
Evaluation report

XBID NL-BE

Reporting period: 17th of February 2011 – 1st of July 2012

October 1, 2012

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Introduction

The Dutch regulator NMa has formally requested TenneT on the 16th of August 2012 to evaluate the implicit intraday allocation mechanism on the Belgian – Dutch border. With this request, the NMa uses an option which has been included in the approval decision of the Grid Code change with regards to the introduction of an implicit intraday allocation mechanism on the Belgian – Dutch border.

The following information has been requested:

1. Inventory of the outages in the period between 17 February 2011 and 1 July 2012, and mentioning:
 - The exact cause of the outage and who was responsible for the outage
 - The duration of each outage
 - How the outage has been solved
2. Hours of outage because of maintenance in the above-mentioned period (regular and extraordinary)
3. Operational changes and/or improvements that have been implemented in this period or foreseen in the near future

This report summarizes the results of the inventory of the outages and an overview of the operational and technological changes and improvements which have been or will be implemented to improve the performance of the implicit capacity allocation. The detailed inventory is provided to the NMa in a separate document.

History

Until February 2011 APX-ENDEX and Belpex operated local intraday markets in respectively the Netherlands and Belgium. Starting from 2009 up to February 2011 Elia and TenneT operated an “improved” explicit intraday pro rata capacity allocation system on the Belgian – Dutch border, which had been tolerated by the respective regulators.

In April 2010 APX-ENDEX, Belpex, Elia and TenneT agreed to examine the possibilities to cooperate on the design, implementation and eventually operation of a cross border intraday market coupling (XBID BE-NL). Taking into account the target model, i.e. moving towards an integrated intraday solution for the European market with implicit cross-border capacity allocation, the parties decided to implement an early interim solution.

Starting from May 2010 the parties designed and developed the implicit intraday cross border mechanism in cooperation with Nord Pool Spot (NPS), the operator of the intraday trading platform "Elbas" which was already in use in the Nordic Area. The mechanism aims for continuous transnational trading. Procedures and systems have been developed to support the process.

Starting from the 17th of February 2011 the parties operate the implicit intraday cross border allocation mechanism using Elbas as trading platform, providing access to the Belgian and Dutch local markets as well as the shared cross border market.

On 15th March 2012 the Elbas solution was extended to include NorNed, thereby linking the Dutch, Belgian and Nordic intraday markets.

High level business process (initial design)

This section contains a description of the business process that was initially implemented. Later some subsequent changes and improvements, that have taken place, are described.

Before the intraday cross border capacity allocation platform can be opened for the next delivery day, both TSOs align the capacity which will be available on the trading platform, based on the Net Transfer Capacity and the already allocated capacity from long term and day ahead trades.

After opening of the cross-border intraday market, market parties are able to conclude cross-border trades up to 1h30 before start of the odd delivery hours and 2h30 before start of the even delivery hours.

After trades have been concluded, parties have to nominate:

- Dutch market parties have to nominate these trades at the latest 1h00 before the delivery hour at TenneT as trade for the Dutch internal market with APX CCP as counter party. At the latest 1h00 before the delivery hour all changed nominations have to be consistent and approved by TenneT.
- Belgian market parties have to nominate these trades at the latest on the day after delivery at Elia as trade for the Belgian internal market with Belpex as counter party.
- APX CCP and Belpex act as intermediate and nominate the corresponding change in their local markets with local market parties and APX XB shipper (in case of cross-border trades) as counter parties.
- APX XB shipper nominates the change in the cross border flow which results from the concluded cross-border trades during the last gate (two hours) towards

both TSOs as well as the change in the flow with APX CCP towards TenneT and the change in the flow with Belpex towards Elia.

The figure below shows the nominated flows for each market party and the shipper.

