

Patrice Dreiski

Energy Security: An OSCE Perspective

Energy is one of the hottest topics in contemporary politics. The extreme importance of energy for modern life is undeniable. Energy maintains our standard of living and is the basis of economic performance. Currently, we take it for granted that energy is available whenever we want it. Demand for energy will continue to increase as long as the global economy grows and average living standards rise. The most reliable predictions indicate that by 2050, the world's population will have nearly doubled from its present level, rising from around six billion to roughly ten billion people. This will certainly result in increasing import dependence, higher prices, and uncertainty of energy supply.

In recent years, we have witnessed a resurgence of interest in energy security that goes well beyond the stability and predictability of prices, commercial arrangements, and infrastructure projects. Energy security is recognized as an integral part of the OSCE's comprehensive concept of security. In this respect, the topic is at the top of the political agenda of OSCE participating States, as it underpins not only their economic growth, but also their ability to alleviate poverty, improve social welfare, and secure their political independence. This has occurred in parallel with the emergence of a number of new threats and challenges that bring in numerous factors to be taken into account when shaping national and multilateral strategies.

For the next twenty years, fossil fuels will continue to dominate global energy use, accounting for some 85 per cent of the increase of world primary demand. Oil will remain the most widely used fuel, even though its percentage share will fall marginally. Demand for natural gas will grow in the immediate future. Interregional trade is expanding strongly all over the world, particularly with the development of liquefied natural gas (LNG). This development will strengthen the role of transit countries while creating a particular role for maritime hub countries.

Governments are facing new challenges regarding their energy policies. Things have changed since the first energy crisis. We can no longer be certain that the existing national energy policies will provide secure access to energy resources, accommodate increasing demand for energy and growing energy dependence, and protect against energy depletion.

Current economic and environmental conditions oblige us to look for regional and even global solutions to long-term energy security challenges based on renewable, efficient, and ecologically sound technologies. To achieve this

Note: The views contained in this contribution are the author's own and not the official positions of the OSCE.

goal, more energy dialogue and more interregional and inter-institutional co-operation are needed, and more joint activities and multilateral energy policies must be developed

As a regional security organization, the OSCE contributes to a convergence of views and a growing awareness of common interests in its three dimensions: the politico-military dimension, the economic and environmental dimension, and the human dimension. The OSCE is a primary instrument for early warning, conflict prevention, crisis management, and post-conflict rehabilitation. Because it is first and foremost a political organization, we believe that the OSCE can fulfil a conflict-prevention role in the field of energy security, since energy issues can lead to tensions, discussions, and possible crises between countries.

The OSCE does not aspire to become an international energy organization. The OSCE Strategy to Address Threats to Security and Stability in the Twenty-First Century, adopted at the Maastricht Ministerial Council in 2003, elaborates a number of challenges that the OSCE can envisage in the field of energy. In particular, it states that the OSCE can use its role as a platform for multilateral policy dialogue and its field presences to enhance awareness, capacities, and political will among its participating States to encourage energy dialogue and efforts to diversify energy.

In 2006, 2007, and most recently in December 2009, the OSCE Ministerial Council unanimously adopted three decisions underlining the Organization's particular role with regard to energy security: developing dialogue on energy security among OSCE participating States, promoting awareness regarding the protection of critical energy infrastructures from potential terrorist threats, and strengthening dialogue and co-operation on energy security in the OSCE area.

As a regional organization of 56 participating States, including several major energy producers, consumers, and key transit countries, the OSCE is well placed to promote a broader concept of energy security encompassing all stages of the value chain and involving countries of origin, transit, and destination as well as all relevant stakeholders, including the private sector and civil society.

The relevance of sustainable energy supply and energy efficiency, which are of major importance to the promotion of economic development and sustainability, is underlined in the OSCE's mandate within the economic and environmental dimension.

Energy security is and will remain at the top of the global political agenda, and the capacity to develop concerted policies aiming at strengthening energy security will rely on co-operation between relevant international organizations.

A Definition of Energy Security? The “Three Ps Principle”

The Product: Is the primary energy product available? Is it physically available from the producers’ side? Should we consider the estimated level of reserves to be reliable? This part of the definition of energy security calls for the application of principles of good governance, and particularly transparency. What is the necessary level of investments, particularly upstream – in exploration and production – to secure the availability of the primary energy sources? Can the economies of the countries concerned afford such investment or do they require the participation of foreign companies? To what extent is the producer country willing to accept foreign investment in a sector it considers to be strategic?

