

METHODOLOGY

for forecasting the Network Users' metered outputs with a non-daily frequency

Scope

Art. 1

This methodology is intended to establish the mode of determining the forecasts related to the Network Users' (NU) metered outputs with a non-daily frequency, according to the provisions of:

- a) ANRE Order no. 160 / 01.08.2018 on the designation of the forecasting party in the National Gas Transmission System balancing area and of the template for the provision of information on the metered outputs with a non-daily frequency, art. 4 "*The template for providing information on the metered outputs with a non-daily frequency, applicable in the national gas transmission system balancing zone, is the one corresponding to the reference scenario as provided for in the Regulation*"
- b) Regulation (EU) no. 312/2014 of the commission of 26.03.2014 establishing a network code on the balancing of gas transmission networks, Chapter VIII, art. 36 and art. 42.

Definitions

Art. 2 For the purposes of this methodology, the terms, expressions and abbreviations are defined according to the provisions of the Network Code for the national transmission system, approved by Order no. 16/2013 of the President of the National Energy Regulatory Authority, as amended, other terms are defined as follows:

C_{NMZ}[^] - the forecasted daily consumption of the final customers metered with a non-daily frequency.

C_{NMZ} – non-daily metered consumption.

Ring – group of MS for the town with multiple supplies.

MS – gas metering station.

Consumption determination

Art. 3 The formula underlying the calculation of the NU forecasted consumption in relation with the NU metered outputs with a non-daily frequency is as follows:

$$C = \sum_{j=0}^k c_j + c_{OST}$$

Where:

- C – NU clients forecasted consumption
- c_j – NU clients forecasted consumption related to the DO
- c_{OST} – the sum of the forecasted consumption of the NU clients directly connected to the NTS
- k – total DO number

Art. 4 Description of the forecast template for the determination of the non-daily metered consumption of this final customers' category, forecasted for each MS/Ring.

Background:

- A.** The C_{NMZ} is determined in relation with the sum of the non-daily metered consumption of all the final customers related to the DS connected to the MS/Ring for which the forecast is prepared.
- B.** The share of the non-daily metered consumption related to a MS/Ring in the monthly non-daily metered consumption of the entire county fluctuates slowly from one month to another.
- C.** The cases when this fluctuation is not slow are unforecastable cases (not depending on a consumption history). They cannot be constituted in phenomena and therefore there is no mechanism to forecast them. The errors generated by such cases can not be attributed to a forecasting mechanism or to the quality of the data.
- D.** The respective share implicitly includes the differentiating behaviour of the final customers specific to the area covered by the MS/Ring.
- E.** The non-daily metered consumption forecasted by county is determined.
- F.** If forecasting formulas are used, the factors thereof are established for each county.
- G.** C_{NMZ} is determined by the share of the C_{NMZ} forecasted by county with the share the monthly C_{NMZ} of the MS/Ring had in the consumption of the monthly C_{NMZ} of the county for the forecast previous calendar month.

- The forecasted value of the non-daily metered consumption (C_{NMZ}) related to a MS/Ring during a day is as follows:

$$C_{NMZ^i} = p_i^{l-1} * C_{NMZ^j}$$

Where:

C_{NMZ^i} - non-daily metered forecasted consumption of the final customers

i – metering station

j – the county where the metering station i is located

l – the month corresponding to the date the forecast is related to

p – the share of the monthly C_{NMZ} related to the MS/Ring in the total monthly C_{NMZ} of the county

C_{NMZ^i} – forecasted C_{NMZ} of the MS/Ring i located in the county j

p_i^{l-1} – the share the C_{NMZ} of the MS/Ring i had in the total C_{NMZ} of the county j, during the month previous to the month corresponding to the forecasted day (e.g. month 02.2020 for the forecasts prepared during the days of the month 03.2020)

C_{NMZ^j} – C_{NMZ} forecasted for the entire county j.

Information provision

Art. 5 Data and information on the estimation of the non-daily metered customers' daily consumption.

