictatorial and inimical Iran. This being the case, then the US does not need to weaken Iran in order to make it a more responsible country. Rather, it should normalize relations with Tehran, help form a regional security system with Iran as a pivotal member, and recognize that Iran’s power needs are proportionate to its regional weight and national security requirements.

The key concept is the normalization of relations: are they possible; would they resolve US concerns about Iran’s power, and would they help the democratization of Iran? My response to each of these questions is a resolute yes. Iran and the US have no demands for one another that could not be solved by negotiation, and their common interests far outweigh their differences, as illustrated by the American wars in Iraq and Afghanistan. They also have a common interest in a stable Persian Gulf and Caspian Sea, in the independent development of Central Asia and the Caucasus, and in the fight against terrorism, radical Islam of both the Shi’a and Sunni brands, and the fundamentalist Wahabi/Salafi Islamic sects. Besides, they need one another, for Iran to support the US politically, e.g. in Iraq, and for the US to support Iran economically, particularly in the high-technology and petroleum sectors.

What the two sides lack is the political will to normalize after a series of false starts in the past that have only resulted in increased mutual distrust. The Iran-Contra fiasco comes to mind, but there have been others. Building trust and confidence is the key first step towards US-Iran engagement. In no better way can this be achieved than by a third party-mediated simultaneous announcements in Tehran and Washington that the two sides wish to normalize relations and become partners in ending terrorism, securing peace in the Middle East, fostering nuclear non-proliferation, and advancing democratic development within the region. On these and on other issues, one place to start is a broader conceptualization of common ground and divergences of opinion between the US and Iran. With the crisis in Iraq, American forces on Iran’s borders, and

the growing tension over Iran's nuclear programs, a strategic imperative exists for the two sides to engage in an honest dialogue.

There are elements on both sides that want to see relations normalized. Above all are the people of both nations. Polls have shown that over 85 percent of Iranians want Iran to normalize relations with the US. A Gallup poll has shown that over 65 percent of Americans do not want a US-Iran conflict. There are also forces on both sides, however, that do not want relations to normalize. These include warmongers, ideologues, selfish regional states, and those with vested personal, organizational, group or corporate interests. These and other obstacles notwithstanding, the two governments must make normalization a top priority and make every effort to achieve it. Normalization is the only hope for a renewed American-Iranian partnership and the democratization of Iran. If Iran under various authoritarian regimes has not initiated hostilities, then a democratic Iran would surely be even more accountable and would not develop nuclear weapons, support terrorism or oppose the peace in the Middle East.

More to the point, the US should apply to Iran the approach it has successfully applied to, for example, South Korea, as opposed to the approach it has unsuccessfully applied to Cuba, Iraq or even Eastern Europe. The Cuban option, sustained economic sanctions and political pressure without diplomatic relations, will not serve American interest in the strategic Middle East, with the world's largest oil and gas reserves. This is also a region of significant geo-political importance, in which Iran has always played a pivotal role. The Iraqi option for Iran, forced regime change, is even more antithetical to American interests, as we have argued above, as the situation in Iraq itself bears daily witness. Yet the best argument against this option is that it will misuse American power against Iran and will not achieve the America's goals of a stable, friendlier, and more democratic Middle East, including Iran.

The Eastern European option of "velvet revolutions" destroying the system from within would also be unsuitable in the case of Iran. In the Eastern European countries, the one-party communist systems were autocratic and subservient to the former USSR; the regimes were thoroughly discredited and widely viewed as illegitimate; the opposition forces were avowedly pro-American; and the population existed for the most part in an information vacuum. None of these conditions hold in the case of Iran, which is above all a market economy. Significantly, in Eastern Europe, religion was on the side of the opposition while in Iran it is an arm of the theocratic state. The only viable model for the transformation of Iran is the model provided by South Korea, Taiwan, South Africa, and several dictatorships in Latin America. To neutralize the dictators, the US combined diplomatic ties with economic relations and political pressure for the rule of law, democracy, and human rights.

Unless and until the US and Iran establish diplomatic ties, Iran cannot be democratized, and to normalize relations, the two sides need to move beyond confidence building. In exchange for a guaranteed fuel supply for its nuclear power plants, Iran should suspend uranium enrichment for a given period of time and implement its agreement with Russia to transfer spent fuel abroad. To clinch the deal, the EU-US "joint carrot-and stick strategy" must offer Iran a more lucrative incentives package than selling spare airplane parts to Iran and accepting Iran as a member in the World Trade Organization. The deal must not only be big enough to entice the Iranian Government into accepting it, but also for the Iranian people to lend their full support to it and stand in opposition to the regime if it were to reject it.