The Place: Where is the product available? Is the field easy to reach or remote and inaccessible due to geological conditions? Will export require transit across third countries? Are alternative routes available? How can the transit phase be managed? What are the potential risks of disruption? Are they easily manageable? Are there any potential investments that could circumvent the transit phase? Would the transit country be able to afford these investments? Who is the owner of the transport network?

The Price: At what price is the product available? How is the price determined, particularly for natural gas? Is the price agreed for long-term supply contracts? What is the level of transparency of these contracts? What is the role of the state authorities? Do these contracts involve reciprocity, such as cross investment in the energy sector?

Price remains a strong determinant for the willingness and capacity of producers to invest in upstream and transport activities; this is particularly relevant given the current economic and financial crisis; a non-volatile price is important to secure long-term investment capacity on the part of the energy-producing countries.

Based on this tentative definition, energy security exists for a country or a group of countries when the “three Ps” are in place; if one or more is missing, weak, or questionable, the energy supply is not secure.

As noted above, the OSCE brings together participating States that include many of the main energy consumers, some of the main energy producers, and important energy transit countries. Given this energy interdependence among the OSCE participating States, reliability and stability on energy issues should be a mutual goal.

The Evolving Risks and Challenges to Energy Security Will Dominate the Near Future and Will Influence Relations between Countries

The Global Imbalance between Projected Demand and Supply

According to the International Energy Agency's reference scenario, if governments stick with present policies, the world's energy needs will be almost 60 per cent higher in 2030 than they are now. Fossil fuels will continue to dominate the global energy mix, meeting most of the increase in overall energy demand. The shares of nuclear power and renewable energy sources will remain limited.

The same source notes that the earth's energy resources are more than adequate to meet demand until 2030 and well beyond. Fossil fuel resources are finite, but we are still far from exhausting them; the world is not yet running out of oil: Most estimates of proven oil reserves are high enough to meet cumulative world demand as projected over the next three decades. Less certain, however, is how much it will cost to extract these resources and deliver them to consumers. Two-thirds of the increase in global energy demand will come from emerging economies; in 2030, they will represent half of total demand, much of it going to China and India.

But serious concerns about energy security arise from projections of market trends with regard to the geographical location of producers and consumers. The world's vulnerability to supply disruptions will increase as international trade expands. The increase in demand calls for a commensurate increase of investment in the energy sector.

The Increasing Geographical Concentration of Energy Supply: World Oil Production Is Shifting away from OECD Countries

OPEC countries, mainly in the Middle East, will be able to meet most of the increase in global demand for oil with increased production. OPEC will supply half of the world's oil needs, even more than its share in the 1970s.

Net interregional energy trade will more than double by 2030. A total of 26 million barrels of oil or LNG exports currently passes through the Strait of Hormuz at the exit of the Persian Gulf every day. About the same quantity passes through the Straits of Malacca in Asia. Traffic through these choke points and other vital channels will more than double over the projected period.

Fossil fuels will continue to dominate global energy use, accounting for some 85 per cent of the increase in world primary demand. Oil will remain the most widely used fuel, even though its percentage share will fall marginally. According to the International Energy Agency (IEA), by 2030, oil is still likely to face very little competition from other fuels as far as road, sea, and air transportation are concerned due to limited substitution capacity.

Worldwide consumption of natural gas will almost double by 2030, overtaking that of coal within the next decade; gas demand is projected to grow more rapidly in Africa, Latin America, and developing Asia. In terms of quantity, most of the increase in gas consumption will come from the OECD markets and the transition economies.

Gas is often preferred to coal in new thermal power plants for environmental reasons, its lower capital costs, and its operational flexibility. Gas production will increase in Russia and the Middle East, which between them hold most of the world's proven gas reserves. The recent development of unconventional gas production in North America and the development of LNG will provide new prospects in the gas market.

The Environment

If current policies do not change, energy-related emissions of carbon dioxide will continue to grow substantially, even marginally exceeding the rate of growth of energy use.

Carbon dioxide emissions will be more than 60 per cent higher in 2030 than now. The average content of energy in world output, which fell significantly during the past three decades, will hardly change. Two thirds of the projected increase in emissions will come from developing countries, which will remain big users of coal. Power stations, cars, and trucks will produce most of the increase in energy-related emissions, unless a radical change occurs in how we produce and use energy. This rate of growth of carbon dioxide emissions raises serious questions concerning environmental sustainability. Achieving a truly sustainable energy system will call for a significant technological breakthrough as well as for far more pro-active policies aimed at increasing energy efficiency.

