

Why and How Must Present Energy Security Policies Be Improved

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ABSTRACT

Energy security has become a pressing issue of today's politics, and the global search for a new security model has begun. To combat uncertainty about the reliability of energy supplies, new policy options must, first of all, ensure that energy security has enough flow and capacity to counteract increasing political explosiveness in areas such as the Middle East, Caspian basin, and sub-Saharan Africa. Energy has primarily political overtones, and an effective policy must pursue the objective of a secure supply of energy that can be sustained under the influence of governments of all political colors, and geopolitical alignments.

INTRODUCTION

Energy security, one of the most complex and dynamic political concepts, has many intertwined dimensions and numerous downsides. It is an especially challenging obstacle for the world's two largest energy consumers, the United States and European Union. During the round table on energy efficiency in Brussels Andris Piebalgs, EU Energy Commissioner, noted that the "energy future...is dirty, insecure and expensive."ⁱ Energy security, as a result, has become a dominant priority in major recent summits and high-level meetings. Be as it may, amid many aspirations to develop a functioning energy policy, there is no overall security framework.

The new security model must be sufficiently reliable to cope with a broad spectrum of probable and unanticipated energy vulnerabilities. It must incorporate common solutions that work optimally in domestic, international, and intergovernmental dimensions. At the same time, a credible and sustainable program has to be tailored to specific needs. Many countries have different energy mixes, and they require varying degrees of capacity for protection. Each energy system however needs fluidity of structure and resources to manage risks successfully.

While ensuring that security measures are not duplicative or contradictory, it is essential that the model also include comprehensive techniques to manage both short-term and long-term risks across the globe. Brief disruptions of supply, after all, can be just as damaging as lasting ones.

Most importantly, the model has to be based on a combination of actions, encompassing a wide range of coordinated and reciprocal insurance mechanisms that can endure under the pressure of the international system's propensity for transfiguring political risk.

METHOD

The primary basis for the report is an extensive review of available literary resources, including selection, analysis and interpretation of the relevant data. The subject areas of focus do not include all major energy-producing countries, but only those who demonstrate the changing and uncertain nature of energy security. The regions discussed were chosen according to the degree of their present or future geopolitical significance, or level of dependence on energy security. The examination of political factors underlying the issue is of particular interest.

RESULTS

Global Search for a New Model

For the last several years, the EU has been at the forefront of raising awareness about the urgent necessity for a functional energy policy. Chancellor Angela Merkel has repeatedly described energy security as one of the highest priorities for the German Presidency of the EU that has started in January 2007. Javier Solana, EU High Representative for the Common Foreign and Security Policy, warned the Member States of the increasing competition for energy by saying that the "scramble for territory of the past may be replaced by a scramble for energy."ⁱⁱ And even José Manuel Barroso, the President of the European Commission, accurately observed at a conference in Lisbon that energy had been "at the heart of the original idea of European integration," He alluded to the European Coal and Steel Community of 1952, and the European Atomic Energy Community of 1958, two of the three founding institutions of the EU.ⁱⁱⁱ

The new energy scheme is absolutely indispensable to global stability and national interests. Without policy reform, the EU's overall energy import dependency is projected to increase as much as 60%, or more, over the next

25 years.^{iv} But the interest in energy policy is high outside the EU's borders too. In the face of recent developments, the issue has gained a truly global recognition. The Club de Madrid's 5th General Assembly openly emphasized that immediate action is required in order to transform existing energy systems.^v The 2006 G8 Summit in Saint Petersburg, Russian Federation, identified global energy challenges as "essential to improving the quality of life and opportunities in developed and developing nations."^{vi}

The United States is also painfully aware that its economy and lifestyle can suffer badly from poor access to productive energy resources. In July 2006, David Pumphrey, deputy assistant secretary for international energy cooperation at the U.S. Department of Energy, declared that as the world's largest consumer of energy resources, "the U.S. must play a leading role in addressing...energy challenges and ensuring a secure energy future."^{vii}

Obstacles in Protecting Major Sources of Energy

In terms of type of energy consumed, petroleum and natural gas will continue to dominate.^{viii} Coal, solid fuels, nuclear energy and renewables are, undoubtedly, integral parts of the power sector. But for now, the two substances that are most critical to world commerce and security are oil and gas. The availability and accessibility of crude oil, as the world's most actively traded commodity, are matters of particular interest.^{ix} The new energy policy must reflect these current priorities. If they change, so must the focus of the policy. The model has to be readily adjustable to changing circumstances. Such energy scheme has never been fully achieved yet.