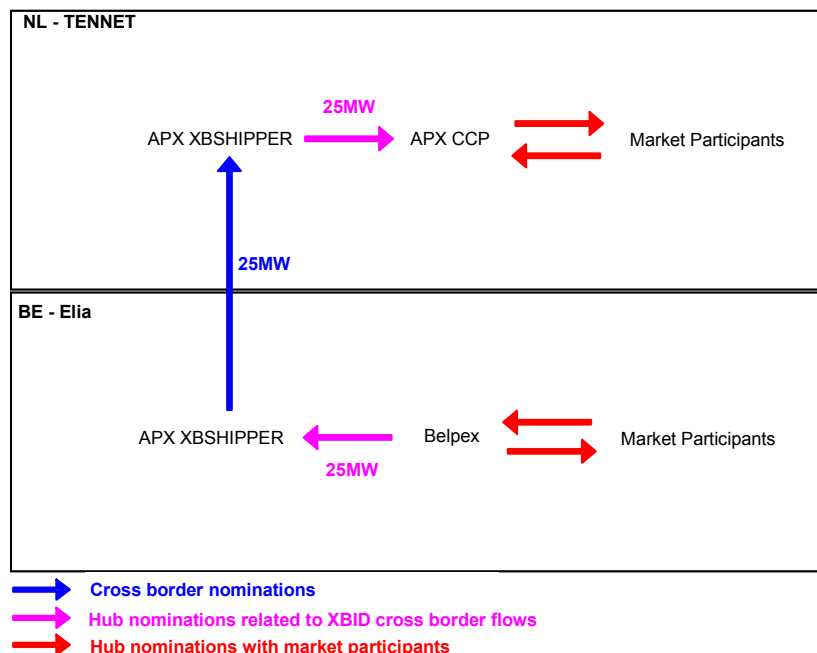


Figure 1 Nominations resulting from concluded cross border trades

After every gate (two hours) both TSOs match the cross border nominations which have been concluded in the past two hours. The cross border nominations will be aligned and in case of a mismatch APX XB shipper will have to modify its cross border nominations for the gate which already has been closed. The aligned cross border nominations are used by the TSOs to maintain the balance in their grids during the hour of delivery.

Management process

In April 2010 APX-ENDEX, Belpex, Elia and TenneT agreed to set up a Steering Committee (SC) to ensure the smooth and the efficient performance of the operational phase of the implicit intraday allocation mechanism on the Belgian – Dutch border.

The Steering Committee, amongst others, monitors and takes decisions on or regarding to:

- Incidents

- Change requests
- Identified risks, if any and assessment of these risks.

Decisions of the SC are binding to the Parties and are taken unanimously.

During the XBID BE-NL Steering Committee of the 18th of March 2011 it has been decided to set-up an Operational Committee to review the occurred incidents and look into future procedures and systems modifications. The Operational Committee started its work at the 12th of May 2011.

APX-ENDEX, Belpex, Elia and TenneT participate in the Operational Committee. NPS, the technical operator of the trading system Elbas, is not represented in the Operational Committee. Any issues regarding the Elbas system will be discussed with NPS by APX-ENDEX.

The Operational Committee is responsible:

- To review the occurred incidents that happened at each Party. These incidents comprise all issues that impacted local or common systems and/or normal procedures between the Parties and which impacted (or not) the market participants
- To propose actions to mitigate the incidents from happening again in the future
- To propose modifications to the procedures and/or backup procedures
- To coordinate between the Parties change requests to the local or common systems
- To coordinate between the Parties in case of planned outages of software/systems which might impact the normal operation of the XBID Market Coupling and/or might impact the market participants
- To put in place a monthly reporting of the operations of the XBID Market Coupling and discuss the particularities

The Operational Committee organizes telephone conferences on a regular basis (every two weeks) together with additional telephone conferences to handle any specific incidents or requests from the Steering Committee.

The Operational Committee also monitors whether or not all parties operate the process as designed. Awaiting final solutions, parties have agreed to introduce some temporary procedures to prevent reoccurrence of some incidents. Also an ongoing review of procedures between APX-ENDEX, Belpex, Elia and TenneT is one of the tasks of the Operational Committee.