Converting the World's Resources into Available Supplies Will Require Massive Investments

According to the IEA, meeting projected demand will entail investments of some 570 billion US dollars per year, with the electricity sub-sector absorbing the majority of this investment. Developing countries will require about half of the total investment; they will face the biggest challenge in raising finance, because their needs are larger in relation to the size of their economies and because of the higher investment risks involved.

A lack of investment is perhaps the greatest threat for the future. Recent years have seen a gradual erosion of available capacity in crude oil production. There is no longer any surplus capacity in the oil industry in most parts of the world. Massive investment will be necessary.

The IEA estimates that the upstream oil and gas sector will require approximately eleven trillion US dollars during the period 2010-2035, of which

80 per cent will go to simply maintain production capacity at current levels. Both OECD and non-OECD countries will be affected. In OECD countries, the energy infrastructure needing replacement will primarily be in the refining sector. In non-OECD countries (here focussing primarily on the countries of the OSCE area), the need will be to build completely new infrastructure, particularly in transport. In the gas sector, the most important investments will be in the transportation network needed to bring gas to markets.

In recent decades, some spectacular technical progress has been made in field exploration, but there is a technical limit to what can be done in distant and inhospitable locations (e.g. deep water or polar regions), where achieving economic viability will also be a challenge.

Uncertainty Regarding Key Parameters

The difficulty of achieving the desired levels of investment is related, among other things, to the uncertainty of key parameters. Future trends in oil prices are a major source of uncertainty: The prices of crude oil and refined products have risen sharply since 1999, hitting an all-time high in nominal terms in 2008; the IEA has assumed that the price of oil imported into IEA countries would average 35 US dollars per barrel until 2030; but this scenario is subject to some major sources of uncertainty due to geopolitical factors.

The current financial and economic crisis will no doubt have direct consequences on the capacity of producers to afford the necessary investments, and will therefore affect energy security. At the same time, uncertainty remains regarding the exact level of reserves. The transport of energy from producers to consumers will remain a sensitive issue, subject to political arrangements.

The Need for a More Secure and Reliable Legal and Regulatory Framework

Another reason why investments in the energy sector remain at insufficient levels relates to the lack of adequate national and international legal frameworks.

Natural resources, particularly in the energy sector, are treated by most governments as a sovereign matter, and while deregulation, privatization, and liberalization are desirable overall, the way in which these policies are implemented may become another cause of instability.

Energy Poverty

Serious concerns persist regarding the unsatisfactory access to energy resources for a large part of the developing world. A number of countries, including some OSCE participating States, face significant difficulties in securing delivery of energy at quantities consistent with the needs of their

populations. Huge investments are required in order to address these challenges.

Strengthening International Energy Security Co-operation within the OSCE Area

Energy security is a defining global issue of our time. It is also a key security matter for the OSCE participating States, one that, in view of the OSCE's comprehensive concept of security, cannot be ignored.

Since 2006, the OSCE has implemented various decisions related to energy security through numerous activities in collaboration with other international organizations involved in energy security. These activities have confirmed the relevance of the OSCE's comprehensive concept of security with regard to energy issues.

Energy security has proven to be a relevant topic for fruitful co-operation among the OSCE participating States. The attention paid by the international community to energy-related issues, the increasing awareness of the environmental consequences of climate change, and the links between the latter and the use of fossil fuels have increased the political importance of the energy question.

The OSCE's mandate is linked to energy because energy has a direct impact on relations between OSCE participating States. Energy security has an immediate effect on the stability of economic and political relations between countries, particularly due to the increasing interdependence of consumers, producers, and transit countries.

Within the framework of the Corfu Process initiated in 2009 under the Greek Chairmanship, energy security has been reviewed as a potential case for co-operation.

It is timely in 2010 to consider the various aspects of energy security within the OSCE area, taking stock of the lessons learned in recent years to improve the energy-security dialogue for the OSCE participating States. This was the aim of the Conference organized in Vilnius on 13 and 14 September 2010, implementing the Ministerial Decision on strengthening dialogue and co-operation on energy security in the OSCE area adopted in December 2009 in Athens.

In our view, a dialogue on energy security between the OSCE participating States could be developed through a selected number of issues, and only in close co-operation with the international organizations involved with energy security.