5.1. The information provided by the TSO on day D-1 for day D.

On gas day D-1, by 2.00 p.m. winter time / 1.00 p.m. daylight saving time, TSO provides the NU with information related to gas day D regarding the estimation of the customers' daily consumption with a non-daily frequency.

The information flow is as follows:

On gas day D-1, by 1.30 p.m. winter time/ 12.30 daylight saving time, the TSO estimates:

- a) The daily consumption for day D related to the non-daily metered NU customers directly connected to the NTS. The estimation is made as a daily average of the DC consumption for the same month of the previous year.
- b) The daily consumption for day D related to the non-daily metered NU customers connected to the DS.

The TSO shall allocate the amounts estimated for the MS/Ring to the NU pro-rata with the shares notified by the DO. Such shares shall be updated and notified to the TSO.

- c) By 2.00 p.m. winter time/1.00 p.m. daylight saving time, the TSO notifies the NU of the amount provided for at point 3 by means of the information under letter a) and b) above.

5.2. Information provided by the TSO on day D for day D.

The TSO provides the NU with two updates of the forecast regarding the metered outputs with a non-daily frequency on day D, at 3.00 p.m. winter time / 2.00 p.m. daylight saving time, respectively 8.00 p.m. winter time / 7.00 p.m. daylight saving time.

The two updates factor in the within-day information regarding the WEATHER (METEO) temperature from 1.00 p.m. winter time / 12.00 daylight saving time, respectively from 6.00 p.m. winter time / 5 p.m. daylight saving time of day D.

5.3. The information provided by the DO for the allocation of the NU forecasted consumption.

The DO shall notify the TSO of the forecasted consumption share of the non-daily metered customers' of each NU in respect of each MS/Ring.

The TSO shall determine the consumption forecasted in relation with each NU, for day D, by using the values of the shares notified by the DO by 12.30 on day D-1.

If the DO partially communicated or failed to communicate the above-mentioned information, the forecasted consumption will be equally allocated to the NUs having customers in the DS related to the respective MS/Ring. The NU shall be notified in this respect.

5.4. In order to improve / re-assess the forecast template and the calculation of the monthly shares, the DO shall monthly notify the TSO, by 12.30 on the last day of the month, of the daily amount related to the non-daily metered customers for the month in progress in respect of each MS/Ring.

Means of communication and deadlines

Art. 6

The information between the TSO and the other participants in the forecast preparation shall be exchanged subject to the following conditions:

- 6.1.** The communication of the information necessary for the forecast calculation processes shall be ensured by introducing data in the TSO's IT platform as well as by automatic exchange of information in XML format.
- 6.2.** Within maximum 3 months from the methodology endorsement, the TSO shall make available the information exchange technical specification to the stakeholders.
- 6.3.** The TSO maintains and develops the IT system, the user screen for taking over the information required for the forecast calculation processes. All information the TSO undertakes to provide to its partners under this methodology shall be provided by means of the reports published in the TSO's IT platform.
- 6.4.** The automatic exchange of XML messages.
- 6.5.** The TSO develops web Service interfaces for taking over the information necessary for the forecast calculation. The access to the interfaces by the partners shall be secured, by means of the digital certificate based authentication.
- 6.6.** The NU shall be provided with all the necessary information by the TSO by accessing SOAP type or other TSO agreed types of web Service interfaces in the partners' systems. The access shall be secured.
- 6.7.** The delivery of information to and from the TSO shall be ensured by using the XML messages prepared by the TSO. The TSO shall make available the XML message exchange technical specification to the stakeholders.
- 6.8.** The maintenance services of the TSO IT system shall be notified to the partners at least 24 hours in advance. The TSO IT system incidents shall be notified to the partners as soon as they have been noticed.

Implementation Schedule

Art. 7 This methodology shall be implemented by the following milestones:

- 7.1. Procurement of implementation services by 31 August 2021.
- 7.2. Implementation and tests at the DO by 15 November 2021.
- 7.3. Implementation and final tests by 30 November 2021.
- 7.4. Start up by 1 December 2021.