Iran's national security must be guaranteed, as it lives in a dangerous neighborhood surrounded by many nuclear states. The best way to achieve this security is through a regional denuclearization scheme. It would also help if the United Nations were to promote a global moratorium on enrichment, as the world's existing stock of enriched uranium will last for decades. IAEA Director General Dr. Mohamed El Baradei supports this idea. A dialogue on Iran's national security requirements and on a regional security framework would be another logical step. These measures will help Tehran justify giving up its right to enrichment, thus maintaining its national pride. Iran will almost assuredly accept an initiative along these lines, especially if relations with the US were normalized, economic sanctions were brought to an end, and the threat of the use of force against the regime were ruled out.

Resolving the nuclear issue would also open the door for progress on many other issues. Notable among these are the issues of terrorism and democratization. These issues are inseparable from one another and from the nuclear problem, as President Bush has asserted. The challenge is thus to find the right approach to democratization. Demanding free and fair elections is the key here, and future Iranian elections will provide the best hope for a democratic Iran. While giving the negotiations on the nuclear issue every opportunity to succeed, Americans must also pay closer attention to these elections. Specifically, the US should reject regime change and let the Iranian authorities know that it will work with them only if they allowed for genuinely competitive elections.

The opposition should follow by making the normalization of American-Iranian relations their top priority. They must also call for free elections and the formation of a coalition government that represents the interests of all the various constituents of Iranian society. They should let the regime know that they will be prepared to participate in the political processes if elections are free and fair. It will not be easy to persuade the regime to normalize relations with the US and hold free and fair elections. Even if it is unsuccessful, the call for normalization and free and fair elections by the US, the EU, and the opposition will mobilize the international community, including the UN, as well as the grassroots in Iran, generating heavy pressure on Tehran. Given the serious domestic problems and foreign threats which the Islamic Republic faces, it will sooner or later yield to such pressures and agree to hold talks for normalization with the US and to open the political arena to competition.

Fueling the Dragon: China-bound Pipelines are Russia's Most Realistic Asian Energy Option

*by Gabe Collins**

China and Japan are jostling fiercely for access to Russian oil. China wants a pipeline to Daqing, in Heilongjiang Province. Japan wants a pipeline to Nakhodka on the Pacific coast—one day's sail from Japan. However, East Siberian fields may be unable to sustain enough production to fill a line to the Pacific and a spur to China, forcing Russia to choose between China and Japan.

Russia is sitting on the fence so far, leaning toward a 1 million bbl/day line from Taishtet to Nakhodka, with a possible 600,000 bbl/day spur from Skovorodino to Daqing.¹ This would allow Russia to sell oil to Japan, China, Korea, and the U.S. West Coast. If both sections of the line can be filled, Russia could satisfy China's desire for a "dedicated" oil supply. In the interim, Russia is assuring Japan that a line will eventually be built to the Pacific coast and promising China up to 300,000 bbl/day in railway crude deliveries.

China is a natural destination for Russian energy exports due to lower transportation costs, high energy demand growth, and both sides' desire to cement a strong political partnership. With the March 2006 gas pipeline agreements, Russia already seems to have chosen China as its main Asian gas export target and will likely end up doing so with oil as well. The interaction of politics and geology will shape Sino-Russian energy relations. Figure 1 offers a brief timeline of key events in the China-Russia energy relationship.

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China the Most Realistic Destination

Reason 1: Russia May be Unable to Fill a Large Pacific Line

Russia's East Siberian fields may be physically unable to fill a 1.0 million bbl/day line to the Pacific and a 600,000 bbl/day spur to China. The Moscow-based Institute for Energy Policy calculates that in 2015 Eastern Siberia will be able to support a maximum of only 800,000 bbl/day of production. Chinese sources are more optimistic about the area's potential, however, estimating that Eastern Siberia has 145 known oilfields and 250 gas fields.² Only 22 of these oilfields and 54 of the gas fields are considered "major" and 48 of the major gas fields and all 22 major oilfields are still in the exploration phase and are not yet developed.³ However, the bottom line is that if the area cannot fill the proposed lines to capacity, Transneft will be forced to scale down the project or take a serious financial hit. Scaling down would mean clearly choosing either China or Japan rather than trying to supply both.

Reason 2: Lower Transportation Costs

It would be much cheaper to ship oil to China than to the Pacific coast. According to Vladimir Milov, head of the Moscow based Institute for Energy Policy, piping oil to the Pacific will cost from \$6.40-\$9.80/bbl. Then, oil will face additional tanker shipping charges from 50¢ to \$1.21/bbl⁴ for a total transport cost of up to \$11/bbl. By comparison, shipping oil from the Persian Gulf to the U.S. Gulf Coast costs roughly \$3.35/bbl and from the Persian Gulf to Japan costs \$2.44/bbl.

