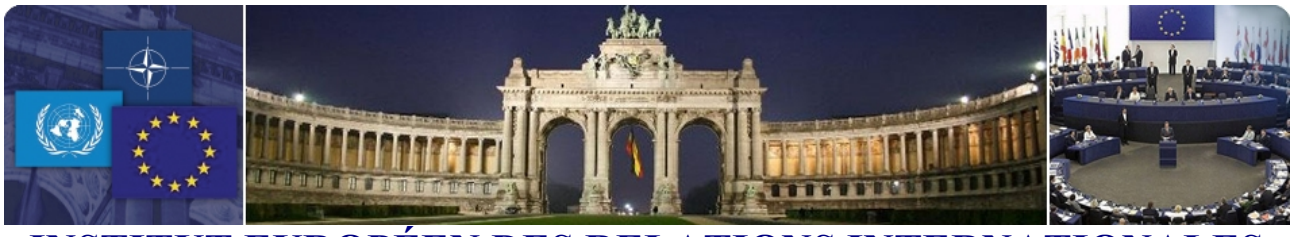

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ENERGY SECURITY

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FOREWORD

After the fall of the Berlin Wall, the geopolitical landscape has considerably changed with the US maintaining, for the time being, its economic and military superiority. It seems, anyway, that the world is moving towards a fundamental reshuffle of the global balance of power with the emergence of actors whose posture will eventually shape a new global order through alliances reflecting interests different from those currently dominating international politics.

Coping with and possibly managing this global transformation will have consequences for how global oil and gas supply and demand are structured. Only a few years ago, oil and gas export originated mainly from the Middle East and were transported to the trans-Atlantic areas ; today, both supply and demands are much more diversified. Russia, Central Asia, West Africa and Latin America have also become significant hydrocarbons suppliers, while the economic rise of countries in Asia, particularly China and India, have diversified the demand structure for energy suppliers.

This transformation will have a direct impact on both sides of the supply and demand equation. It will increase the bargaining power of the suppliers as they find hungry new customers but, at the same time, consumers will have the opportunity to negotiate alternative deals with a number of suppliers operating outside the OPEC-pricing mechanism.

ENERGY CHALLENGES

Given the current international scenario, it is clear that the future of human prosperity depends on how successfully we tackle the two central energy challenges : securing the availability of reliable and affordable energy, and achieving an environmentally acceptable system of energy supply.

Oil, in conjunction with coal and gas will, anyway, remain for years to come the world vital sources of energy just taking into account that it is currently estimated that around 80% of the world primary energy production is coming from burning fossil fuels.

As a consequence, preventing catastrophic and irreversible damage to the global climate requires a major decarbonisation of the world energy sources. As a matter of fact, in the UN Climate Change Conference (Doha, 26 Nov. - 8 Dec. 2012) related to the Kyoto Protocol (extended to 2020), it was stressed that it is mandatory to put in place a robust policy mechanism to achieve the stabilisation of greenhouse gases in the atmosphere. The wording adopted by the Conference incorporated for the first time the concept of “loss and damage”, an agreement in principle that richer nations could be financially responsible to other nations for their failure to reduce carbon emissions. The energy sector will thus have to play the central role in curbing emissions through major improvements in efficiency and switching to renewable and other low-carbon technologies.

But, securing energy supplies and affecting the transition to a low-carbon energy system implies involvement and commitment of governments.

DEFINITION OF ENERGY SECURITY

The issue of energy security is certainly not restricted to oil, but involves also electricity and gas, thus extending to the entire infrastructure of energy supply that supports the global economy: offshore platforms, pipelines, oil tankers, long-distance natural gas pipelines, liquefied natural gas (LNG) tankers as well as refineries, storage, generating facilities, transmission lines and distribution systems.

Industry structures and operations need therefore to be designed and managed with these new features in mind : the result is to create new responsibilities for both industry and government, including communication and coordination between them, so as to properly cope with energy shocks and weather disasters.

In the longer term, a renewed commitment to new technologies and energy research and development holds the promise of further diversification : but energy security requires, first and foremost, continuing commitment and attention: today and tomorrow.

At this point we can try to give an acceptable definition of Energy Security.
Energy Security is an umbrella term that covers many concerns linking energy, economic grow and political power.

SECURITY THREATS

The security threats we are facing today mean that understanding the domestic and international drivers and dynamics is more relevant than ever.

The first threat is the demographic explosion. World population is set to increase to 7.7 billion in 2020.

The second threat is the environment/climate change. UN researchers predict continuing rapid degradation of eco-systems, severely affecting water, health and food.

The third threat is terrorism and proliferation, with the greatest threats emerging from countries where state power is not too strong but too weak.

