

NATO AND ENERGY SECURITY: INFRASTRUCTURE PROTECTION AND BEYOND

Over the past years, energy security has turned into a major theme of the international security debate. As an Alliance that provides protection for almost 900 million citizens, NATO has a legitimate role to play in energy security. Defining the exact nature of this role proved difficult at first, as there were concerns by some Allies about unduly “militarizing” an essentially economic issue. But energy security is becoming firmly embedded in NATO’s agenda. The Alliance’s new Strategic Concept broke new ground with respect to non-traditional security challenges, including energy security. The Lisbon Summit Declaration also reinforced the Strategic Concept’s message by tasking NATO to integrate energy security considerations into NATO’s policies. Today, the question of “if” has been replaced by the question of “how” – energy security is now a permanent fixture of NATO’s agenda.

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Over the past years, energy security has turned into a major theme of the international security debate. This is hardly surprising, considering Europe's growing dependency on oil and gas, the growing energy needs of rising powers such as China and India, the expected depletion of fossil fuels after the middle of this century, an intensifying debate on climate change, and a continued interest of many nations in civilian nuclear power have brought energy security into sharper focus.

As an Alliance that provides protection for almost 900 million citizens, NATO has a legitimate role to play in energy security. However, defining the exact nature of this role proved difficult at first. In 2006, when a gas crisis involving Russia, Ukraine, and various countries in Central and Eastern Europe led to severe energy cut offs, and many NATO Allies pushed for a more visible NATO role in energy security, NATO embarked on an effort "to consult on the most immediate risks in the field of energy security, in order to define those areas where NATO may add value to safeguard the security interests of the Allies (...)." ¹ Still, as the energy security situation and interests of individual Allies differ considerably, defining NATO's role turned out to be a painful process. At the 2008 Bucharest Summit, Allies agreed on a confidential report entitled, "NATO's Role in Energy Security," that listed major principles as well as key areas of engagement. ² Yet while the report constituted a major step towards a more visible role of NATO in energy security, the controversial debates among Allies during the preparation of the report also brought home continuing structural and political difficulties in anchoring that subject firmly on NATO's agenda.

It was self-evident that NATO had to stay clear of interfering with national energy policies. However, there were also concerns by some Allies about unduly "militarizing" an essentially economic issue by entrusting it to a military organization, and about NATO duplicating what was already done by a *plethora* of other international energy actors. Most importantly, there was a fundamental concern about creating an additional burden for the prickly NATO-Russia relationship: given Russia's key role as an energy supplier of many European Allies, energy security debates in NATO might run the risk of degenerating into a Russia-bashing exercise. In short, while NATO accepted a new role, it did so only hesitantly and with many qualifications. Energy security was still a potentially divisive subject.

1 "Riga Summit Declaration," *NATO Press Release* (2006), No.150, 29 November 2006, Paragraph 45.

2 "Bucharest Summit Declaration," *NATO Press Release* (2008), No.049, 3 April 2008, Paragraph 48.

From Debate to Substance

Accordingly, hopes were high that the Alliance's new Strategic Concept, to be agreed at the November 2010 Lisbon Summit, would be able to provide the Organization with a clearer mandate. As expected, the Strategic Concept broke new ground with respect to non-traditional security challenges, including energy security. Not only was the interruption of energy supplies dealt with at length, NATO

was also tasked to contribute to energy security, including through contingency planning. The Lisbon Summit Declaration reinforced the Strategic Concept's message by tasking NATO to integrate energy security considerations into NATO's policies and activities. Together, the Strategic Concept and the Lisbon Summit Declaration opened a new chapter in the evolution of energy security as a legitimate item on NATO's agenda.

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However, it was a number of international events rather than conceptual blueprints that made a NATO role in energy security appear increasingly realistic. NATO's counter-piracy operation off the Horn of Africa brought home the role of naval forces in protecting energy shipments, as did Iran's repeated threats to block the Strait of Hormuz. Pakistan's temporary closure of its borders for NATO supply lines into Afghanistan, and the repeated attacks on fuel supplies for NATO forces highlighted the operational dimensions of energy. Moreover, terrorist attacks continued to target energy infrastructure, notably in Iraq, Nigeria, and Egypt, averaging 350 incidents per year. Concerns about cyber threats to energy infrastructures were heightened by the “Stuxnet” malware that had damaged Iranian centrifuges. The Fukushima nuclear disaster in March 2011 also dramatically influenced the global energy debate. And the “Arab Spring” as well as NATO's operation against pro-Gaddafi forces in Libya in 2011 also highlighted the importance of energy security, as these developments involved some of the key energy suppliers for Europe. All these developments underlined that NATO could not ignore the energy security dimension if it wanted to stay relevant.

