



50th PHLG meeting, Vienna, 21 June 2018

# Cyberattacks in the energy sector of Energy Community – reality and future challenges



## Cyberattacks in the Energy Community are reality...

- √ Growing number of cyberattacks on the energy sector in the last years
- √ 2015 and 2017 Cyberattacks in Ukraine hit electricity sector

2015 – 30 substation disconnected, more than 200k people in 8 regions affected for several hours

#### ...but also future...

#### Energy transition brings opportunities but also new challenges –

Moving towards more digitalised, decentralised and decarbonised systems with an increased number of new players, new services, new market places and enhanced cross-border cooperation, is bringing manifold challenges to the security of energy supply and safe operation of the energy infrastructure.

Ensuring cybersecurity in times of increasing application of information and communication technologies (ICT) in the energy sector is one of challenges

## Challenges and threats specific to the energy sector





- ✓ Proliferation of highly interconnected and poorly secured information and communication technologies (ICT) and services
- ✓ Outsourcing of infrastructures and services
- ✓ Increased interdependency among market players
- ✓ Protection concepts and design rules of energy facilities not reflecting current cyber threats and risks
- ✓ Dependence on foreign security technologies (intregrity of components used in energy systems)
- ✓ Cross-border interconnected energy network the 'weakest link' problem and the 'cascade effect'
- Constraints imposed by cybersecurity measures in contrast to real-time/availability requirements
- ✓ Availability of human resources and their competences
- ✓ Evolving cybercrime business models
- ✓ Blurring lines between state and non-state actors

# Energy Community-added value in facing cyber challenges and risks

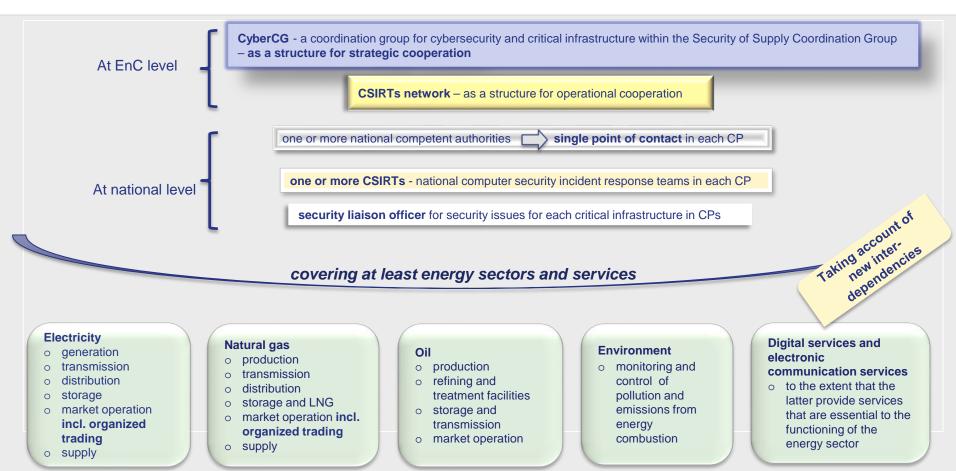




- Capability to build and develop platforms for the exchange of information and best practice, for research and development, for building skills and capacities, for raising awareness, and improving preparedness of CPs
- Opportunity to share among the CPs the rarely available human resources with adequate technical expertise on the energy sector-specific challenges
- Knowledge of sector-specific requirements and challenges, as well as of the regional context
- Ability to develop trust and confidence among CPs' and stakeholders
- Better positioned for response coordination in cases of cross-border incidents affecting more than one CPs or CPs and interconnected MSs
- Ability to enhance effective cooperation among CPs within already tested common structures (e.g. Security of Supply Cooperation Group – SoS CG)

### Organizational structure of CyberCG within SoS CG





# **CyberCG** – a structure for strategic cooperation and developing trust and confidence within the Energy Community

Tasks



#### The CyberCG consists of

- competent authorities and single point of contacts of CPs
- the CSIRTs network
- security liaison officers
- the Secretariat
- the European Commission
- the ENISA (if possible)
- representatives of Observer and Participant countries
- representatives of the relevant stakeholders

biennial work programmes / A yearly report

#### Meetings

- twice a year or more, upon a motion of the Chairperson, the Chairperson of SoS CG, the Secretariat
- o take part in meetings and activities of the SoS CG

 exchange information and best practice, discuss modalities, on risks and incidents; on identification of operators and critical infrastructures, on awareness-raising, education programmes and training; research and development

- discuss capabilities and preparedness of the CPs, evaluate national strategies, assist CPs in building capacity
- o **provide strategic guidance** for the CSIRTs the CSIRTs network
- engage in discussions with CPs and MSs on whose territory a potential critical infrastructure is located, and other affected CPs and MSs
- support operators of critical infrastructures with best practices, methodological guidelines
- encourage the use of European or internationally accepted standards and specifications; discuss them with relevant stakeholders and with relevant organizations

# Action at EU level shall inspire further measures in the Energy Community









# **CSIRTs Network** – a structure for operational cooperation at Energy Community level



 The CSIRTs network composed of representatives of the Contracting Parties CSIRTs and the Secretariat

#### Tasks

- exchange information on CSIRTs' services, operations and cooperation capabilities
- exchange and discuss non-commercially sensitive information related to incidents and associated risks
- at the request of CP's CSIRT, discuss and, where possible, identify a coordinated response to an incident;
- o discuss, explore and identify further forms of operational cooperation
- inform the CyberCG of its activities and of the further forms of operational cooperation
- discussing lessons learnt from cyber exercises, including from experience shared by ENISA
- at the request of an individual CSIRT, discuss the capabilities and preparedness of that CSIRT
- issue guidelines in order to facilitate the convergence of operational practices and operational cooperation
- develop a blueprint for cooperation at Energy Community level in case of incidents or crisis affecting one or more CPs

- produces an annual report to the CyberCG
- build on best practice, and where possible, assistance from ENISA

# Closed-CSIRT network (within the CSIRT network)

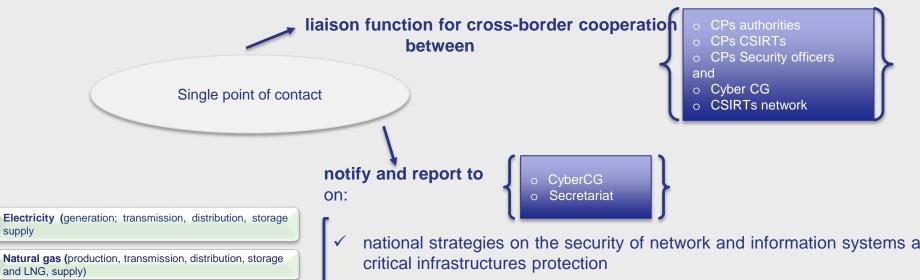
- composed of a representative from each CPs with an appropriate level of security vetting and clearance for handling classified information
- make use of specific certified communication means

### **Tasks**

 treat such a threat and incidents considered as classified information by the CPs concerned

# Single points of contact in each CP





Market Operation - Organized energy trading venues

Oil (production, refining and treatment facilities, storage

and transmission)

and services

- Monitoring and control (of pollution and emissions from energy combustion)
- Digital services and electronic communication services (to the extent that the latter provide services that are essential to the functioning of the energy sector)

- national strategies on the security of network and information systems and
- identification of critical infrastructures and operators of essential services
- main elements of the incident-handling process
- security and incident notification requirements
- powers and means for enforcement under their applicable law