One more threat to energy security is the significant increase in energy prices, either on the world market – as occurred in a number of energy crises over the years – or by the imposition of price increases.

Rather than just manipulating prices, suppliers might also go beyond this by suspending or terminating supplies. This has been done to apply pressure during economic negotiations (Russia-Belarus, Russia-Ukraine energy disputes) or to apply political pressure (by OPEC after the Yom Kippur War). Suspension of supplies may also come about as a result of world-wide international sanctions against a country.

Energy Security is therefore closely linked to all these threats.

At present energy features as a key element in agreements with third countries, suppliers, consumers and transit countries. Europe is working to enhance its bilateral energy relation with key partner in the Caspian Basin, Central Asia, the Mediterranean and the Middle East. As for Russia, it will remain a very significant partner for Europe. But Russia also needs Europe, whose markets take around 2/3 of Russian gas exports, and the revenues from EU customs are vital to Russia economic growth. Managing this interdependence will be an important challenge.

That is why Europe needs, to cope with all these security challenges, to work hand in hand with the US.

Increasing energy security is also one of the reasons behind plans for an oil phase-out in Sweden by 2020 together with a block on the development of natural gas imports. Greater investments in native renewable energy technologies and energy conservation have been thus envisaged in Sweden, while Iceland is also well advanced in its plans to become energy-independent by 2050 through deploying 100% renewable energy.

ACTIONS TO BE TAKEN

The first move could be to increase efforts to supplement oil with more plentiful coal and natural gas; by differentiating the resort to these fossil fuels, whose amount is finite, the danger of oil-age ending abruptly, with potentially dire consequences, is less looming.

Oil, gas and coal cannot provide, anyway, a lasting solution, particularly if we consider fossil fuels as a potential for change in the international balance of power based not only on which countries control the lion's share of the world's fossil fuel supplies, but which countries are most dependent on those supplies: an oil-hungry China or India can yet take a harder line.

A second move could involve the exploitation of alternatives to fossil fuels: nuclear energy and renewable energy sources, such as solar cells, wind turbines and other sources, which will surely become relatively less expensive as oil price rise.

For the time being, the small but rapidly growing world market in solar cells, hydrogen-fuel cells, wind turbines is currently dominated by Europe and Japan : the job of governments, in this regard, is to step in where a need exist and when the private sector is unwilling or unable to satisfy it (as already happened for railroads, highways, computer, internet, space technology).

Further possible approaches to integrate renewables consider ethanol, biomass, tidal and geothermal energy worthy of being explored : the bottom line is that diversification is the magic word.

EUROPE ATTITUDE TOWARDS ENERGY SECURITY

Recent increases in energy prices and a steady escalation in global energy demand have led US policy makers to engage in a debate over how best to address the country future energy requirements. Similarly, energy security has become a policy priority for the EU, which imports 50% of its energy needs, figure expected to rise to 65% by 2030. About 50% of the EU natural gas import and 30% of its imported oil come from Russia.

January 2009 two-weeks shut off following a dispute between Russia (supplier) and Ukraine (transit country) brings us back to the same event occurred in 2006 when Europe committed herself to develop and implement a strategy of diversification. But nothing happened afterwards, mainly

because of the different attitudes of the European countries, unwilling to exploit the lessons learned (LL) from the event.

The first LL was that Europe had to decrease its dependency on Russia, ready to use energy as a political weapon to regain influence in its "near abroad" and to limit Europe political influence. One way to do that is to build Nabucco, a transit route by passing Russia and stretching from Turkey to Austria crossing Bulgaria, Romania, and Hungary.

The second LL takes into account not the source country but the transit routes. Hence, the solution is to make the big European customers of Russian gas less dependent on Eastern European transit countries, namely Ukraine. The priority for this group of countries is to build new transit routes to bypass Ukraine and deliver gas directly to the centre and west of Europe. These countries, among them Germany and Italy, support two projects developed in close cooperation with the Russian Gazprom : North Stream and South Stream.

North Stream (the most advanced project) is to cross the Baltic Sea, directly linking Russia and Germany. South Stream is to cross the Black Sea and end in Italy. In both projects the majority partner is Gazprom : 51%.

North Stream, in particular, is a controversial project, leaving outside Poland, Lithuania, Estonia, and other Eastern and Central Europe states: many see North Stream as a Russian attempt to splinter Europe.

The third LL is that Europe is vulnerable to political pressure as long as gas markets remain insufficiently interconnected. The more European gas markets are connected, the less individual countries would be threatened by supply disruptions, because neighbouring countries could immediately intervene and help. A single, competitive gas market would help to depoliticize gas.