Security of delivery is addressed by focusing on the capacity of the distribution network for the timely delivery of the required quantities. Beyond the legal and commercial commitments, disruption of delivery is a matter of

concern among the participating States and could therefore be discussed accordingly.

The scope of possible disruptions could be addressed irrespective of their cause (technical failure, terrorist attack, political dispute, or natural disaster). In this regard, the role of state authorities and of private companies could be considered in connection with available capacity, as well as the ways and means they have to react to such threats.

The initiative from several OSCE participating States that aims at preventing and overcoming disruptions, particularly in the continental gas network, deserves particular attention in this context.

Potential Threats to Critical Energy Infrastructure

So far, terrorist threats have not targeted energy infrastructures. Nevertheless, there is a high risk of disruption in case of an actual terrorist attack on any infrastructure network. Furthermore, some infrastructure has dual military and civilian uses, possibly making it more attractive as a target. The consequences of natural disasters on critical infrastructures should also be taken into account. The OSCE has already developed activities in this field and will extend this co-operation at the request of participating States.

The legal framework regulating the energy market merits discussion, particularly with reference to stable energy supply and the transit phase. Seeking an appropriate and efficient legal mechanism accepted and adopted by the largest numbers of countries is a matter for further consideration. The further development of the Energy Charter Treaty deserves particular attention.

The legal regulation of the transit phase is a key component of energy security and particularly relevant for the OSCE participating States, due to the fact that many of them rely on energy transit countries or are themselves transit countries. The legal aspect of the transit phase and the type of legally binding relationships between producer and consumer countries and third parties will have to be taken into consideration.

In this regard, the OSCE as a regional organization is interested in a concerted approach to the development of new and alternative energy transport routes, particularly concerning the development of the Caspian Sea Basin and the evolution of the energy transport network between Eurasia and the countries of central and southern Europe. This topic was addressed on a regional basis during the conference in Ashgabat on 3-4 May 2010.

Enhancing Energy Efficiency, Saving Energy, and the Option of Renewable Energy Resources

Energy conservation could be a more affordable and environmentally responsible option to meet growing energy demand. Efforts to improve energy effi-

ciency and save energy contribute greatly to lowering the energy intensity of economic development, thus strengthening energy security. Increased energy efficiency and conservation reduce stress on infrastructure and contribute to a healthier environment through decreased emission of greenhouse gases and pollutants.

Particular attention could be paid to the development of alternative and cleaner low-carbon energy production. The OSCE supports the promotion of renewable energy and innovative energy technologies.

The OSCE could further develop the dialogue on energy security with the participation of other relevant organizations and experts, such as the United Nations Economic Commission for Europe (UNECE), the IEA, the Energy Charter Secretariat (ECS), the International Energy Forum, the European Commission, the Organization of the Black Sea Economic Cooperation (BSEC), the Energy Community Secretariat, and organizations representing energy companies, such as EUROGAS.

International Energy Security Co-operation: Potentials for Synergy

Energy security is a matter of concern for many countries, but it is also a reason for co-operation between the various stakeholders. The OSCE is ready to provide a political platform for efforts to strengthen energy security co-operation. Through its field operations, the OSCE is present in Central Europe, South-eastern Europe, the Caucasus, and Central Asia and is able to provide a concrete contribution as a regional security organization. But this engagement, already supported by the political will of the 56 OSCE participating States, also requires solid co-operation with other international organizations, such as the IEA, the European Commission, the Energy Charter Secretariat, the UNECE, the International Energy Forum, OPEC, and NATO.

The OSCE's comparative advantages can add significant value when the Organization's political platform is harnessed in co-operation with other relevant international organizations.

The OSCE's current activities in the field of energy (primarily the activities of the Office of the Co-ordinator of OSCE Economic and Environmental Activities, OCEEA) are already conducted in close co-operation with the following relevant multilateral organizations:

The International Energy Agency (IEA): The Paris-based agency has a constituency similar to the OECD. It is the leading agency for energy outlook and policy guidance for the industrialized countries. The Agency was created in 1974, right after the first oil crisis, to manage and overcome the risks of oil disruption among its member states. Based on this mandate, the IEA has developed emergency plans and, in particular, an obligation of mandatory stock reserves among the IEA countries. Due to the global interdependencies in the energy sector, the agency does not consider energy issues in terms strictly

limited to the IEA member states, but has developed a global energy dialogue that encompasses member states and non-members alike. The Russian Federation and the countries of the former Soviet Union are included in this dialogue. Initially focused on oil, the IEA is now paying considerable attention to the gas market, the importance of which is growing.

