Immediate monitoring of injections and offtakes via near-real-time measurement data

Elia provides non-validated near-real-time measurement data so that its customers can track changes in injection and offtake levels more quickly. Elia customers (ARPs and grid users) can access these data just a few minutes after the measurements are taken. With this service, ARPs can react more quickly when the balance of their perimeter is under threat. Grid users can use these data as a tool to more quickly adjust offtakes and injections. These data are easily accessible via the Elia website.

I. Non-validated near-real-time measurement data: principles

I.1. Data available within minutes for immediate monitoring

Elia provides its customers with near-real-time measurement data. These data are linked to injections and offtakes of electricity by a customer at one point on the Elia grid. The key feature of these data is that they are provided just a few minutes after the measurements are taken. By way of comparison, the quarter-hourly values made available to customers via load curves (see the sheet "Quarter-hourly data: a way of checking invoicing and offtake profiles") are provided on a D+1 basis, i.e. one day after the metering takes place, or on an M+1 basis, i.e. one month after metering. By providing data in near-real-time, Elia's customers can react almost immediately to a problematic situation, such as imbalances.

I.2 Integrated quarter-hourly data

Elia provides customers with near-real-time measurement data on a quarter-hourly basis. This is the average of injections and offtakes, measured over a 15-minute period. This average is obtained by integrating all measurements taken in real time during that 15-minute period. Before providing them to its customers, Elia collects these values via remote measurement devices installed on the grid point for which measurements are carried out. These data can also be linked to active and reactive power.

I.3 Non-validated measurements

The very short period of time within which the measured values are made available to Elia customers means that these values are not validated. If, due to a technical problem, it proves impossible to carry out the near-real-time measurement, these data will be lost for good. Customers who also receive monthly load curves will receive complete and validated information on offtake and production levels on an M+1 basis.

The accuracy of the measurements taken via remote measurement is a bit less than the accuracy of load curves, because these are data that come from measuring equipment, not from metering. The error percentage for these near-real-time measurements is within a band of 2%.

I.4 Measurement data that are as easy to read as they are to use
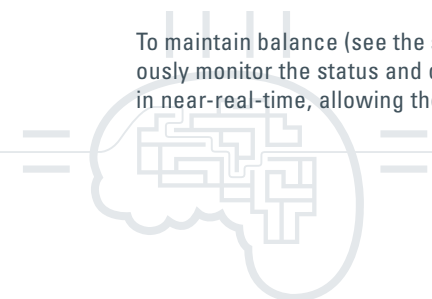
Elia makes these near-real-time data available to customers via an extranet to ensure maximum readability. The data are presented in the form of a table of 100 values that together comprise the quarter-hourly averages for the current day; this table comprises no more than 25 hours. In the table, those quarter-hours that are not yet completed or for which remote measurement failed are represented by the value 0(I). These data are provided in CSV or XML format in a file that can be processed or easily integrated into the customer's computer system. This format is the same as the one used for making load curves available.

II. Benefits of non-validated near-real-time measurement data

Thanks to near-real-time metering, Elia customers have accurate quarter-hourly data showing them their level of electricity offtakes and injections, very shortly after the measurement was taken. The rapid provision of data is especially useful for ARPs and grid users.

II.1 Benefits of near-real-time data for ARPs

To maintain balance (see the sheet "The balancing mechanism: ensuring the balance of the Elia control area"), ARPs must continuously monitor the status and development of their perimeter. With near-real-time measurements, ARPs can perform such controls in near-real-time, allowing them to respond quickly in case of imbalance.

This makes near-real-time data especially useful for ARPs. Indeed, ARPs can have access to first-hand data enabling them to better understand real-time actions and their impact. Special attention is required in cases where ARPs or grid users have signed an ancillary services contract with Elia (CIPU, interruptible customer, etc.). If these services are applicable for the measured points, then the imbalance calculation can be affected, which will not be visible in near-real-time measurements.

II.2 Benefits of near-real-time data for grid users

There are times when grid users need to have rapid access to their offtake or injection data for various reasons. In this respect, the provision of near-real-time measurements offers grid users an ideal solution, specifically when they do not have the technical facilities needed to decrypt real-time pulses (see the product sheet "Pulses for monitoring consumption and production data in real time").

More generally, this service provided by Elia offers all users other benefits:

- provision of data over the Internet via a user-friendly interface, making it easier to read the data;
- provision of data in CSV format (convertible into Excel) and XML format, meaning that they can easily be integrated into the customer's system.

III. How to access near-real-time measurements

Any Elia customers wishing to have near-real-time measurement data can contact their key account manager, who will provide them with all relevant information on the service. Customers must then sign a metering service contract. Once the contract has been signed, Elia provides customers with access codes enabling them to view the measurement data on the Elia website. The rates for this service can be found at www.elia.be.

IV. Legal and contractual basis

Near-real-time measurement data can be provided once a metering service contract has been signed.

To ensure confidentiality, the following precautions are taken:

- if the data to be provided to the near-real-time customer come from measuring equipment belonging to a grid user, then the customer must provide a data provision authorisation signed by the grid user;
- near-real-time data must be provided in accordance with the Grid Codes and the regulated contracts signed between Elia and its customers.

Non-validated near-real-time measurement data in 5 key points

- Elia provides its customers with quarter-hourly data just a few minutes after the remote measurements have been taken. These near-real-time measurements are not validated.

- These data allow customers to monitor their offtake and injection levels in near-real-time.

- Since the data are made available so quickly, ARPs are able to respond nearly instantaneously when the balance of their perimeter is under threat. By the same token, grid users can more closely track injections and offtakes.

- The data are provided in the form of tables listing the quarter-hourly values for the current day.

- For maximum user friendliness, the data provided in near real time are accessible via an extranet as computer files (CSV and XML format) that Elia's customers can easily read and process.

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