But, although the EU 27 Member States (MS) have ceded some national sovereignty (or competency) to EU institutions in a variety of areas, including economic and trade policy, energy policy remains primarily responsibility of the MS notwithstanding the recurring and strenuous efforts made by the European Commission to liberalize and open up their national markets : for the time being, a common, single European energy policy is far from being achieved !

The forth LL is related to the diversification of the source of energy. Establishing a diversified network of secure energy suppliers has become one of the foremost challenges facing the nations of Europe. In one sense Europe is fortunate to have such large sources of available energy within a relatively small geographical space. However, Europe faces the fact that for the foreseeable future, those energy producing nations pose different levels of risk, comprehensive of political instability.

Last but not least, the challenge of energy efficiency through information and communication technology (ICT) is also part of energy policy.

An example related to how saving on fuel and safeguarding the environment with smart driving comes from the European Space Agency (ESA) : on 16 February 2009 ESA's Technology Transfer Program awarded the first prize in the European Satellite Navigation Competition to a new system using satellite navigation data to help car drivers develop smart, smooth and safe driving techniques that can help save an average of 15-20% in fuel, as well as contribute to environmental production.

The two inventors (a Swedish and an Israeli) have come up with an intelligent system named Green-Drive that combines information on where a vehicle is located, what the road conditions are and the type of car being used to calculate and advise the driver on the most economical driving style to use, when to accelerate, when to brake, and when to keep the speed constant.

ENHANCED COOPERATION IN THE EU AND THE US APPROACH

Climate change could reach catastrophic levels this century unless emissions of greenhouse gases are reduced and EU access to more secure energy sources is granted.

The package of EU climate and energy measures approved in Dec 2008 directs and coordinates individual MS efforts to limit emissions by maximizing the effectiveness of the measures taken and by supporting the coordination of the global fight against climate change (Kyoto Protocol).

But, if the EU is to secure a viable energy future, MS must develop a robust policy response based on the framework of collective energy security, by resorting to the "enhanced cooperation" within the Union.

Emerging in the late 1990s, enhanced cooperation envisioned the creation of an institutional avant-garde or pioneer group, consisting of Germany, France, Italy and others, able to blaze a trail to increased integration if the size or complexity of a problem made difficult the participation by the entire Union. While this idea was enshrined in the treaty of Nice, and further expanded in the Treaty of Lisbon, the EU has never used this tool to its full advantage.

Thankfully, the Lisbon Treaty guidelines for enhanced cooperation make this possible. As part of a collective energy security plan (an energy "Article 5"), MS can announce their intention to create a pioneer group and seek approval from the Council. The Lisbon Treaty states that "All members of the Council may participate in the deliberations of the enhanced cooperation group, but only members of the Council representing the MS participating in enhanced cooperation shall take part in the vote". Strong in the support of their fellow Europeans, and confident in the strength of an enhanced cooperation agreement, individual governments would thus avoid to deal with Moscow bilaterally. In addition, an energy security pioneer group would be well positioned to coordinate the construction of the physical infrastructure necessary to integrate the EU energy market and expand the range of import alternatives.

Under Lisbon Treaty, members could therefore establish an enhanced cooperation group, constituting the core component of an energy security cooperation agreement. EU guidelines require that at least 9 countries agree to work together under the aegis of enhanced cooperation. The most natural candidates would be those states that tend to be mainly affected by Russian shut-offs: Bulgaria, Czech republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia and Romania. The inclusion of Austria, Greece, Finland or Netherlands, countries which are also heavily dependent on Russian imports or gas producers themselves, would further strengthen the group influence within the EU.

Once the enhanced cooperation is started in Europe, across the Atlantic USA has, too, a vital and necessary role to play in the development of a collective energy security initiative in Europe. During previous USA-EU Summits, both sides pledged to work in tandem to strengthen the

transatlantic partnership on energy. On the issue of energy security, EU and USA declared their joint desire to "increase competition in energy markets and promote marked-based solutions to diversify the development and transit of energy resources to the global market".

Looking ahead, US has a compelling interest to help European countries diversify import options, limit the corrosive influence of non-transparent business practices, and prevent external energy partnerships from inappropriately influencing state policy.

Secretary of State Clinton has already signalled the desire to engage Europe on the question of energy security : "I hope we can make progress with our friends in NATO and the EU to understand that we do need a broader framework in which we can talk about energy security issues" she told the Senate. "It may or may not be Article 5 (of NATO), but I certainly think it is a significant security challenge that we ignore at our peril". In this regard, a European collective energy security agreement would offer USA and Europe the chance to do more than talk.