The Operational Committee maintains an incident log to track the incidents. Incidents have been categorized based on the parties which are affected by the incidents. The incident log is used to:

- Resolve incidents and handle all impact
- Identify and mitigate risks of re-occurrence of the incidents
- Investigate changes for improvements
- Internally report on the availability of the intraday allocation mechanism.

The Operational Committee also maintains a registration of outages, planned and unplanned.

The registration of planned outages provides parties:

- the possibility to investigate for any impact which has not been foreseen by the party which planned the outage,
- the opportunity to align maintenance
- the time to inform markets
- a view on the possible cause of incidents following the outage
- the possibility to report internally on the expected unavailability of the intraday allocation mechanism.

The registration of unplanned outages provides parties:

- a view on the possible cause of incidents following the outage
- the possibility to report internally on the unexpected unavailability of the intraday allocation mechanism.

Transaction volumes

Together with the introduction of the implicit intraday allocation mechanism on the Belgian – Dutch border, the internal Belgian and Dutch intraday allocation mechanisms have been implemented in the Elbas system.

On a monthly bases, APX-ENDEX and Belpex report the number and total volumes towards the Steering Committee.

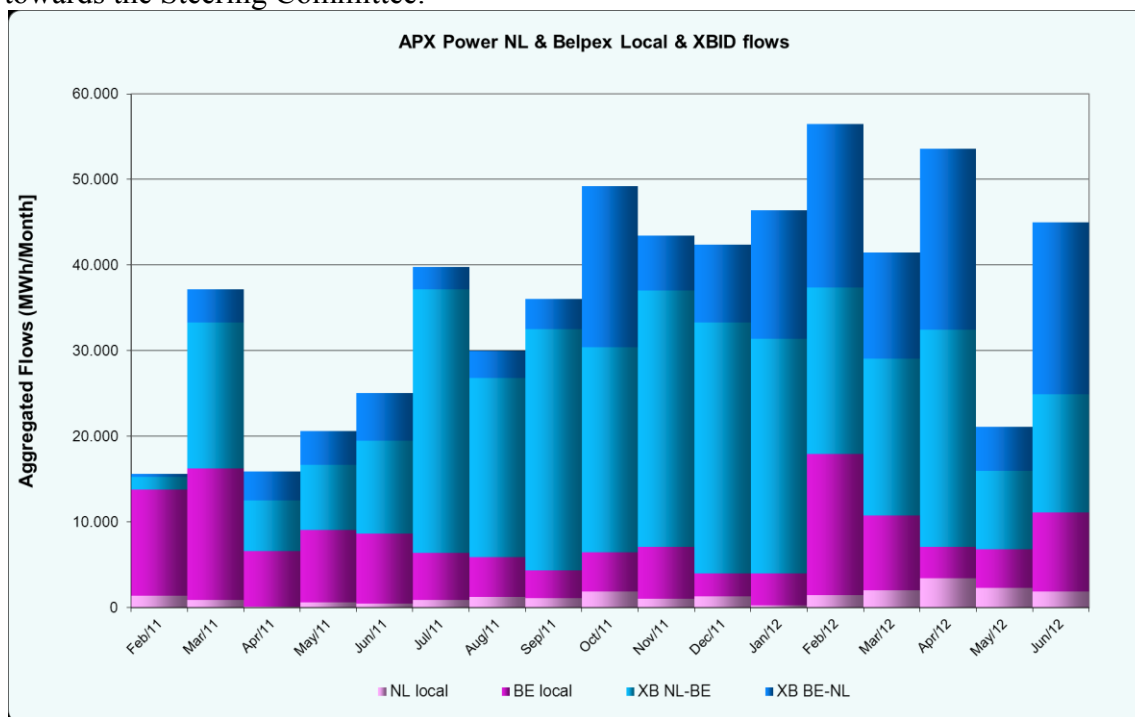


Figure 2 Aggregated monthly intraday volumes in local markets and cross border

The graph shows totals per month of:

- local Dutch volumes = between two NL counterparties (no capacity usage)
- local Belgian volumes = between two BE counterparties (no capacity usage)
- cross-border flows NL-BE = deals between party in NL (sell) and party in BE (buy)
- cross-border flows BE-NL = deals between party in BE (sell) and party in NL (buy)

Operational performance

This report on the operational performance is based on the registration of three types of non-availabilities of the BE-NL intraday allocation mechanism.

