NATO
Energy Security
Centre of
Excellence

Education, Training and Exercise Programs at the NATO Energy Security Centre of Excellence

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NATO ENSEC COE
SARD SME

2.Developing competencies in supporting Critical Energy Infrastructure Protection (CEIP)

- **Table Top Exercise (TTX),**
  - **October 2014,**
  - **May 2016;**
- **UA case : CEIP study, Conference;**
- **Workshop : (*i.e. on LTU Gas Terminal, ATA on CEIP in Georgia end 2014, Sweden May 2016, …)***
- **Studies & Researches;**
- **Conference : Vilnius, Kiev, Warsaw, Vilnius, …**
- ***Education activities (courses, …)***

Strategic Analysis and Research

- **Hybrid Warfare on Critical Energy Infrastructure: Ukrainian Case**

  Based on Ukrainian experience, to deliver an **analytical study** for NATO to build resilience **in energy sector** (2015-2016);

  Study, support on Green book on CIP in Ukraine, conference in Kiev,…

- **Study for NATO PC on National Host Nations capacities to support NATO re-assurance measures (2015 – 2016)**

  Special focus on supply chain and storage capacities for NATO Eastern countries connected to **Readiness Action Plan**

Strategic Analysis and Research

- **Development of Data Base on Energy Infrastructure**

- **8 June 2016, Conference on "Critical Energy Infrastructure Protection – The Maritime domain" Warsaw, Poland.**

  Co-organized with the Polish Naval Academy;

- **Organizing ARWs or Conference (Baku, Vilnius, Kiev, Warsaw, …)**

- ***Participation in ARWs in CEIP (Ankara, Tbilisi, Stockholm, …) or conference with our expert***

Experience and best practices sharing

Klaipeda (LTU) LNG Terminal Security Roundtable (12 December, 2014)

Aim: discuss the potential means of ensuring the safety and protection of energy infrastructure related to the LNG terminal.

Organizers:

- the NATO Energy Security Centre of Excellence
- the Ministry of the Interior of the Republic of Lithuania
- together with Joint Stock company 'Klaipėdos nafta' (operator)

Security proposals for LTU LNG terminal were based on good practices:

- at the Gate Terminal at Gasunie (Rotterdam) and
- future LNG terminal in Swinoujscie (Poland)



Education, Training and Exercise Division

- **ADL 2014 NATO Energy Security Awareness Course Update** **(available on line in NATO e learning-portal, updated version will be available at the end of August 2016)** https://jadl.act.nato.int/

- **Energy Security Education Module**

  (Baltic Defense College 2-7 April 2016)

- **Energy Security Course (focus on Caucasus area)**

  (Tbilisi, Georgia – 11-15 April 2016)

Education, Training and Exercise Division

- **Energy Security Course (focus on the Baltic region)**

  (Vilnius, Lithuania – 14-17June or Autumn 2016 in NATO ENSEC COE)

- **Energy Security Strategic Awareness course (DoK 400/500)**

  (NATO School, Oberammergau, Germany – 26-30 September 2016)

Education and Training Efforts (Collective)

- Contribution with injections of energy elements to the scenarios of the NATO military exercises, MEL/MIL.

- NATO CMX contribution : **Report on Energy Security and Security of Supply Situation in the Baltic States (contribution to NATO CMX 2016);**

- **NATO** **T**able **T**op E**x**ercise on the Protection of Critical Energy Infrastructure **(17 - 20 May 2016 – Vilnius)**
  Military & Civil planers with private operator on Electrical power systems.
  Impact on Host nation support during NATO reinforcement deployment
  Highlighting the necessary cooperation between all actors.

Table Top Exercise on CEIP

- NATO-ICI Table Top Exercise on CEIP -2014
- **NATO Table Top Exercise on CEIP-2016**

Education and Training Efforts (Collective)

- **NATO-ICI T**able **T**op E**X**ercise on the Protection of Critical Energy Infrastructure (20-23 October 2014)

- ✓ Terrorist Attack based scenario
- ✓ Cyber Attack based scenario
- ✓ STRATCOM Based scenario

CCDCOE
NATO Cooperative Cyber Defence Centre of Excellence Tallinn, Estonia

Exercise Specifications – TTX 2016

❖ TTX on CEIP- 2016

- **Exercise Name:** Table Top Exercise on Critical Energy Infrastructure Protection – 2016 (TTX on CEIP-2016)
- **Theme:** Protection of Power Grid Infrastructure
- **Region:** Baltic Sea Region
- **Scenario**: Skolkan Scenario

Exercise Specification

❖ TTX on CEIP- 2016

- **Exercise Aim:**

To support national authorities in building resilience through improved emergency preparedness, planning, prevention, response and strengthen their capability to protect critical energy infrastructure and contribute to the development of NATO's competence in supporting the protection of critical energy infrastructure.

