



Impact of finance, markets and ownership on the operational security and effectiveness of defence-related critical energy supply and infrastructure

Background

The **armed forces rely on civilian critical energy supply and infrastructure (CESI)** in and outside the European Union (EU) to ensure affordable, sustainable, and accessible energy for their everyday activities within the European territory. This critical dependence entails risks, threats and vulnerabilities that can affect operational effectiveness. As an energy-intensive consumer, there is an emerging need for the defence sector to investigate and enhance its understanding and insights on the effects of financial and market vulnerabilities of defence-related CESI.

Scope and Objectives

Failure to properly address the security of the energy supply leads to economic recession and a massive increase in state debt burden. In this context, this CF SEDSS research study investigates how financial, market, regulation, and ownership issues impact CESI operators and examines the resulting effects on the resilience of the European Union Member States' armed forces within the EU's territory.

Problem Analysis

After a lengthy period of peace and economic prosperity, the return of war has been the wake-up call for EU governments which are realising that energy security is paramount to national and economic security.

MoDs with a longer time horizon than most civilian organisations are therefore ideally suited to help EU organisations in this redesign of improved security of energy supply for the benefit of both the civilians and the armed forces to secure abundant clean energy.

Methodology

This study splits CESI into four types:

- **Electricity producers** (mostly produced in the EU);
- **Critical EU energy infrastructure** (as the EU has unbundled energy infrastructure);
- **Producers of coal, oil and gases** (providing the buffer and mainly produced outside the EU);
- **Energy reseller/supplier** since MoDs contract for their energy requirements via resellers.

Solution Implementation

Failure to properly address security of energy supply leads to economic recession and massive increase of state debt burden.

For electricity production and energy infrastructure:

- MoDs should have a voice when EU Commission and Member States deal with controlling acquisitions of EU electricity production assets by systemic rivals;

- MoDs should be represented at the European Union Agency for the Cooperation of Energy Regulators (ACER) as both a particular buyer and an entity that can provide views when dealing with the security of energy supply;
- MoDs to voice their concerns at national and EU electricity and gas regulators (ENTSO-E & ENTSOG), in particular during the 10-year network development plans;
- To enhance EU security within the electricity capacity mechanism, it is recommended that MoDs request ACER to review its 'Technical specification for cross-border participation in capacity mechanisms'. Participation of foreign companies controlled by non-EU states should be carefully considered for EU security reasons;
- MoDs should liaise with their respective national regulators to implement technical solutions that will allow the electricity grid to sustain more severe storms.

For producers of coal, oil and gases:

- To prevent an increase in EU dependency on oil and gas, it is proposed that MoDs participate in the drafting of position papers by the EU, the G7, and the IEA that influence global supply and demand;
- MoDs should voice their concern at their respective state levels that too little investment in energy is unsustainable (it should be a question of not only climate change but also energy sovereignty).

Impact and Opportunities

The study identifies and assesses the impact of non-EU ownership issues regarding CESI, which could affect operational security for armed forces.

An additional chapter is dedicated to how the security of supply should be addressed in an energy transition world where inter-fuel competition is increasing. The old analysis per fuel type paradigm is becoming less and less relevant and should be modernised, as it promoted thinking in silos which were ultimately static, whereas reality is dynamic and demand for different fuels changes with the energy mix.

Challenges and Risks

For the last two decades, the EU has relied increasingly on markets for its broad energy security as markets can cost-effectively provide some short-term balance. Unfortunately, markets cannot cope with malign interferences or massive supply disruptions and are vulnerable to abrupt shifts in perception and sentiment.

The energy transition exposes misalignments between exporters and importers, potentially reshaping commodity markets and relationships.

Way Ahead

It is recommended that each MoD:

- nominate an energy security officer to enhance CESI knowledge;
- Publish each year a report on:
 - › EU electricity production, demand and storage;
 - › EU infrastructure;
 - › Oil and gases supply and demand and
 - › EU security of energy supply.