Unless Russian oil producers prioritize politics over economics and accept drastically reduced netbacks for their oil, China is the most logical market. State controlled Rosneft and Sibneft might be willing to sacrifice profit for political reasons, but to fill a large pipeline, private firms such as Surgutneftegaz and TNK-BP would also need to participate. It is unlikely that these producers would willingly forego significant netback revenue without either political coercion or tax incentives. Table 1 estimates producer revenue from different Russian oil export routes.

Route	Production Cost (\$/bbl)*	Transportation Cost (\$/bbl)	Export Taxes (\$/bbl)	Producer's net revenue@ \$60/bbl oil
Angarsk-Daqing	16.00	2.06 (est.)	29.64 (est.)	\$12.30/bbl
Taishet-Skovorodino-Daqing	16.00	2.06	29.64 (est.)	\$12.30/bbl
Taishet-Nakhodka	16.00	8.10 (est.)	29.64 (est.)	\$6.26/bbl
West Siberia-US East Coast	~5.00**	3.99*	29.64 (est.)	\$21.37/bbl
*--assumes that all are greenfield developments **--brownfield development cost		**--Center for Petroleum Business Studies	If oil falls below ~\$55/bbl, a Pacific line will lose money under the current tax structure	

Russia could allow Japan or China to finance the line's construction. This would improve the transportation economics, but Moscow fears becoming "obligated" to any single oil importer. In fact, it has rejected Japanese overtures under which Tokyo would not only fund the line itself, but also develop the area's fields and invest in non-energy infrastructure development.

Is a Tipping Point Near in the China-Russia Energy Relationship?

China has thus far been dissatisfied with Moscow's cagey approach to China bound oil and gas export projects. In March 2006, National Development and Reform Commission vice director Zhang Guobao characterized the Sino-Russian energy relationship as "one step forward, two steps back."⁷⁵ Nonetheless, progress is occurring and the relationship appears to be warming up.

Oil Side		
Date	Deal	Oil Directly Secured
2006	Rail imports expected to hit 15 million tons (300,000 bbl/day)	300,000 bbl/day
July 2006	CNPC purchased approximately 5% of Rosneft's \$10.4 billion IPO	
June 2006	Purchased Udmurtneft	Entitles China to 60,000 bbl/day of equity oil production (could be swapped for oil from fields closer to China)
June 2006	Sinopec reached 1-year deal to purchase 130,000 bbl/d of Urals blend through an unnamed European trader	130,000 bbl/day
December 2004	China lends Rosneft \$6 billion for the purchase of Yuganskneftegaz	Part of the China's railway import share
Total: 490,000 bbl/day (15% of Chinese oil imports)		
Gas Side		
March 2006	Signed deals for up to 80 BCM/year of Russian gas to be shipped to China as early as 2011 (equal to about 10% of current US annual gas consumption)	

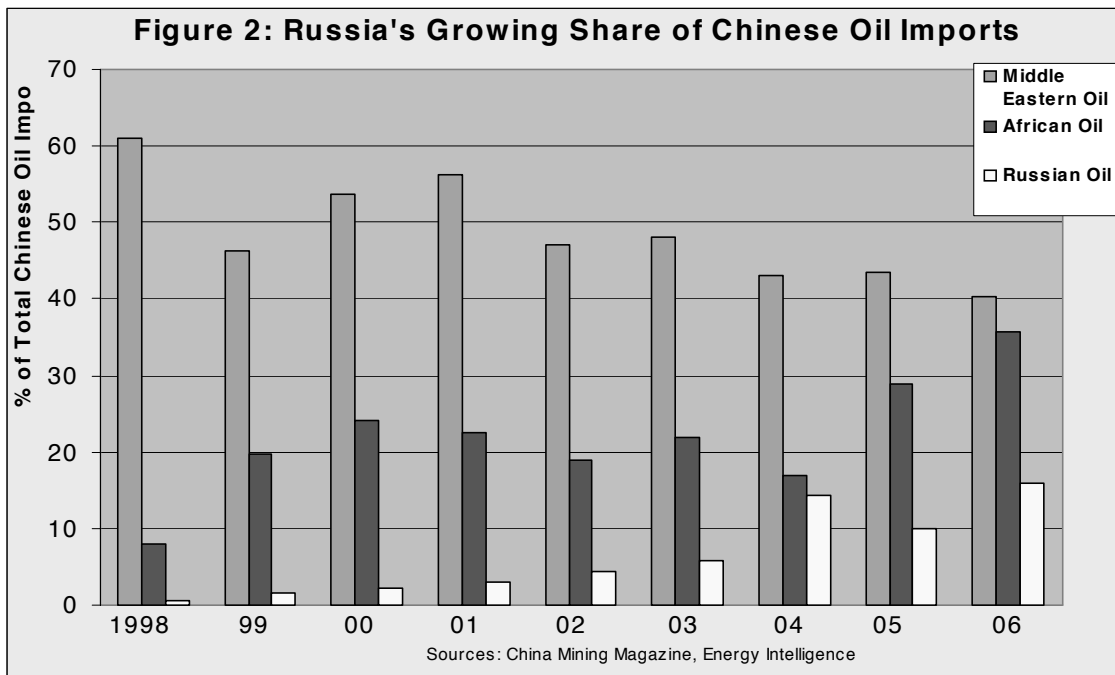
European criticism of Russia energy policies in the wake of the 2006 Russia-Ukraine "gas war" is likely speeding Russia's move toward a more Asia focused energy export strategy. Table 2 outlines key developments in the Russia-China energy relationship.