The efforts by the United States to keep its energy policy up-to-date show vividly how difficult it is to prepare and maintain a truly forward-looking agenda. The think tank of Deutsche Bank Group, for example, has observed that the Energy Policy Act of 2005 (EPACT), which authorized the U.S. Department of Energy to increase the Strategic Petroleum Reserve (SPR) capacity from 700 million to 1 billion of barrels per day, was the first energy law since 1992.^x It contained 1,700 pages.

The first time the United States began thinking seriously about energy security was in 1973-74, during the Arab Embargo. In the aftermath of the unexpected sharp increase in oil prices, the country has defined energy efficiency, conservation, and new technology as the core aspects of its reformed energy policy.^{xi} Diversification of supply sources outside the Persian Gulf has also become a top priority. In the 2006 State of the Union Address, President Bush called for the replacement of around 75% of oil imports from the Middle East.^{xii}

Considering the political nature of the Arab Embargo, one of the first well-known instances of energy being used as a tool of political manipulation, it is rather strange to find that the tone of the ensuing legislative measures was largely economic. Except for the Broader Middle East and North Africa Initiative, a plan designed to promote political liberalization in the region, none of the U.S. major official components of energy security aim at reducing political risk.

The absence of a comprehensive, politically oriented, energy security strategy in the United States, and the international community speaks not of inattention to the issue, but of its complexity. There is plenty of evidence to suggest that energy security is the most intricate, volatile and potentially detrimental aspect of security as a whole. One reason for the slow progress in fabricating a new energy policy is that the threats it confronts constantly assume different forms. Emerging Asian economies, a new era of protectionism in Latin America, concentration of oil reserves in highly sensitive areas, and a growing significance of oil are all deeply complementary and equally important elements of energy security that hinder access to vital natural resources.

Principal Threats and Solutions are Political

Energy security consists of different elements that do not simply work together, but constantly interact and reinforce one another. For that reason, it is difficult to define any hierarchical structure for them, or predict how the lack of one aspect will affect the rest of dimensions. What can be said with certainty is that apart from economic concerns, energy security is driven by political motives and oriented toward political ends. This makes energy security fundamentally a transnational political phenomenon, whose major threat and principal solution are also political.

Factual evidence compellingly indicates that political risk, as a threat to energy security, is virtually unrivaled. Nowadays, some of the most politically sensitive regions in the world are major sources of fuel. Some of these areas include the Middle East, Russia, Caspian Sea, and sub-Saharan Africa.

The reports released by the U.S. Government Office of Accountability (GAO) and the Energy Information Administration (EIA) affirm that 63% of proven world oil reserves are located in areas of high and medium levels of political risk (see Figure 1).^{xiii} As defined by the Global Insight's Global Risk Service, political risk is a correlation between the likelihood that events such as civil wars, coups, labor strikes will occur, and the degree to which these events are estimated to negatively impact GDP growth.^{xiv} The main task in determining the volatility of energy

resources emanating from political factors is to predict the probability of the major forms of political risk happening in the international system.