1. Planned outages

One or more of the parties has, at least a few days ahead, announced the closing of the Elbas trading platform due to unavailability of one or more of the systems

- which are involved in the process. Market parties are able to anticipate the non-availability of the intraday cross border allocation mechanism.
2. Unplanned outages
One or more of the parties has announced the closing of the Elbas trading platform due to unavailability of one or more of the systems which are involved in the process, but the notice was not given sufficiently in advance.
 3. Incidents
One or more of the parties faced an operational problem which required the closing of the Elbas trading platform.

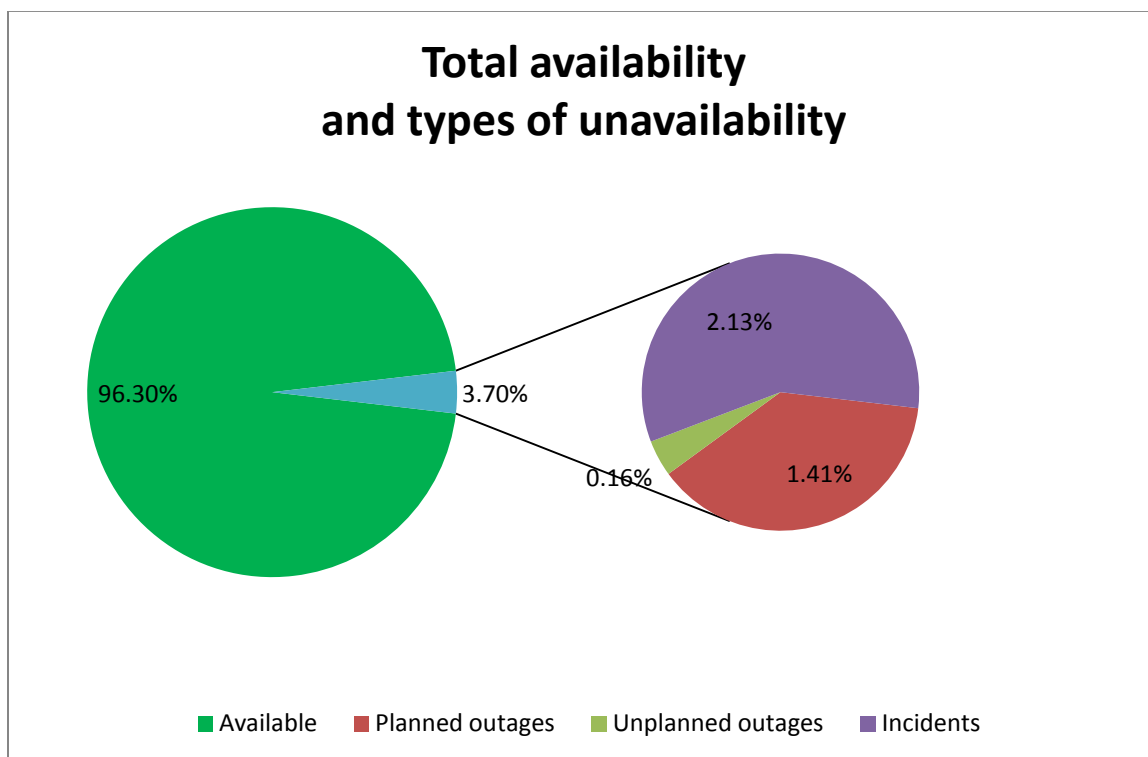


Figure 3 Total unavailability of the intraday cross border allocation mechanism specified per type of non-availability