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Additional pressure on the Allies to take their own Strategic Concept seriously and refine NATO’s role in energy security came from NATO’s partner countries, in particular from the Gulf region. In part due to concerns about Iran’s nuclear program, these countries started to look for ways to enhance their cooperation, focusing on energy security as a major area of

cooperation, and repeatedly challenging NATO to be more responsive to their cooperation ambitions. Some partners from the Caucasus, Northern Africa, and the Middle East were also beginning to show interest in energy security as a *venue* for enhancing their broader relationship with NATO.

These developments influenced NATO’s approach to energy security in several ways. First, they vindicated the new Strategic Concept’s emphasis on energy security and on threats to infrastructure and supply. Second, they broadened the energy security discussions far beyond the European gas disputes and related debates about individual suppliers using energy as a political tool. Third, they demonstrated that supplying energy for military operations was more than just a logistical challenge. Fourth, they also brought home the close interrelationship of energy security and other emerging challenges, such as cyber threats, terrorism, piracy, and environmental change. In sum, the issue of energy security was finally moving from a discussion over principle to one of concrete implementation.³

The result of these developments has been a more coherent approach that builds upon the following tools:

- First, consultations. In addition to regular meetings among Allies on energy security issues, individual partners can meet with Allies at various levels in the so-called “28+n” format. These meetings have given Allies detailed insights about these partners’ energy policies and security perceptions. In turn, these partners were provided with a highly valued opportunity to inform Allies about their national energy outlook and their expectations about future cooperation.

³ “Chicago Summit Declaration,” *NATO Press Release* (2012), No.062, 20 May 2012, Paragraph 52.

- Second, operational energy security. It is widely acknowledged that the growing fuel requirements of Allied forces can compromise their operational effectiveness. Since NATO's missions will involve long distances and a sustained presence, they require ever larger support structures, which also increase the risk for Allied soldiers. Several NATO

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members have thus started to examine ways to reduce their dependence on traditional fuels, shrink their logistics footprint, and also take environmental concerns into account. However, these are essentially national initiatives. Positioning NATO as the front runner in the field of “operational energy security” will help to bring scattered efforts together. Moreover, increasing energy efficiency in the military is in line with NATO's “smart defense” approach that seeks to retain essential military capabilities through the more efficient use of resources.

- Third, tailored cooperation with partners. A number of partner countries have expressed serious interest in working with NATO in the field of energy security, but their interests differ considerably. For example, whereas some countries are mostly interested in the protection of maritime energy infrastructure and anti-piracy operations, others focus on training and on access to NATO member countries' expertise in the protection of energy infrastructures. In light of the growing interest of partners, it will be necessary not only to deepen regular contacts but also to develop tailored partnership cooperation menus in energy security and, as appropriate, other emerging challenges. NATO's Science for Peace and Security Program will play an important role in further developing practical cooperation with partners, as it provides opportunities for NATO member and partner countries to develop new methodologies and technologies in the field of energy security.
- Fourth, dialogue with other stakeholders. Several major international organizations, including NATO, the EU and the OSCE, are currently defining their respective roles in energy security. To avoid duplication, the Emerging

Security Challenges Division has engaged in a dialogue with other energy security stakeholders. This dialogue, which seeks to produce a rolling inventory of roles and responsibilities of all major institutions, will become a permanent fixture of NATO's agenda.

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- Fifth, training and education. The growing importance of energy considerations in the international political debate suggest that diplomats and military leaders alike should be given the opportunity to develop a better understanding of energy and related issues, such as resource competition and climate change, as drivers of future security developments. To this end, an attempt is now being made to utilize NATO's unique training facilities by offering appropriate training courses.
- Sixth, intelligence and strategic analysis. With over 60 intelligence services from 28 nations, NATO provides a unique forum for discussing threats to energy security. The major focus of these analyses is the security of critical energy infrastructures, particularly in energy producing and transit countries; and the security of transport routes. To further enhance situational awareness, NATO's in-house analytical capabilities are currently being expanded, allowing for a more forward-looking analysis of how energy, economic, environmental and other factors may impact on NATO's policies and operations. The cross-cutting nature of emerging challenges will also be increasingly reflected in NATO's exercises through the incorporation of energy, cyber and other elements into relevant scenarios.
- Seventh, enhanced public diplomacy efforts. Since all major documents on energy security are classified, NATO's role in this area is insufficiently understood by the public – a lack of information that could invite misunderstandings. Given the increasing public interest in NATO's response to emerging challenges, NATO will disseminate the findings of its energy-related events to a much broader audience.