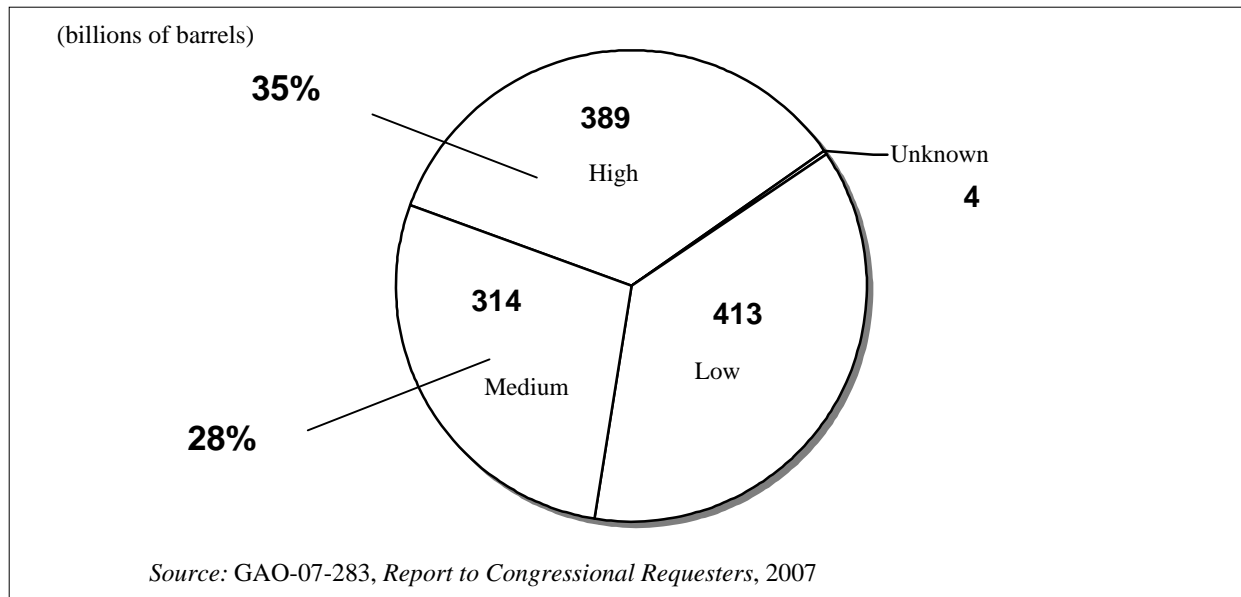


Figure 1. Worldwide proven oil reserves by political risk

The extensive study of conducted by Professor Andrew Mack of the University of British Columbia illustrates that the international system has become much less inclined to all traditional patterns of political violence (see Table 1). Although the study applauds such dramatic and positive transformation, it reassures that there is no room for complacency. The risk remains real primarily because “the underlying causes of conflict are too rarely addressed,”^{xv} G. John Ikenberry and Anne-Marie Slaughter, the co-directors of *The Princeton Project on National Security*, also reason the threats in the international arena are numerous. The authors assert that the Middle East, for example, now “rivals the Balkans...in explosiveness.”^{xvi} In support of their claim they cite the Israeli-Hezbollah war in the summer of 2006, a broader Shi’ite-Sunni conflict, and flourishing Iranian nationalism.

Table 1. Decline in all forms of political violence*

Armed conflicts	International crises	Wars between countries	Actual and attempted coups	Genocides and mass killings	Deaths from all political violence
40%	70%	Less than 5% of all armed conflicts	60%	80%	62% in the Americas
					32% in Europe
					35% in Asia
					24% in Africa

Source: Human Security Report 2005: War and Peace in the 21st Century, Human Security Centre
 *except for international terrorism

The EU and the Middle Eastern Explosiveness

Up until now, there have been many attempts to achieve a safer energy environment. The EU, for instance, has significantly changed its sources of supply between 1978 and 2001. Dependence on Persian Gulf producers has been reduced and replaced with the countries of the former Soviet Union (FSU), Norway, and the United Kingdom. However, the EU’s apparent success in lessening the political vulnerability of its energy sources is misleading.

In 1978, 60% of the EU’s crude oil supplies came from the region that has historically been a locus of many conflicts, the Middle East (see Table 2.1).

Table 2. EU-15's top 10 crude oil supply origins

2.1 1978				2.2 2001			
Rank	Country	1000 tones	%	Rank	Country	1000 tones	%
1	Saudi Arabia	151,709	24	1	Norway	107,253	18
2	Iran	84,563	13	2	Former USSR	100,828	17
3	Iraq	69,286	11	3	United Kingdom	85,876	15
4	United Kingdom	53,475	8	4	Saudi Arabia	58,518	10
5	Libya	41,581	6	5	Libya	43,008	7
6	Kuwait	38,449	6	6	Iran	30,991	5
7	Nigeria	38,092	6	7	Nigeria	25,358	4
8	United Arab Emirates	37,665	6	8	Iraq	19,564	3
9	Former USSR	31,210	5	9	Other Middle East	18,780	3
10	Algeria	20,843	3	10	Algeria	14,009	2
	Sub Total	566,873	88		Sub Total	504,185	87
	Total Supplies	643,874	100		Total Supplies	581,200	100

Source: Clingendael International Energy Programme, 2004

Understanding all the risks posed by the ongoing difficulties in the Middle East, the EU began to refashion security strategy, making its energy sources seemingly more diverse and reliable. In 2001, the Middle East was no longer the EU's primary supplier of crude oil. By that time, European nations accounted for 33% of its oil needs, the FSU provided 17%, and the Middle East contributed another 28% (*see* Table 2.2).