Factors Supporting a Sino-Russian Energy Partnership

Oil Side

China covets Russian oil, which it sees as a replacement for seaborne oil imports passing through what China sees as the "American controlled" Malacca Strait.⁶ Chinese security analysts fear that the U.S. Navy might cut off China's energy supply in the event of a showdown over Taiwan or other serious conflicts.⁷ China also fears that America's increased post-Iraq war presence in the Persian Gulf threatens China's oil security.⁸ Accordingly, Beijing is aggressively pursuing overland oil supply options, primarily from Kazakhstan and Russia. China and Kazakhstan have built a 200,000 bbl/day line that will reach full capacity in 2008-2009, and possibly expand to 400,000 bbl/day by 2011.⁹ If the Kazakh line reaches full capacity and Russia builds a 600,000 bbl/d line from Skovorodino to Daqing, by 2012-2015, China could receive nearly 25 percent of its oil imports through secure overland routes that do not transit third countries. Some have called these projects competitors, but this is unlikely for two reasons. First, China's oil import demand is sufficient to accommodate both, particularly given Beijing's desire to reduce its reliance on seaborne oil imports. Second, the Kazakh line and a line to Daqing are far enough apart that pumping oil between them could cost as much as \$8/bbl.¹⁰

In addition to concerns about foreign navies' ability to interdict Chinese oil shipments, China also wants to diversify its oil supplier base. China sees the Middle East as inherently unstable and is working to diversify away from the Persian Gulf by increasing its take of African and Southeast Asian oil. Yet Chinese analysts realize that these sources alone cannot replace Middle Eastern oil, thus necessitating a turn toward Russia.¹¹ Figure 2 shows how Russian oil imports are helping to displace Middle Eastern ones in the Chinese market.



Chinese analysts see a Russian pipeline to Daqing as a "win-win" proposition because it could provide China 600,000 bbl/day of Siberian Light crude, replace seaborne imports, offset the declining Daqing field, and give Russia a steady revenue stream.¹² Such a pipeline would also make Siberian Light one of the major crude streams in the region. This would give it pricing power that could erode the traditional "Asian Premium" that Asian importers pay for Middle Eastern oil.

Moscow meanwhile sees China as a way to diversify away from a stagnant European market obsessed with cutting energy demand. In the next decade, Russia hopes to increase its oil production by 14 percent and its natural gas production by 26 percent and will need vibrant markets

like China to absorb this increase.¹³ Russian observers believe that energy exports could be the “key” that opens the door to broader economic relationships with China and other Asian countries, enabling Russia to diversify away from Europe.¹⁴

The Russian government also hopes that pipeline projects will help promote regional development. President Putin himself has said “[*pipeline construction*] will bring with it social and transportation infrastructure development, roads, electricity, manufacturing, and will demand high quality training of specialists.”¹⁵

Russia would gain from allowing Chinese companies like CNPC into Eastern Siberia. Chinese national energy companies are free from shareholder concerns and can spend heavily on building infrastructure that benefits overall regional development. They have a good track record of doing so. In Sudan, CNPC has sharply increased Sudanese oil production, built a 900 mile export pipeline to the Red Sea, and has begun building up Sudanese refining capacity. In Angola and Nigeria, Chinese banks have provided a combined \$6 billion in financing for oil related and public infrastructure.¹⁶

China has already expressed a strong desire to participate in exploration and development and serve as a labor/engineering contractor in Eastern Siberian energy development.¹⁷ After a series of setbacks—like CNPC’s failed attempt to purchase Slavneft in 2002 and unsuccessful bid for 20 percent of Yuganskneftegaz in 2004—China now has a foot in the Russian door. In June 2006, Sinopec paid \$7.20/BOE for TNK-BP subsidiary Udmurtneft, entitling it to 60,000 bbl/day of equity oil. Whether a larger Chinese upstream presence will come to Russia remains to be seen and hinges on politics and the ultimate outcome of the ongoing pipeline wrangle.

