Distribution Network Losses and their management – Case Study session

Case study by the National Agency for Energy Regulation of the Republic of Moldova

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Basic information about DSO operators

1. *Total DSO operators in country?*
   - *There are currently **23 licenced DSOs**, operating on the territory of the Republic of Moldova.*
2. *Each DSO operator natural gas distributed amount and consumers?*
   - ***12** DSOs affiliated with the main natural gas supplier JSC "Moldovagaz", are responsible for the main share of distributed natural gas (**1008.5 mil. m³** in 2020**, 96.3%**), while the other smaller DSOs have distributed (**37.8 mil. m³, 3.61%**).*
3. *Share of smart meters in system?*
   - *DSOs in the Republic of Moldova do employ smart metering systems. Based on a poll performed in the year 2022, the current share of installed smart meters is **10%** for household consumers and **12%** for industrial consumers.*

Regulation of natural gas losses in distribution networks (1)

4. *At what level and through what legislative documents is the component of losses in the distribution network (government decree, technical normative acts, Regulator decision or other similar acts) covered in your country?*
   - *In the Republic of Moldova the component of natural gas losses is covered by a chapter in the National Law on natural gas, as well as by ANRE's own approved Regulation for the calculation of technical consumption and technical losses within the natural gas distribution networks.*
5. *What are the principles used in the methodologies which are used to determine the natural gas losses in distribution networks (national normative acts, methodologies, pipeline construction technical norms, other technical studies or analytical studies)?*
   - *The currently applied Methodology for the calculation of technical consumption and technical losses in the distribution networks covers a wide range of aspects related to the operation of the various components of the distribution networks:*
     1. *Established natural gas losses coefficients for the infrastructure (stations, pipelines) physical leakages based on technical norms, specifications for construction materials used, historical evaluations and technical trials performed when developing the Methodology;*
     2. *Standardized natural gas loss coefficients for various repair and maintenance works performed by the DSOs;*
     3. *Calculations for metering equipment errors and various other factors that influence metering.*

Regulation of natural gas losses in distribution networks (2)

5. *What is the volume/proportion of losses that are taken into account for tariff purposes. What are the various countries approach to this aspect of network losses recovery through tariffs?*
   - *According to the national legislation and relevant normative acts, the amount of natural gas that is taken into account for tariff purposes is equal to the volume which have been determined via the approved Methodology – so called normative losses;*
   - *The normative volume of losses differs from the de facto volume of losses reported by the operators in their quarterly and annual reports.* ***In 2020*** *de facto/technical losses reported by the DSOs was at* ***28 million m³****, while the determined and approved volume of normative losses amounted to* ***16.4 million m³****;*
     - *This particular approach however has sparked discussions amongst various stake-holders for the need to change the existing approach and amend or develop a new methodology.*

Distribution Network Losses and their management

Natural gas losses percentage last three years (loses/distributed amount)?

1) *Technical losses for the past 3 years amounted to:* ***35.2 mil m³*** *(3.39%) in 2018,* ***31.3 mil m³*** *(3.19%) in 2019,* ***28 mil m³*** *(2.77%) in 2020;*
2) *In accordance to the current methodology, starting with the year 2020 Commercial losses are no longer taken into account for tariff setting purposes.*

What actions taken to reduce losses in system?

1) *Investments made*
   - *Distribution System Operators are constantly performing various types of investments, approved by ANRE, aimed at reducing natural gas network losses, (installing newer equipment, substituting older sections of the gas network, increasing the number of smart meters, procuring better diagnostics equipment and high-performance sealing materials).*

THANK YOU FOR YOUR ATTENTION!

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