Have the Eurasian supplies made the EU's energy balance any safer? There is nothing to suggest that multiple low-risk options are preferable to a single high-risk option. The EU's diversification was probably a thoughtful and cautious step, but not crucial to energy security, mainly because it failed to stimulate a constructive political change that could lower the degree of political risk in the Middle East, or the FSU.

Designing a comprehensive approach to energy security is problematic. It requires consideration of individual possibilities and priorities, strengths and weaknesses, general and specific barriers. Bearing in mind that over 75% of the total hydrocarbon resources are under state ownership, it makes sense for energy policy to concentrate on suppliers' political climate.^{xvii} Most policy papers however seem to accentuate diversification of supplies and fuels, increased energy efficiency, and liberalization of energy markets, hoping that changes in key political aspects will follow.

Downsides of Diversification

Energy security continues to remain a delicate issue of growing concern. The worries of major oil consumers like the EU and US are not unfounded. By looking at the interaction between major consumers and suppliers, one can ascertain which elements of energy security are being paid the most attention to. Diversification of fuel and supply appears to have always been crucial to energy security, as it provides avenues to lower the negative impact of unequal concentration of energy resources.

Geographic asymmetry between hydrocarbon resources and their markets, Dr. Robert Skinner of the Oxford Institute for Energy Studies points out, is the essential ingredient of energy security and "the single greatest threat to peace and stability, nationally and internationally."^{xviii} Indeed, natural resources, particularly petroleum and natural gas, cannot be manipulated in ways that would allow any nation to extract them in places where they do not exist. This inseparable connection between energy supplies and their origins makes diversification, supposedly, an invaluable instrument in strengthening energy security. Daniel Yergin, chair of Cambridge Energy Research Associates, quotes Winston Churchill as having once said, "safety and certainty in oil...lie in variety and variety alone."^{xix} Examination of a broader picture of energy security attests that diversification may be a more peripheral detail, than it is currently considered.

The Caspian Sea Case

Among the resource-rich members of the FSU, Russia stands out as the world's largest exporter of natural gas and the second largest oil exporter. Along with Norway, it is the EU's top supplier of energy resources.^{xx} Some of

the Eurasia's richest energy fields, the West Siberia and Volga-Urals regions, are encapsulated within the Russian territory.^{xxi} The world's potentially third largest reserve of oil and gas, the Caspian Sea basin, is within Russia's reach as well.^{xxii}

The Precaspian and Middle Caspian sections of the Caspian Sea basin are scattered mostly across Kazakhstan, and partly along the Kazakhstan-Russian border. Azerbaijan, Iran and Turkmenistan share the South Caspian part of the basin. Political profiles of the littoral states confirm that natural energy reserves in the Caspian region are similarly volatile to those in the Middle East (*see* Table 3). Interestingly enough, Richard C. Longworth, the Chicago Tribune's chief European correspondent, has once described the Caspian region as "Bosnia with oil."^{xxiii}

Table 3. Political profile of selected countries in the Caspian region and Middle East

Country	Corruption Index, 2004 (out of 145)	Freedom House Index, 2007		
		(7 is the lowest)		Freedom Status
		Political Rights	Civil Liberties	Partly Free/Not Free
<i>Caspian region</i>				
Azerbaijan	140	6	5	NF
Kazakhstan	124	6	5	NF
Russia	95	6	5	NF
Turkmenistan	139	7	7	NF
<i>Middle East</i>				
Iran	88	6	6	NF
Iraq	130	6	6	NF
Kuwait	44	4	4	PF
Saudi Arabia	72	7	6	NF
United Arab Emirates	30	6	5	NF

Source: Global Corruption Report 2005, Freedom In the World 2007.

Against the backdrop of the Caspian region's own concealed explosiveness the EU's decision by to dilute its dependency on the Middle East with primarily Eurasian resources might seem well-reasoned. But the supplies of the FSU, as it turns out, bring an assortment of their own unfavorable nuances, predominantly political.^{xxiv}

Diversification is not a reliable instrument to improve energy security. It may be helpful in addressing short-term risks, but not the possible long-term complications. Focusing on how to boost energy supply, diversification overlooks the root cause of energy vulnerability, the political system.

The Influence of Political System

In 1998, the Research Paper released by the House of Commons Library stated that Russia "had little experience of democratic or participatory government. . . ."^{xxv} The Paper went on to say that the country's "underlying economic conflicts and dilemmas were not being resolved."^{xxvi} Certainly, Russia has been somewhat transformed since the day these statements were made.