Gas Side

China’s attempts to reduce its serious air pollution will drive strong natural gas demand that cannot be met by domestic production alone. Russia has few alternatives to China for marketing East Siberian gas, because the fields lie more than 1500 miles from major markets. TNK-BP will soon begin selling gas from Kovykta into the Irkutsk area¹⁸, but the region lacks demand to support development of a 2 trillion cubic meter gas field. Russian consumers also pay subsidized rates, making domestic gas sales unprofitable for producers who cannot sell into higher priced outside markets to compensate for losses from domestic sales.

In March 2006, China and Russia signed an agreement to build two pipelines that would bring up to 80 BCM of gas per year to China from West and East Siberian fields as early as 2011.¹⁹ If Russia can get rates of even \$80 per 1000 cubic meters, this would mean income of more than \$6 billion/year, which would raise Gazprom’s annual revenues by more than 20 percent.

Political Drivers

China and Russia have shared interests in building a more comprehensive political-economic relationship, which the Chinese side believes could be cemented by an energy partnership.²⁰ China sees energy relationships in comprehensive terms and would likely bolster an energy partnership with increased technology and arms exchanges, other investments, and an overall push to increase bilateral trade.²¹

The two countries are the core of the Shanghai Cooperation Organization and a strong China-Russia energy/political partnership could make it easier for them to coordinate policies and manage interests in Central Asia, thus possibly leading to an even more assertive and influential SCO. Continued cooling of U.S.-Russia relations and friction with Europe over energy issues might push Russia to pursue a more Asia-centric foreign energy policy.

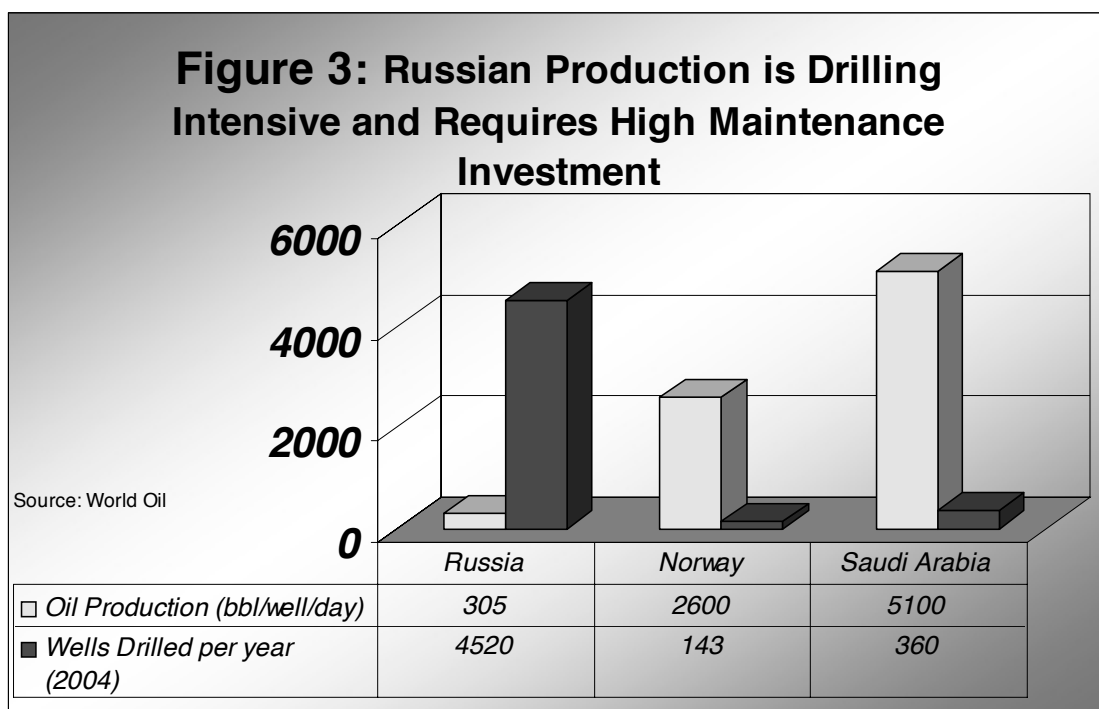
Factors Holding Back the Partnership

Russian Resource Nationalism

Russia needs foreign participation in oil and gas development, where an estimated \$11 billion annually in new investment is needed simply to maintain production. However, recent Russian moves will likely discourage badly needed foreign investment. The new “Subsoil Law” bars non-Russian firms from participating in auctions for any field with more than 513 million barrels of oil or 50 billion cubic meters of gas.²² Meanwhile, the Duma recently passed a “Law on Gas Export,”

effectively giving Gazprom absolute control over who can access its lines as well as how much they receive for their gas.²³ The net effect will likely be that third party producers may shy away from gas production, thereby putting the entire burden of fulfilling supply commitments upon Gazprom itself. Finally, the current Russian oil taxation structure is such that for every dollar above \$28/bbl, the Kremlin takes roughly 95 cents. This dampens private companies' incentive to invest in expanding production, even though oil prices are currently very high.