NATO APPROACH

As the worldwide demand for energy continues to grow, there is the risk of ending up with a volatile process of competition to control the sources of supply. To avoid such a dangerous situation, NATO strongly believes that a system of international cooperation to share energy is badly needed. The key question is how to convince all the emerging new economic giants to see energy as a necessarily sharable resource.

A further concern is that western countries are producing less and less of their own energy, and are therefore having to import more and more : the consequent massive energy revenues not only mean more economic power for the oil producers, but also increasing political power and influence in shaping the new global security order.

So, new ways are to be found to use oil and gas more efficiently, while pushing ahead the conversion to alternative fuel and seriously looking at ways of diversifying energy supplies to reduce vulnerabilities.

As climate change impacts on energy exploration and transit routes, it will also increasingly impact on NATO security. In 2008 Norway put the issue of the "High North" on the NATO agenda. As the polar icepack melts and the Northwest Passage to Asia opens up, an increasing amount of shipping will pass through one of the most remote and inhospitable parts of the world, requiring to intervene in the event of an emergency situation, an environmental disaster or even a terrorist attack.

A further issue is resources : as the ice-cap decreases, the possibility increases of extracting mineral and energy deposits. Related to resources is territorial claims : there are differences of opinion between the 5 states concerned (USA, Canada, Norway, Denmark and Russia) over the delineation of the 200 Nautical Miles (NM) limit of the Exclusive Economic Zone (EEZ), as well as over the extension of the continental shelves. NATO could be a proper forum for the 4 Arctic Coast States belonging to NATO and could, by involving the Arctic Council and EU, favour a comprehensive approach to the High North issue.

NATO is not certainly the panacea to all these problems, but there are three roles NATO can play.

The first role is to police and to protect on the high seas, so as to keep sea lanes of communication (SLOC) open and safe. Since 2001, NATO maritime operation Active Endeavour, in the Mediterranean, has helped to protect Europe from terrorists and when considering that 80% of NATO supplies for ISAF are transported by sea, it is clear to see why NATO has a direct interest in guaranteeing order on the oceans.

As NATO is already cooperating with EU (NATO maritime operation Ocean Shield and EU maritime operation Atalanta) to develop a greater naval presence off the coast of Somalia to stop piracy, at the same time NATO should be ready to protect the essential choke points and navigation routes along which so much oil and gas supplies pass each day.

NATO can therefore be a force of stability at sea in much the same way as it acted as a force of stability on land.

NATO has recently adopted a very ambitious concept called "Maritime Security Awareness", to monitor what goes on in the oceans, in the same way that air traffic controllers monitor the situation in the skies. This information can be shared with the International Maritime Organization (IMO).

Indeed, the future of maritime operations will not be just about deploying ships but about establishing such an information and intelligence network to be able to effectively control the maritime domain.

NATO second role is to foster partnerships. Over the last few years the Alliance has developed a very extensive network of security partnerships (Partnership for Peace, Mediterranean Dialogue, Istanbul Cooperation Initiative, NATO-Russia Council, NATO-Ukraine Commission, NATO-Georgia Commission) with a large number of countries around the world : several of these are major energy producers. This vast and extending network of relations can help to deal with energy security issues thus increasing NATO transparency and ability to forecast future trends and to build trust and confidence by promoting a frank and open dialogue between producers, transit countries and consumers.

Finally, NATO could support its MS in coping with energy challenges. Energy security was already identified as a challenge in NATO Strategic Concept in 1999 and has been confirmed as such at the Strasbourg-Kehl Summit and at the Lisbon Summit : NATO allies should therefore regularly consult on energy trends and try to reach a common analysis of NATO countries strategic vulnerabilities. In short, NATO could act as a catalyst in persuading its countries to take a more strategic look at energy security and to develop a more collective approach.

NATO has already begun to act in such a coordinated way with its own members, partner countries, and with other international organizations. There is one missing link in this network of cooperation: the dialogue with the private sector, dialogue which must be started, finalized, improved and maintained so that all the legally operating stakeholders can make the most of it.

FINAL CONSIDERATIONS

At this stage, if we want to make a comparison between the attitudes of 3 pivotal players such as the EU, NATO and the US, we could venture to suggest that the EU looks much more worried about liberalizing markets than effectively ensuring energy supply. So, in order to satisfy the free market requirements, the EU is continuously striving to separate suppliers from distributors. Furthermore, EU policies often overlap and do not integrate with US and NATO.

A common approach is instead badly needed within Europe, by avoiding the disconnect between a sometimes ambitious European Commission policy and the selfishness of the Member States which deem the national benefit more attractive than the common good.

Once this common approach is achieved, Europe should identify, together with the US and NATO, a suitable international Energy Security policy conducive to preventing future confrontations whilst fostering consultation and cooperation.