Over the past several years, Russia has acquired many attributes of a parliamentary democracy. Regardless of how earnest the democratic change has been, several remnants of the past Soviet system persist. The Russian constitution, for example, continues to remain strongly presidential.^{xxvii} Furthermore, Yuliya Tymoshenko, the former Prime Minister of Ukraine, provides an account of the study carried out by Olga Kryshchak, director of Moscow's Center for the Study of Elites, alleging that close to "78 percent of the top people in Putin's regime can be considered ex-KGB."^{xxviii} Another well-known critic of Russia's domestic political regime, a former special correspondent for *Novaya Gazeta*, Anna Politkovskaya, insists in her latest book that the "legislative and executive branches of government had merged," leading to the gradual demise of the parliamentary democracy in Russia.^{xxix}

Russia's underdeveloped democracy adversely influences its reputation as a dependable supplier of primary fuel. What's more, this democratic deficit strongly politicizes Russia's relations with the regional transit countries. In the Eastern European energy corridor, political atmosphere is not as strained as in the Middle East, but when the price

negotiations for oil or gas get out of hand, the significance of improved energy security becomes evident. Similarly to the Arab oil embargo, the Russian-Ukrainian crisis in January 2006 epitomizes the problems that arise when energy is used as a political lever.^{xxx} Besides Ukraine, the shutdown of the Druzhba pipeline during the crisis affected the Czech Republic, Hungary, Germany, Poland, and Slovakia.^{xxxi} The incident evinces that shortcomings in one nation's political systems have the tendency to spread and infect the overall regional stability.

For the present, Russia's largest pipeline, Druzhba, delivers 12 % of EU's total oil consumption.^{xxxii} Germany alone, for instance, receives 20% of its total oil imports from the Druzhba.^{xxxiii} This mega-pipeline carries about 40 % of total Russia's total exports. Entering Europe via the Northern and Southern branches, the pipeline first passes through Belarus and Ukraine. The routing of Russian pipeline network itself, putting other risk factors aside, is risky.

Lessons of Sub-Saharan Africa's Fragility

While political risk permeates the Middle East, Russia, and the Caspian Sea basin, the lack of a common energy security initiative encourages proliferation of severe political risk in sub-Saharan Africa (SSA), the fastest-growing oil-producing region worldwide.^{xxxiv}

In the recent years, the world's oil production has risen 16%. In SSA, it grew by 36%.^{xxxv} Some of the region's largest exporters demonstrate strong performance in oil production, although many show just the opposite. Gabon, region's fifth largest producer, is expected to lose 37% of its present output by 2015. In Chad and Cameroon future production is also predicted to deteriorate rapidly, unless more exploration and development take place (*see* Table 4).

Table 4. Oil production in selected African countries

Country	Oil production (1,000 b/p)		
	2001	2005e	2015e
Nigeria	2,083	2,719	3,729
Angola	740	1,098	2,549
Gabon	259	250	100
Chad	0	230	80
Cameroon	107	84	66

Source: African Development Bank and OECD, 2005

SSA's decrepit economy enhances the chances for outbreaks of political violence, compromising global energy security. Between 2001 and 2002, oil production in Nigeria and Angola, SSA's two top exporters, constituted, respectively, 92% and 89% of their total exports.^{xxxvi} Even more disturbing is that the production of oil during that time represented 70% and 85% of government revenue in these countries.^{xxxvii} It is a troubling pattern because the empirical data confirms the assertion that the poor economic standing of SSA substantially predisposes it to many forms of political risk. The press release compiled by the Human Security Centre in 2005 disclosed that "most of the world's conflicts are now concentrated in Africa."^{xxxviii}

In general, political conditions have improved in SSA. Still, its lack of technology and freedom, the underdevelopment of non-oil economy, and misguided management of the oil resource all add up to the politically unsafe climate. A widespread corruption and denial of civil liberties amplify the detrimental affects of boiling instability (*see* Table 5). According to the findings of the Human Rights Watch published in 2007, Nigeria is "crippled by corruption, inefficiency, and underlying culture of impunity."^{xxxix} Since 1999, approximately 10,000 Nigerians have fallen victim to domestic violence.