Many of Russia's great production gains in the late 1990s and up to 2004 came from reworking Soviet era fields with Western technology, not from new exploration and development. Developing East Siberia could push the Russian energy sector's annual investment needs well beyond \$20 billion/year. Figure 3 shows how much more drilling Russia requires to maintain and grow its production than other oil exporting countries do. It should be noted that Saudi Arabia is drilling aggressively to increase its production capacity by as much as 15 percent.



China arouses special fears among Russians. Russia dislikes ceding shares in its natural resources to Western IOCs whose home governments sermonize on open markets and human rights. Yet China has 10 times Russia's population and the countries share one of the world's longer land borders (more than 4000 km).

Although China would be a high growth market for Russian natural resources, Russians fear becoming the junior partner in any Sino-Russian relationship.²⁴ The Russian Far East is already being inexorably drawn into China's economic orbit. Eastern Siberia has some of the world's lowest population densities (1 person per square kilometer), and borders Chinese provinces with far higher populations. The demographic ratio is not improving because Russia's population is falling and several Eastern Siberian regions in particular have some of the worst health problems and lowest life expectancies in Russia.²⁵ For this reason, some Russians fear that Chinese immigration could effectively make Eastern Siberia a satellite of China. Many Chinese analysts attribute the slow progress of China-Russia energy relations and the 2003 cancellation of the Angarsk-Daqing pipeline plan to these very factors.²⁶

In addition, many Russians simply resent the prospect of becoming little more than a resource provider for China. A relationship in which Russia sells China raw materials and China sells Russia higher value added manufactured products would not be a firm basis for a meaningful economic partnership. Indeed, top Russian officials including Russia's ambassador to China have indicated that serving solely as a raw material supplier for China would be unacceptable for Russia.

Barrier 2: Monopsony Fears

Russia also fears that building a pipeline to China would permit Beijing to squeeze Russia on price once the pipeline is built by threatening to take less oil and import more by sea. A line to the Pacific Ocean on the other hand would allow Russia to sell oil into a wide range of markets, including Korea, Japan, China, and even the U.S. West Coast. Some Chinese have proposed building a line through Northeast China to Dalian, from which surplus oil could be shipped on to Japan and other Asian markets.

However, Russia's conflict with Ukraine in the winter of 2006 and other transit country problems in its gas sales make it unlikely that Moscow would put its oil exports at similar risk by supporting this option, although it might make greater economic sense than a line to Nakhodka. It is also likely that Tokyo would strenuously oppose giving China the power to cut Russian oil supplies to Japan.

Moscow also likely fears a repeat of its 2003 experience with the Russia-Turkey Blue Stream gas pipeline. After Gazprom had sunk significant capital into line construction and gas began flowing, Turkey stated that it had other suppliers and did not "need" Russian gas, promptly refused to take further deliveries until Gazprom slashed its price, causing the Russian side serious financial losses.

Barrier 3: High Transportation Costs

Table 3: Russia-China Oil Transport Costs		
Route	Parameters	Transport Cost (\$/bbl)
VSTO-Nakhodka, tanker to Ningbo, China	\$6.40/bbl tariff, 6 day Aframax round trip to Ningbo	6.70-10.10
Russia-Daqing, China by rail	Russia currently charges \$10.29 RMB/ton rail transport fee to border. ¹ China would likely charge roughly \$25/ton for transport from border to Daqing. ¹	at least 4.00
Russia-China pipeline ²	2400 km line from Angarsk-Daqing, \$2.2 billion cost	2.06
VLCC Ras Tanura, Saudi Arabia-Ningbo, China	33 day trip, \$55K/day VLCC charter rate, 2 million bbl cargo	1.10
Sakhalin, Russia-Ningbo, China	6-day roundtrip with Aframax tanker	.30

¹ <http://www.jinlai.net/main/list.asp?id=809>

¹ Jianrong, Jiang. "Problems in China-Russia Energy Cooperation and their Effect on China." (Zhonghe Nengyuan Hezuo Zhong de Wenti ji dui Zhongguo de Yingxiang) Social Sciences (Shehui Kexue) Vol. 1. 2006. (59-69)

² Assumes that China takes title to the oil at the China-Russia border

As Table 3 shows, the Nakhodka line can access multiple markets, but at a very high cost. In addition to at least \$6.40/bbl in transportation cost, the Russian government currently taxes crude oil exports at roughly \$27/bbl. If China purchases oil at roughly market prices, the substantial transportation cost of the Pacific route gives returns that are at least 20 percent lower than for a Daqing line.²⁷

Russian observers also worry that oil from a line to the Pacific would have to compete with cheaper oil produced on Sakhalin.²⁸ Sakhalin is forecast to produce 250,000 bbl/day by 2010. If Russia ships oil from Nakhodka to Japan, South Korea, China, and the U.S. West Coast, there

would likely be sufficient combined demand to ward off a glut. However, Sakhalin oil would be the "barrel of first choice" due to a built in price advantage of at least \$6.00/bbl from lower transportation costs.