The Energy Charter Secretariat (ECS): The Brussels-based organization has a similar origin to the OSCE, and, thanks to their comparable mandates, the OSCE and the ECS are already close partners. The ECS was designed to assist in the evolution of East-West economic relations in the energy sector at the end of the Cold War. The ECS is tasked with implementing the Energy Charter Treaty, which has been ratified by 51 countries. The Russian Federation's withdrawal from ratification of the Treaty in August 2009 places a question mark on the multilateral legal framework in the energy sector.

The United Nations Economic Commission for Europe (UNECE): The Geneva-based organization has a similar constituency to the OSCE. The OSCE OCEEA participates in all the activities of the UNECE Sustainable Energy Division. The UNECE has recently focused its work on energy security, the promotion of renewable energy sources, and the development of energy efficiency policies among its member states.

The Energy Community Secretariat: This Vienna-based organization seeks to integrate EU energy markets with those of non-EU countries, including Moldova and Ukraine, as well as the countries of the Western Balkans. The OSCE OCEEA works closely with the Energy Community Secretariat, whose activities, although highly technical, also include energy security. The organization and its founding document, the Energy Community Treaty, seek to use energy as an effective means of driving forward the integration of EU and non-EU countries.

The European Union (EU): The EU has developed numerous policies in the field of energy. Although the 2006 Green Paper promoted, to a limited extent, the emergence of common energy principles within the EU, there is still some reluctance among EU countries to share energy policies, due to their very different domestic situations. The EU has promoted the emergence of common principles in the energy sector, including competition and unbundling between generation and transmission. It has therefore been instrumental in an important restructuring of the energy sector, through the build-up of solid EU-scale energy companies.

The progressive liberalization of the gas market has introduced more competition and led to the modernization of transport and distribution networks in the gas and, to a lesser extent, electricity sectors. These policies have helped to strengthen energy security in the EU area. Nevertheless, the imbalance between production and consumption remains, and the EU, whose focus is primarily oriented towards the EU internal market and the promotion of internal EU market rules – including rules for the promotion of renewable

energy sources – remains concerned at the sustainability and reliability of existing energy sources.

The EU has been very active in promoting alternative energy transport routes, such as the Nabucco pipeline project, and the activities developed in this direction involve not only EU energy policy, but also EU foreign policy.

The North Atlantic Treaty Organization (NATO): NATO adopted a declaration at the Alliance's Bucharest Summit in April 2008 that underscored its position on energy security. Reflecting a process started in 2006 at the Riga Summit, which tasked the Council in Permanent Session with defining a coherent and suitable role for the Alliance, the Bucharest Declaration affirms NATO's continuing support for efforts aimed at promoting energy infrastructure security. By linking the Alliance's role to the wider European discussion on diversification of supply routes, NATO wishes to add value in two ways. First, by promoting diversification among NATO's entire membership, which extends beyond continental Europe, including the increasing role of Turkey as an energy hub and, second, by linking diversification to overcoming the instability of certain regions or the potential threats of terrorist or pirate attacks on sensitive maritime bottlenecks.

It has been demonstrated that NATO's views are directly compatible with those of the OSCE on the specific issue of protecting critical energy infrastructure, particularly from terrorist attacks.

The Way Forward?

Many decisions related to energy are called for in the coming years. They will have important consequences for decades to come and will contribute, if politically co-ordinated, to the economic stability of the countries concerned. There is no worldwide organization in charge of energy, but since it is a cross-cutting issue, several organizations are addressing it with a particular focus. One should not consider this to be duplication, but a necessary complementarity.

The OSCE's core mandate concerns security, and when the OSCE addresses energy issues, it does so from a security angle: security of delivery, security of transport and transit, and the capacity to overcome possible disruptions. As a regional organization, the OSCE has a field presence in many countries in Eurasia where energy is an important issue, including energy producers, transit countries, and states whose energy situation is fragile.

As a political platform, the OSCE can promote discussion on the development of alternative routes. As a regional organization, it can encourage the development of regional co-operation initiatives similar to those that already exist on the European continent, such as the Energy Community. As an organization with a crisis-resolution mandate, the OSCE can contribute to solving regional disputes in which energy is an issue.

As underlined above, energy security is a complex issue combining legal, geopolitical, economic, and technical aspects. Such a sensitive issue requires strong international co-operation, and the OSCE is ready to be part of this necessary process.