Table 5. Political profile of selected oil producers in sub-Saharan Africa

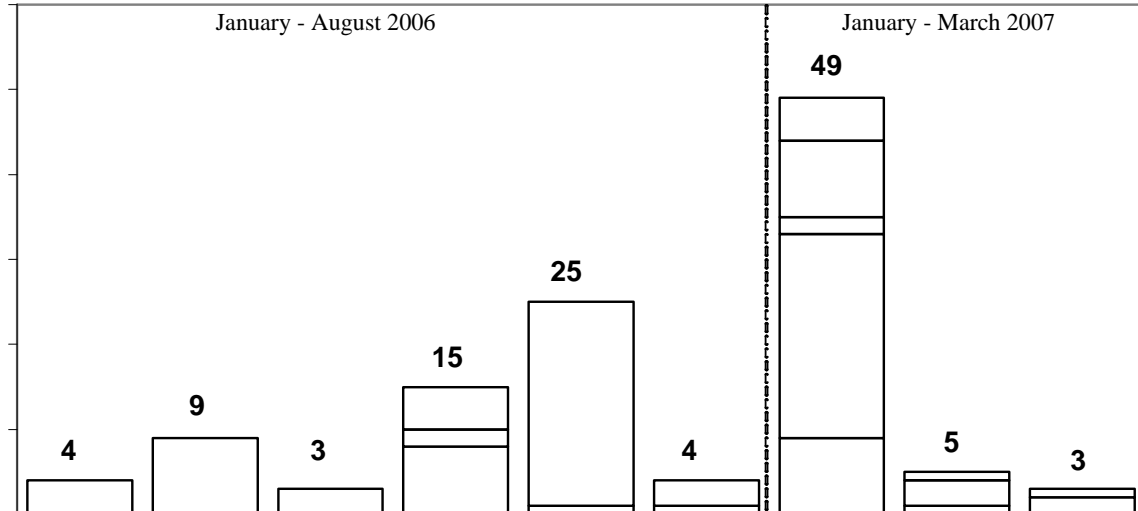
Country	Corruption Index, 2004 (out of 145)	Freedom House Index (7 is the lowest value)		Freedom Status
		Political Rights	Civil Liberties	
Nigeria	144	4	4	PF
Angola	133	6	5	NF
Gabon	74	5	4	PF
Chad	142	6	5	NF
Cameroon	129	6	6	NF

Source: Global Corruption Index 2005, Freedom In the World 2007.

Conditions in SSA attest that political instability is a negative homemade phenomenon. The region's consistently inferior economic opportunities exacerbate political conditions. Since political risk is contingent upon nation's domestic environment, it will continuously undermine energy security until a meaningful political change occurs.

Internal Barriers to the Security

Nigeria, Africa's most densely populated state and the biggest oil producer, is a great example to illustrate the direct relationship between the domestic political environment and the risk to energy security. Nigeria's devastated economy and corrupt government have provoked the emergence of armed groups, making situation in the country, and SSA generally, only more precarious. Gunmen abduct workers from local oil refineries, incapacitating a steady and reliable output of oil.^{xi} Since 2006, the number of kidnappings has risen substantially (see Figure 2). In addition, the armed groups specifically aim at the transportation component of the energy network. In 2006 alone, 2,258 acts of pipeline vandalism were committed.^{xii}



Source: Bergen Risk Solutions 2006, Reuters 2007

Figure 2. Kidnappings of Oil Workers in Nigeria

Better energy policy has to understand a broader picture, and simultaneously analyze all relevant conditions in detail, under a magnifying glass. SSA, and specifically Nigeria, supports the argument that political risk can prove more damaging to energy security than relative uniformity of sources.

Energy Trends and Prospects

Incidents that endanger energy security are not limited to poor, conflict-ridden countries. They exist in many shapes and forms, and can afflict even some of the most advanced industrialized nations. In exploration and

development of energy, for example, technological limits, high costs, and environmental challenges preclude developed and peaceful countries from sustaining ample export capacities.

The indigenous energy production in the UK, the largest producer of oil and gas in the EU, has steadily fallen since 2002 at a rate of 8-9%, despite more frequent development (*see* Table 6).

