

Human Factors in Energy



Why?

Energy is a **key enabler** to sustain support activities and/or military operations. Appropriate professional training, combined with awareness-raising campaigns, is the cornerstone of raising energy efficiency and reducing energy consumption.

How?

The scope of energy savings and efficiency within the military sector has two pillars; facilities and military activities (exercises / operations). Within those two pillars, in terms of human factors, different messages have to be emphasised and communicated internally and externally:

- Financial cost reductions stemming out of energy efficiency improvements is a key message to leadership and central government.
- Improvement of the standards of workplace due to the application of energy efficiency practices in buildings is a key message to personnel and lower level management.
- Enhancement of operational capabilities through rational use of existing energy resources, along with the reduction of risks related to logistic support (personnel exposure to the enemy, availability of energy sources), is a key message to all stakeholders.

Benefits to the Defence Sector

Systematic training of all personnel that is involved in significant energy uses in conjunction with awareness-raising and motivation campaigns towards all personnel will avail the defence sector to:

- **Enhance operational military capabilities**, through rational use of existing energy resources;

- **Reduce the operational risks** of personnel related to logistic support of operations;
- **Improve the workplace standards** through the application of the requirements of the Energy Performance of Buildings Directive (EPBD1);
- **Reduce energy consumption** and **energy-related operational and support costs**.

Challenges for Defence

- The link that sometimes is missing between operational targets and energy efficiency upgrade / energy consumption reduction.
- The general lack of financial and / or human resources to implement large-scale energy efficiency projects that demonstrate vigorously the commitment of top management (strategic level).
- The general tendency (not limited to the defence sector) to neglect funding on training / awareness schemes and direct all available financial resources to more technical solutions, such as renovations and procurement of equipment.
- Cases where the energy-saving parameter has to be reconsidered due to military operations' imperatives.
- The multi-tier level of command, combined with the high turnover of all levels of management and personnel to various duty stations, which requires acclimatisation periods in new main duties and operational objectives, leaving the involvement with energy efficiency, in lower priority.

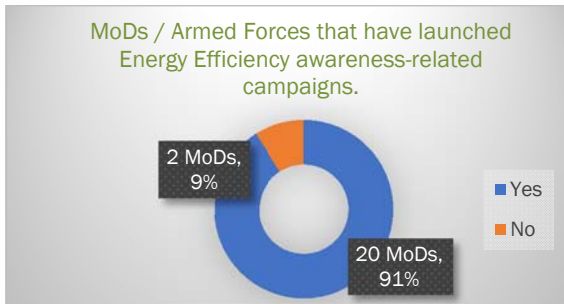
Status in the Defence Sector

According to a relevant Questionnaire (Nov. 2016), answered by 22 Ministries of Defence (MoDs), representing 96.9% of EU

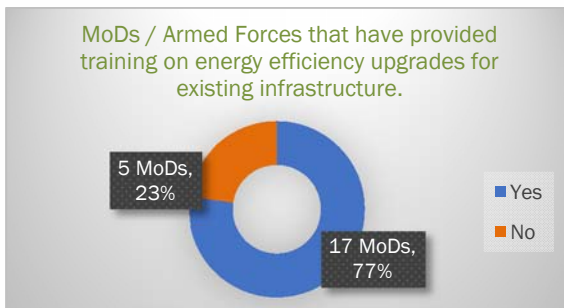
¹ Directive 2010/31/EC of the European Parliament & Council on the Energy Performance of Buildings.

defence expenditure as well as 91% of EU defence personnel². Member States have addressed the human factors on energy efficiency. To that end:

- o Almost all MoDs have launched awareness campaigns related to energy efficiency:



- o Three quarters of the MoDs have provided training on energy efficiency upgrades for existing infrastructure to clusters of engineers and technical personnel:



Examples in Defence Context

German MoD

Between 2005 and 2010 **Bundeswehr** run the "**missionE**" energy-awareness campaign, providing events, guidance, relevant publications, supported by a dedicated website. The campaign contributed to a **21.5% decrease in consumption between 2005 - 2010**.



courtesy of DE MoD

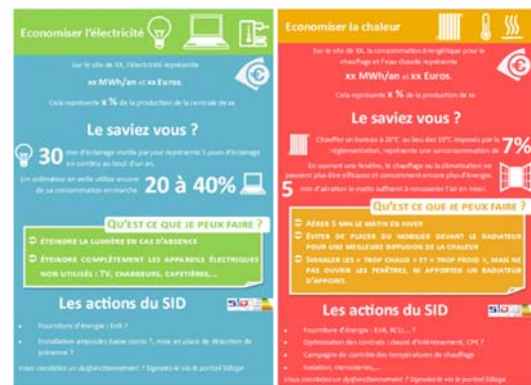
Building on this success, the German MoD is going to run "**missionE 2.0**", introducing also new aspects such as energy management, central energy purchasing, E-mobility, energy information system, etc.



courtesy of DE MoD

French MoD

In 2016 the FR MoD published a guide presenting approx. 70 technical solutions for energy savings in buildings. Moreover, a toolkit for energy managers on communication and awareness is prepared.



courtesy of FR MoD

Hellenic MoD

Since 2015, the Greek MoD, in collaboration with the National Centre for Public Administration, is running a one-week dedicated energy efficiency training course for its personnel involved in the design, construction, operation and maintenance of infrastructure. All expenses, including accommodation and travelling, are covered by the EU Structural Funds (Social Cohesion).

Latest update: 23.10.2017

² Data for the year 2015, retrieved through EDA Defence Data portal (<http://www.eda.europa.eu/info-hub/defence-data-portal>). The EU MS MoDs that provided replies are: AT, BE, BG, CY, DE, EE, EL, ES,

FI, FR, HR, IE, IT, LT, LV, NL, PL, PT, SE, SI, UK. Among the participating MS is DK, which holds an opt-out from EU policies in relation to security and defence and does not provide defence data to EDA.