

Saving Energy in the Military

Michael Rühle
Head, Energy Security Section
NATO Emerging Security Challenges Division

15 October 2015

The “fifth fuel”: Why saving energy makes military sense

“My logisticians are a humorless lot ... they know if my campaign fails, they are the first ones I will slay.”

Alexander the Great



The “fifth fuel”: Why saving energy makes military sense

- A soldier’s fuel consumption increased from one gallon in WWII to 20 gallons today (roughly half of which is consumed generating electrical power)
- Forward Operating Bases in remote locations in Afghanistan had to be supplied by air, increasing fuel cost 400 times
- Most of the energy used in military camps is for heating and cooling

The “fifth fuel”: Why saving energy makes military sense

- One out of eight U.S. Army casualties in Iraq was the result of protecting fuel convoys.



What nations are doing

- **Smart grids (e.g. to reduce running time of diesel generators)**



What nations are doing

- Renewables (to power individual soldiers and camps)



What nations are doing

- Insulation



What NATO is doing

- **Get an overview over national efforts of Allies and partner countries**
- **Focus on most promising technologies with short-term return on investment (e.g. LED, insulation)**
- **Prepare the ground for STANAGs (NATO Standardization Agreements) on energy efficiency**

What NATO is doing

- **Bring companies together**
- **Engage Ministries of Defence**
- **Demonstrate interoperability of energy-efficient military equipment**
- **Demonstrate military adequacy of “smart energy” equipment**
 - **must be as good as “traditional” equipment**

What NATO is doing

- **Encourage nations to measure their military energy consumption**
- **Offer education and training on energy efficiency**
 - **Change attitude and behaviour of soldiers**
 - **“Every soldier is an energy manager”**
- **Link military energy efficiency to environmental issues**
 - **Military cannot stand aside re. environmental concerns**

What NATO is doing

- **Practice what we preach!**



- ... reduced heating, cooling and ventilating power thanks to thermal insulation, thermal inertia and effective solar protection of glazing.