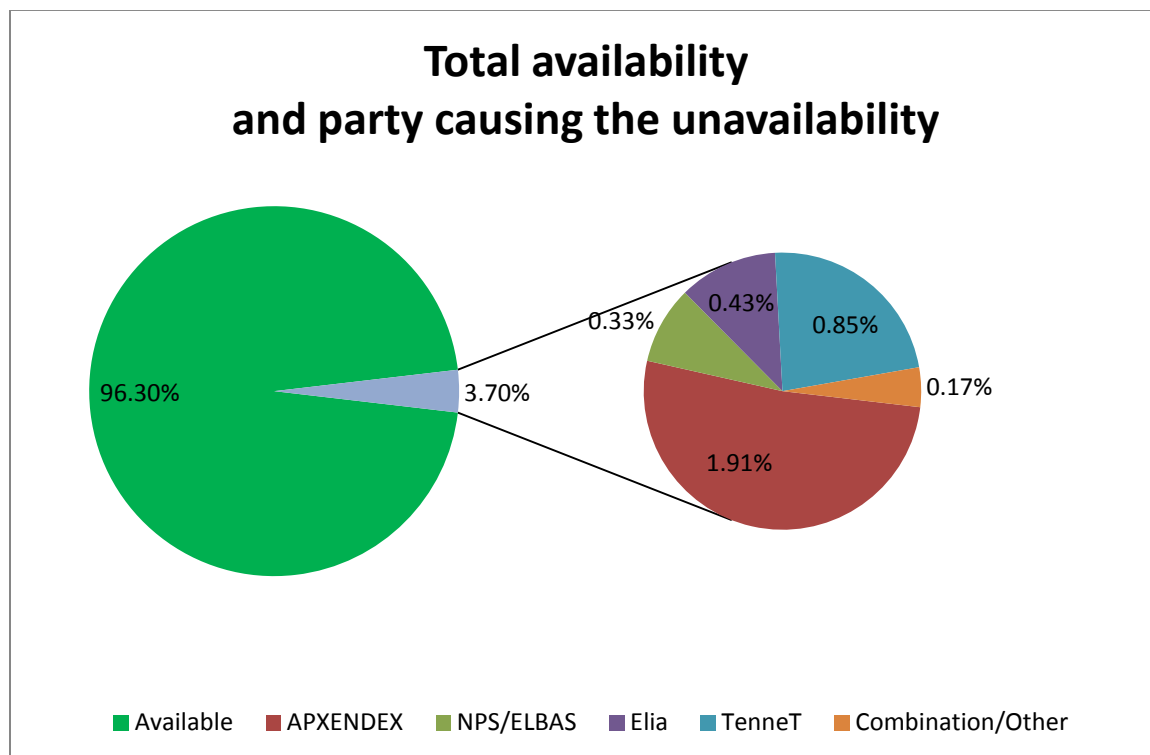


Figure 4 Total unavailability of the intraday cross border allocation mechanism specified per party

The system (un)availability has been measured through the closing and re-opening times of the Elbas platform for all planned outages, unplanned outages and incidents and is expressed in hours.

The system unavailability has been specified per party causing the unavailability.

NPS has been added as a separate party because they also have been responsible for non-availability of the XBID BE-NL process, sometimes due to issues on the Elbas system in other market areas.

The category 'Others' has been added for incidents where none of the parties can be taken responsible for an outage or the full duration of the outage:

- One planned outage was needed by TenneT as well as APX-ENDEX to introduce the XBID mechanism on the Norwegian – Dutch border
- One incident has been caused by Elia. Despite the fact that Elia solved the incident within 10 minutes, other parties were not able to cope with the effects of the incident in their own processes.

- One of the incidents has been caused by a market party which created chain inconsistency in the Dutch day-ahead market, which forced closing of the intraday market.