Barrier 4: Natural Gas Issues

Unlike oil prices set by a global market, natural gas prices in bilateral pipeline deals are heavily influenced by local factors. Russian natural gas exports to China face both "coal on gas" and "gas on gas" competition. Natural gas's main uses in China would be clean electrical generation and home heating. Here, Russian gas would be easily substitutable by China's massive thermal coal reserves or possibly by imported LNG. As a result, China will have leverage to make Russia accept lower gas prices than it gets in Europe and other areas with less fuel switching ability.

Nonetheless, a pipeline to China and possibly on to South Korea (via the Yellow Sea) is one of Russia's only options for monetizing its East Siberian gas deposits. Other possibilities may be to consider gas to liquids (GTL) or gas-based petrochemical production, both of which would create jobs in this economically depressed region. However, such ventures might be uneconomic since they would have to ship their products at least 2000 miles to reach a major sea port and access global markets.

Alternative Paths for Cooperation

Russia and China may also find alternative ways to cooperate on energy issues. Gazprom and CNPC are considering partnering up to explore and develop oil and gas fields in third countries, including Iran and some of the Central Asia countries.

Russia and China will likely have a complex energy relationship in Central Asia, competing for some assets and cooperating in other deals while Russia works to sell Russian oil through Kazakh pipelines to China. Transneft and KazTransOil JSC have discussed shipping 100,000-200,000 bbl/day of West Siberian oil through the Kazakhstan-China pipeline at a tariff of roughly \$2.20/bbl.²⁹ If Russia can divert sufficient West Siberian crude to China through Kazakhstan, it can satisfy China's wish to obtain more overland oil supplies while at the same time trimming its shipments to Europe and perhaps reducing the Brent-Urals price differential as a result.

Conclusion

The China-Russia oil and gas trade will grow because China is a hungry market that, out of all Asian options, would be the most cost effective for Russia to supply. What remains unclear is precisely how this will take place and how quickly major decisions will occur. Large new energy developments require massive investment and preparatory work and as such, take time. The Trans-Alaska pipeline was only one-third the length of the proposed Nakhodka line and was built in similar climate and terrain. Yet, it required 9 total years from conception to completion and 3 years of actual construction time.³⁰

Pricing of oil and gas will also be a thorny issue. Moscow is reasonable in wanting to pin pricing issues down (particularly for gas) before any pipelines are built specifically to serve the China market. Thus far, no agreement has been reached. Once a price is settled on, things may develop quickly.

Political factors will be tough to overcome in building the energy partnership. Russia's Byzantine bureaucratic politics hinder its energy policies. Internecine struggles within the Russian government account for the pendulum swings that Russian energy policy toward China has taken in the past few years. Russia's increasing diplomatic separation from the West may give it more inclination to earnestly pursue Asian relationships.

China has made it quite clear that it is ready to take its energy partnership with Russia to the next level. For this to happen, Russia must show China that it is indeed ready to become a major Asian energy supplier. In the past several years, Russia has become a significant oil supplier to China. Taking politics and geology into account indicates that a long-term Sino-Russian energy partnership has strong prospects as Moscow and the Russian energy producers look eastward.

