



# Scope, methodology and deliverable



## 1. Scope

- Interoperability on IPs is essential for efficient and undistributed cross border flow
- Regulation (EC) 2015/703 on interoperability and data exchange sets interoperability rules on IPs for EU gas networks
- Coherent application in the Energy Community is necessary for ensuring interoperability on EnC IPs

## 2. Methodology

- Data for analyses based on information from NRA
- Results cover 4 EnC contracting parties and Austria, Italy and Poland from EU
- We expect fulfilled questionnaires from 1 EnC contracting party and some EU countries
- 3 EnC contracting parties did not answer because absence of gas infrastructure
- Focus is on IPs between two EnC CP TSOs and on IPs between EnC CP TSO and EU TSO

### 3. Deliverable

 Survey on contracting parties compliance with Regulation (EC) 2015/703 on interoperability and data exchange due to 12/2016

## Interconnection agreements(IA)



#### 1. Existence of IA

- IA not exist on some IPs between EnC CP TSOs and EnC CP and non EU TSOs (SRB- B&H and 13 IPs in Ukraine)
- IA exist on all IPs between EnC CP TSO and EU TSO (HU-SRB; RO-MO; POL-UKR; SLK-UKR; HU-UKR)

### 2. IA content

- All IAs contain details on measurment standards for gas quantity and quality
- Small difference in steps in the matching process exits on IPs in Serbia and one IP in Moldova and one IP in Ukraine
- Rules for the matching process is lesser rule on IPs in Moldova and Ukraine but not in Serbia
- Russian is language on IP between Poland and Ukraine; Russian and Romanian in Moldova and Serbian on IP between Serbia and B&H
- Dispute settlement mechanism is defined in the most IA, but on IP between Poland and Ukraine dispute settlement mechanism is negotiations.

## **Units**



### 1. Regulation (EC) 2015/703 reference conditions and units

- Reference conditions for volume 0°C and 1.01325 bar
- Combustion reference temperature for GCV, energy and Wobbe-index is 25°C
- Units: bar for pressure, °C for temperature, m3 for volume, kWh/m3 for GCV and Wobbe-index (based on GCV) and kWh (based on GCV)

### 2. Reference conditions and units on EnC IPs

- Unit for pressure is bar, °C for temperature and m3 for volume on all IPs in EnC contracting parties
- Referent pressure on IPs in all countries is equal to value defined in NC, but on IPs in B&H and Serbia reference temperature for volume is 15°C and on IPs in Moldova and some IPs in Ukraine 20°C
- B&H, Moldova and Serbia use Lower calorific value instead GCV
- Ukraine use GCV but combustion reference temperature for GCV, energy and Wobbe-index is 0°C
- Unit for energy is MJ in B&H and Serbia and MJ and kcal in Moldova

# Gas quality and odourisation



### 1. Regulation (EC) 2015/703

- TSO have obligation to publish Wobbe -index and GCV on their website for all IPs every hour
- Adjacent TSOs should perform defined actions in case of restrictions to cross-border trade due to gas quality differences
- Adjacent TSOs should develop options to remove restrictions to cross-border trade due to differences in odourisation practices

### 2. Gas quality and odourisation practice on EnC IPs

- On IPs in B&H, Ukraine and one IP in Moldova TSOs not published Wobbe-index and gross calorific value for gas at all
- At one IP in Moldova TSOs published Wobbe-index and gross calorific value weekly
- Serbian TSO publish daily Wobbe-index and Lower calorific value for different temperature reference condition for volume and combustion(15°C/15°C)
- All EnC contracting parties informed that gas quality differences never caused a restriction in cross/border trade.
- All EnC contracting parties confirmed that differences in odourisation practise never caused a restriction in cross/border trade.

## Data exchange



### 1. Data exchange and security measures in Regulation (EC) 2015/703

- NC define different types of data exchange: document based data exchange, integrated data exchange and interactive data exchange.
- NC foresee following security measures: protection of the confidentiality by encryption, integrity and authenticity by signature of the sender and security measure to prevent unauthorised access to IT infrastructure

## 2. Data exchange and security measures practice on EnC IPs

- On Poland Ukraine IP matching is done with excel sheets exchanged as email attachments
- On one Moldova IP Modbus TCP-IP data exchange is used and the encrypted manufacturer on the other IP
- At IP between Hungary and Serbia and between Serbia and B&H TSOs exchange information by emails
- Restricted list of email addresses is used in the information exchange on IP between Poland and Ukraine
- Integrity and authenticity by signature of the sender on one IP and all security measures defined in NC is used on other IP in Moldova
- On IPs between Hungary and Serbia and Serbia and B&H there are not security measures for data protection foreseen in NC

# Compliance and recommendation



### 1. Compliance with Regulation (EC) 2015/703 on EnC IPs

- IA not exist on some IPs between EnC TSOs and EnC and non EU TSOs (SRB- B&H and 13 IPs in Ukraine)
- All IAs contain details on measurment standards for gas quantity and quality
- Differences exists in matching process, lesser rule and OBA is not implemented on all IPs
- On the most IPs: different reference temperature is used, Lower calorific value is used instead of Gross, different combustion temperature and different Units for energy
- Gas quality differences and diferenties in odourisation practices never caused a restriction in cross/border trade, but on the most IPs TSO not published Wobbe-index and gross calorific value for gas
- Data exchanged is via email instead using solution define in Regulation (EC) 2015/703
- Security measure defined in Regulation (EC) 2015/703 is not implemented on all IPs

### 2. Recommendation

- The EnC Contracting Parties should implement Regulation (EC) 2015/703 in the same time on IPs with other Contracting Parties and with neighboring EU countries
- Deadline for full Implementation should not be shorter than 2 years for existing IPs and should be default rules for new IPs