Monthly unavailability

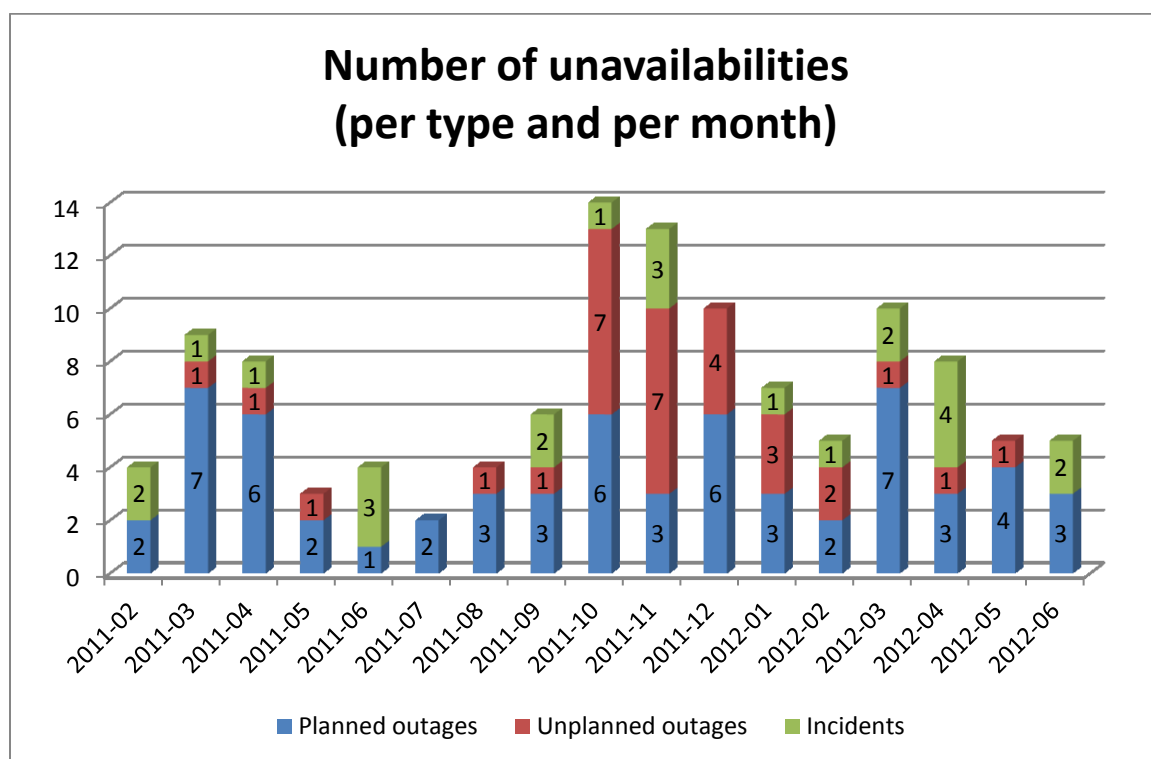


Figure 5 Monthly number of outages per type

The chart above shows the number of planned outages, unplanned outages and incidents per month.