Endnotes

- ¹ Khartukov, Eugene and Ellen Starostina. "Expansion Eyes Multiple Outlets." *Oil & Gas Journal*. Apr. 3, 2006. Vol. 104, Issue 13, Pg. 64.
- ² Haiyan, Xu. "Russia's 'Look East' Energy Export Strategy and China Russia Energy Cooperation." (Eluosi Dongxiang Nengyuan Chukou Zhanlue yu Zhonghe Youqi Hezuo). *Fudan Journal of Social Sciences*. Vol. 5. 2004. (101-106)
- ³ Ibid.
- ⁴ Estimated tanker shipping cost to US West Coast
- ⁵ "Chinese Planner Cites Scant Progress on Energy with Russia." *Platts Oilgram News*. March 10, 2006. <http://web.lexis-nexis.com>
- ⁶ Ping, Luo. "National Oil, Nationally Hauled: China's Energy Security Insurance Line." (Guoyou Guoyun: Zhongguo Nengyuan de Anquan Baozhang Xian) *Maritime China*. Feb. 2005. (38-40)
- ⁷ "China's Energy Security Strategy and the Energy Transport Problem." (Zhongguo Nengyuan Anquan Zhanlue Zhong de Nengyuan Yunshu Wenti). *China Energy (Zhongguo Nengyuan)* Vol. 26 No. 7. Jul. 2004. (4-7)
- ⁸ Daojiong, Zha. "Iraq War's Impact on China's Energy Supply." (You Yilake Zhanzheng kan Zhongguo Nengyuan Zhanlue Yanjiu) *China Oil Industry*. May 2003.
- ⁹ "Kazakhstan oil pours into China through crossborder pipeline." *Xinhua*. May 25, 2006. http://news.xinhuanet.com/english/2006-05/25/content_4600061.htm
- ¹⁰ <http://www.energypolicy.ru/eanalit.php?id=1001959>
- ¹¹ Ruibin, Hao and Wang Weiyi. "China Petroleum Security and Sino-Russia Petroleum Cooperation in the 21st Century." *China Mining Magazine*. Vol. 15, No. 3. March 2006. (5-8)
- ¹² Li, Guo. *Study on Russia's Strategy for Northeast Asia*. Social Sciences Academic Press: Beijing. 2006. (324)
- ¹³ "Russia's Position." Official Website fo the G8 Presidency of the Russian Federation in 2006. July 12, 2006. <http://en.g8russia.ru/agenda/nrgsafety/russianrole>
- ¹⁴ Dmitriev, Mikhail. "The Energy Key Strategy." *Kommersant*. July 31, 2006. <http://www.kommersant.ru>
- ¹⁵ "Vladimir Putin: Additional Exploration of Eastern Siberian Oilfields is Essential." (V. Putin: Neobxhodima Dopolnitelnaya Razvedka Netyanix Mestorozhdenii Vostochnoi Siberii) *Oil and Capital (Neft i Kapital)* July 24, 2006. www.oilcapital.ru
- ¹⁶ To be sure, Japan has also offered billions in development funds to help build a pipeline to the Pacific
- ¹⁷ Li, Guo. *Study on Russia's Strategy for Northeast Asia*. Social Sciences Academic Press: Beijing. 2006. (323)
- ¹⁸ "Kovikta's First Gas Will Flow to Siberia This December." (Pervi gaz s Kovikti Pridyot v Sibir Uzhe v Dekabre Etovo Goda). *Newsru*. August 7, 2006. http://www.newsru.com/finance/07aug2006/kovikta_print.html
- ¹⁹ "Russia Signs Gas Deal With China." *BBC*. March 21, 2006. <http://newsvote.bbc.co.uk/mpapps/pagetools/print/news.bc.co.uk/2/hi/asia-pacific.html>
- ²⁰ Li, Guo. *Study on Russia's Strategy for Northeast Asia*. Social Sciences Academic Press: Beijing. 2006. (320)
- ²¹ Jianrong, Zhang. "Problems in China-Russia Energy Cooperation and its Effects on China." (Zhong-E Nengyuan Hezuo Zhong de Wenti ji dui Zhongguo de Yingxiang.) *Social Sciences*. Vol. 1. 2006. (59-69)
- ²² "Knockdown: Subsoil Law Shifts Ground Under TNK-BP." *Nefte Compass*. June 15, 2006. <http://web.lexis-nexis.com>
- ²³ Vinogradova, Olga. "Gas Export: Speed and Pressure?" *Neftegazovaya Vertikal*. No. 11. 2006. <http://www.ngv.ru/magazin/view.hsrl?id=3216&mid=122>
- ²⁴ Author's interviews in Beijing, Moscow, and St. Petersburg. 2004-2006.
- ²⁵ Arbatov, Alexei. Et. al. *A Strategy for Russia: An Agenda for the President-2000*. Advisory Council on Foreign and Military Policy. Moscow. 2000. (286)
- ²⁶ Bingyen, Wang. "A Macro View of Developing Oil Cooperation Between China and Russia." *Journal of Siberian Studies*. Vol. 31, No. 4. August 2004.
- ²⁷ This is assuming that Russia cannot fill both a Pacific-bound line and spur and that it must choose one terminus or another.
- ²⁸ Grigoryev, Alexei. "Russia's Oil Survey." *Kommersant*. March 7, 2005. <http://info.forest.ru/oil/05/oil-0510.htm#1>
- ²⁹ Khartukov, Eugene and Ellen Starostina. "Expansion Eyes Multiple Outlets." *Oil & Gas Journal*. Apr. 3, 2006. Vol. 104, Issue 13, Pg. 64.
- ³⁰ "Chronology of Major Pipeline Events." *Alyeska Pipeline Service Company*. <http://www.alyeska-pipe.com/Pipelinefacts/Chronology.html>

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