Table 6. UK indigenous energy production and drilling activity (millions of tones of oil equivalent)

Production Year	Total	Petroleum	Drilling Year	Offshore Development (number of wells started)
2002	272.9	127.0		
2003	260.2	116.2		
2004	238.0	104.5	2004	166
2005	215.4	92.9	2005	227
2006	196.4	84.0	2006	211
Per cent change	-8.8	-9.6		

Source: Energy Trends, UK Department of Transportation and Industry, March 2007

Oil production in the UK from older established fields continuously declined in 2006, while net imports of gas increased by nearly 60%.^{xlii} In 2004, the UK became a net energy importer for the first time since 1993.^{xliii} The decline began primarily as a result of decreased North Sea production, whose mature energy reserves are thought to be slowly diminishing.^{xliiv}

In addition to dwindling energy supplies, the economic advances by China and India are expected to significantly propel future world demand for oil, and with it the need for heightened and improved security. Their fast-paced growth has profoundly changed international security landscape. Geerd Warthmann, senior counselor at the Federal Ministry for Economic Cooperation and Development of Germany, concludes that the emergence of massive new economies, namely China and India, means “more than the half of the global population now forms the substantial part of the demand for resources.”^{xlv}

In 1993, China went from being the largest oil exporter in Asia to the world’s second-largest importer of oil.^{xlvi} Meanwhile, the use of energy in India has increased almost six times in the past 25 years.^{xlvii} By 2025 India’s imports of petroleum could reach 90%.^{xlviii} Considering these facts, Montek Ahluwalia, deputy chairman of the Planning Commission of India, reached a definitive conclusion that the country’s “energy security scenario is not satisfactory.”^{xlix}

Solutions for increased safety require a multilateral approach that takes into account national traits and global trends. Present and past conditions hint at an incessantly growing importance of energy security in the world economy and politics. Between 1948 and 1972, world oil consumption grew fivefold.¹ Such alterations on a global scale suggest that in order for the future model to work, it must be organic, always adapting to changing international and domestic circumstances.

Flow and Capacity of Energy Security

Energy security is not a sealed, or unknown issue, although it is sometimes perceived as deceptive and highly uncertain. To deal with the challenges of energy security successfully, the safety measures do not necessarily need to focus on diversification, efficiency, or liberalization of energy markets. A much more helpful approach would reflect and adapt to the magnitude, and character of all political risks. In order to do this, a simple abstract vision could be used set principles that would harmonize national regulations with international standards, and reaffirm them at the common intergovernmental level.

The new energy model should be introduced from inside the political system, but the policies it adopts must be made applicable at different levels. Individual priorities must be considered first, so that the model can establish for itself a firm ground, understand region-specific needs and multiple dependence relationships. Knowing how, and how fast conditions around it change, it would develop and store sufficient amount capacity to evoke proportionate measures, and absorb the excess amount of political risk (of which there is a plentiful amount nowadays). The model then would not be wasting the remaining capacity, but instead saving it to respond to other likely or unanticipated conflicts.

Since risks to energy security originate from the inside as well as the outside of the political system, the initial domestic regulatory authority and capacity would hardly be adequate to confront many types of external pressures.

That's why outside elements of the system must be integrated together with the inside elements in the way that ensures a consistent flow of proactive and reactive capacity.

At the outside dimension, the broader political concerns could be resolved, without penetrating the system's national, internal boundaries. The new model would thus function in a concerted action, but in separate spheres. The flow of capacity to manage political risk would be uninterrupted, although divided into two contiguous and parallel cycles. The two channels of flowing capacity could be connected at the neutral intergovernmental level, which would possess no major responsibilities, except to verify that the flow is consistent, proportionately allocated, and versatile enough to maneuver comfortably in the corners of inherent and created risks.

CONCLUSIONS

The new model must be able to operate in the environment of all forms of risks. Whatever the existing or future alliances do, it must be able to navigate through the challenges of the past, present, and future. The need for such set of instruments is apparent, as energy security is confidently becoming the primary focus of attention. Insightfully, the authors of *The Princeton Project* reveal that a "central part of [the] new power politics concerns the pursuit of energy..."^{li}

There is an enormous range of proposals formulated by government and private organizations that addresses the issue of energy security. Just about all of them emphasize that it is a multi-dimensional phenomenon. Accordingly, it entails many thematic divisions, and must incorporate a mix of policies, goals, and strategic principles. Of course, for a truly universal policy to exist, progress is needed in each of the policies, goals, and principles.

LIMITATIONS

The report has been designed to include discussions about countries that were deemed most relevant and significant to the rising importance of energy security. There are other geographic areas whose political profiles could be discussed in future to make conclusions of the report more definitive, and sufficiently detailed.

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