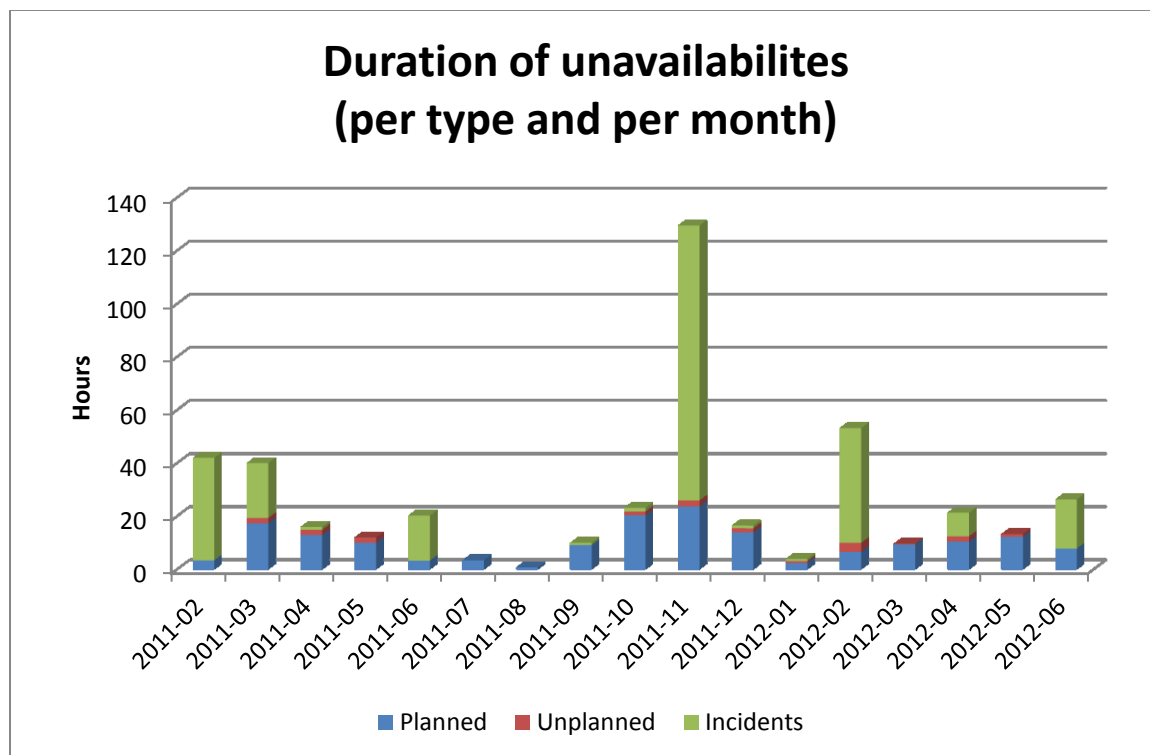


Figure 6 Monthly total duration of outages per type

The chart above shows the number of hours of planned outages, unplanned outages and incidents per month.