- Finally, support to the protection of critical energy infrastructure. Crippled energy infrastructure would affect a stable energy supply and seriously impact on the security and effective functioning of NATO member states. Consequently, NATO is increasingly engaged in this area of work. Critical energy infrastructure is subject to four main types of risks: natural disasters (e.g. earthquakes), technical failures, political instability or conflicts in producing countries, and man-made attacks (e.g. terrorism, cyber attacks, piracy). Most analysts agree that international terrorism represents the main man-made threat to energy infrastructure. The low number of successful or attempted terrorist attacks against the energy infrastructure of NATO members may indicate that, at present, terrorist groups do not possess the resources or knowledge to conduct coordinated major attacks against energy infrastructure assets on NATO territory.

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However, risks to critical energy infrastructures cannot be confined to specific borders. As NATO member states still heavily depend on energy imports from regions outside NATO, a terrorist attack on energy infrastructure facilities outside NATO member countries’ borders can considerably reduce the Alliance’s access to energy resources. Moreover, some energy producing regions, especially in the Middle East and North Africa, are particularly vulnerable to threats against energy infrastructure and suffer from hundreds of terrorist attacks each year. Finally, the world’s energy production industry is still very much concentrated in relatively few areas – for example, half of the world’s oil production comes from just over 100 large oil fields. As the characteristics of the oil industry makes oil prices very sensitive to any kind of disturbance, even an unsuccessful attempt to target strategic energy facilities could cause major oil price hikes.

One major game changer in the landscape of risks to energy infrastructure is the cyber threat. According to the U.S. Department of Homeland Security, the number of attempted and successful cyber attacks against U.S. critical

infrastructure rose more than 383 percent from 2010 to 2011. 16 percent of these attacks specifically targeted the energy sector.⁴ As energy networks grow in size and complexity, they require better control systems, based on information and communication technologies. These centralized control systems, or SCADA, are increasingly important for energy distribution in both NATO member and partner countries. A decade or two ago, critical infrastructure was run by a series of specialized systems, both computerized and manual. Today, a part of these specialized systems have been replaced with mass-market systems, thus increasing their vulnerability.

For all these reasons, sharing best practices on the protection of critical energy infrastructure remains NATO's most frequently offered cooperation item with respect to energy security. Activities in this regard benefit from NATO's long-standing expertise in crisis and consequence management and from the effective involvement of the private sector, whose unique expertise can be made available to partners through the NATO framework. Given that the protection of critical energy infrastructure is a national responsibility, NATO's role is largely that of a facilitator. However, experience shows that it is the specific NATO context that attracts the attention of stakeholders, notably partner countries and industry. Moreover, upon the request of a partner country and agreement by Allies, NATO can dispatch assessment teams to evaluate infrastructure vulnerabilities or assess damage to energy installations, as was the case in Georgia after the 2008 war with Russia. NATO also can, upon request, support the protection of partners' critical energy infrastructures, whether by supporting national communication and intelligence networks or through aerial and maritime patrols.

While the protection of land-based critical energy infrastructure is not a dedicated NATO responsibility, the maritime domain presents a different picture. Today about one-half of energy resources is moved by tankers on fixed maritime routes, which means that any NATO naval operation that contributes to the security of major sea lanes is, by definition, also a contribution to energy security. By protecting international shipping off the Horn of Africa, NATO's counter-piracy operations in the Indian Ocean have clearly demonstrated the potential to deter or disrupt actions that could undermine energy supplies. Accordingly, NATO's maritime strategy documents make a clear case for the role of navies in energy security.

4 U.S. Department of Homeland Security, Industrial Control Systems Cyber Emergency Response Team (ICS-CERT), "Incident Response Summary Report," 2009-11.

Conclusion

After a difficult start, energy security is becoming firmly embedded in NATO's agenda. The close links with other emerging challenges, such as terrorism and cyber threats, has facilitated the integration of energy security considerations into NATO's policies and activities, as mandated by the Lisbon Summit. There is now a much clearer appreciation of a NATO energy security agenda that adds value in certain critical areas, is appreciated by partner countries, and, above all, steadily builds Allied consensus. Putting it differently: the question of "if" has been replaced by the question of "how" – a critically important leap forward that will make energy security a legitimate and valuable part of NATO's 21st century toolkit.