NATO ENSEC COE – TTX - Platform

Exercise Specification

❖ TTX on CEIP- 2016

Exercise Objectives:

- To analyze vulnerabilities of critical energy infrastructure
- To determine the consequences of failure, attack and/or damage to critical energy infrastructure
- To determine cooperation and coordination between military and civilian organizations
- To exercise crisis management processes, including military and civil emergency planning

PARTICIPANTS

55 participants from 12 NATO member and partner countries;

- **Czech Republic, Estonia, Latvia, Lithuania, Poland, Slovakia, Spain, Turkey, USA,**

  Finland, Sweden, Ukraine

- **Security, Academy, Public Sector, Private Sector, Ministries, NATO Force (MNC NE, NFIU LTU)**
- **Experts from NATO HQ, DAT COE, STRATCOM COE**

Threats and Vulnerabilities

Threats:

- Terrorist Attacks
  - Cyber
  - Kinetic
- Disruption of Supply
- Sabotage
- Information Transparency

Vulnerabilities:

- Transmission Lines
- Substations
- Interconnections
- Compressor Stations
- Control Centers
- LNG Terminal
- Pipelines

Consequences and Recovery

Consequences:

- Blackouts
- Power shortages
- Damaged equipment
- Economic impacts
- Propaganda
- Communication outages
- Fear, Panic, Crisis

Recovery:

- TSOs – Transmission Systems Operators
- DSOs – Distribution Systems Operators
- Emergency response
- Power generation alternatives

Protection and Response

- Country specific prevention, response, and mitigation plans
- Regional information sharing
- Existing cooperation fora
- TSO – common defense programs
- Online monitoring, passive defense measures
- Civil to civil surge mechanisms
- Civil/Military cooperation
- Legal Framework to support security

Lessons Identified and Recommendations

- Potentially limit transparency during emerging crisis
- Improve regional information sharing
- Harmonized procedures of response to ensure uninterrupted supply of energy to the region
- Understanding emerging technology and the threats
- Municipality plans for extended periods disruption in power supply
- Continued practice of procedures through joint exercises

Increased capabilities, reduced costs!

IESMA 2016

Innovative Energy Solutions for Military Applications

16-18 November 2016, Vilnius, Lithuania

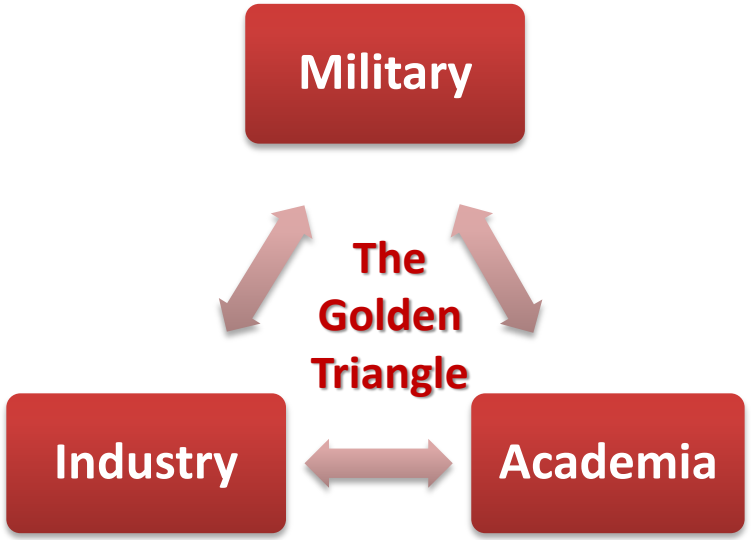
CONFERENCE & EXHIBITION

DELTA

NATO OTAN

www.iesma.info

- **Innovation**
- **Efficiency**
- **Sustainability**
- **Mobility**
- **Autonomy**



Facts & Figures: IESMA 2014

- 223 participants
- 28 high level speakers
- 31 companies in the Exhibition (Including: Honeywell, BAE, THALES, Nexter, etc.).

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http://enseccoe.org

Thank you