EnC Contracting parties compliance with Regulation (EC) 2015/703 on interoperability and data exchange

Aleksandar Popadic
ECRB GWG
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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 measurement 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.
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
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 practice never caused a restriction in cross/border trade.
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 measurement 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 differenties 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