Planned and unplanned outages

Period 17 feb2011 - 1 July 2012

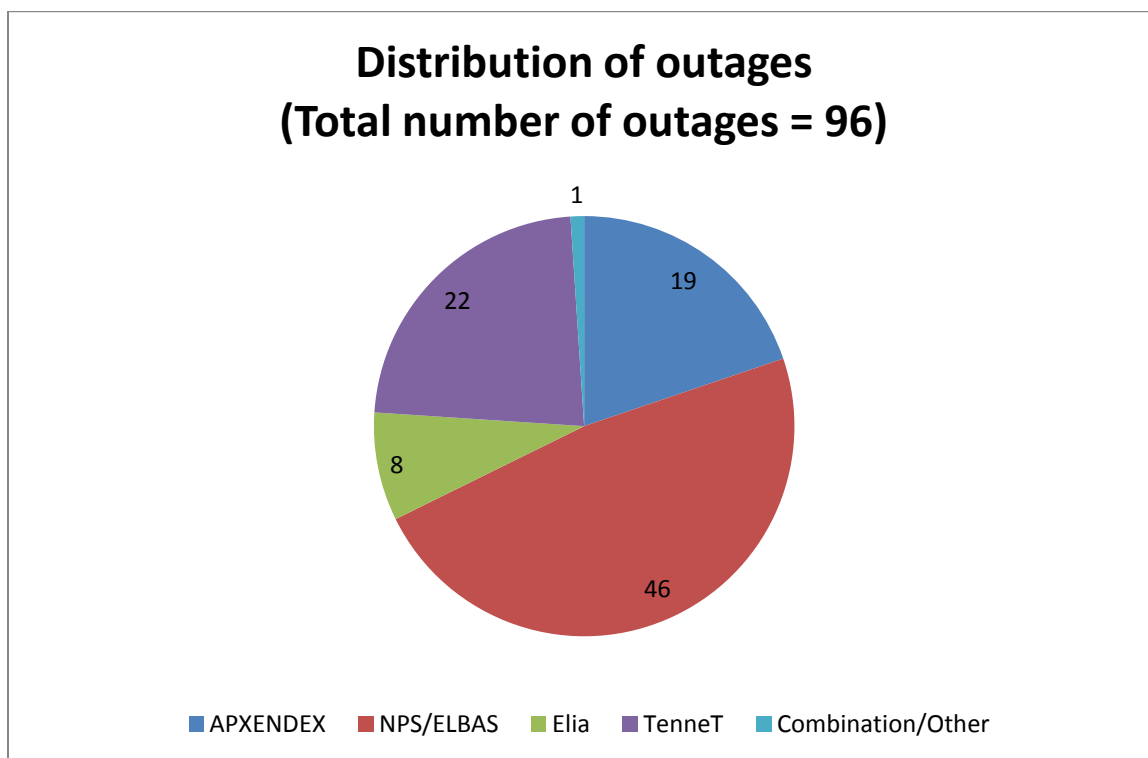


Figure 7 Total number of outages per party

The chart above shows the number of all outages per party, which have been splitted up into planned and unplanned outages per party in the chart below.
Please be aware that the number of outages does not reflect the duration of unavailability of the intraday cross border allocation (see also figure 9).

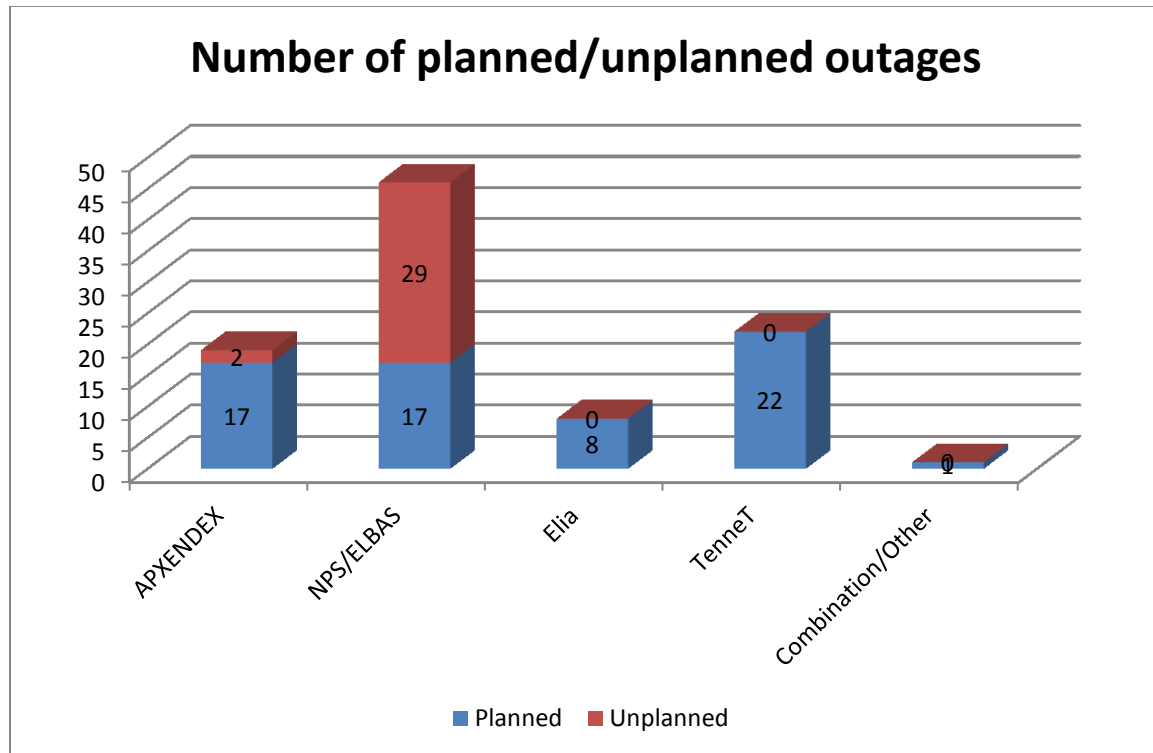


Figure 8 Breakdown of planned and unplanned outages per party

Please be aware that the planned outages should have less impact on the market as parties can better anticipate these outages.

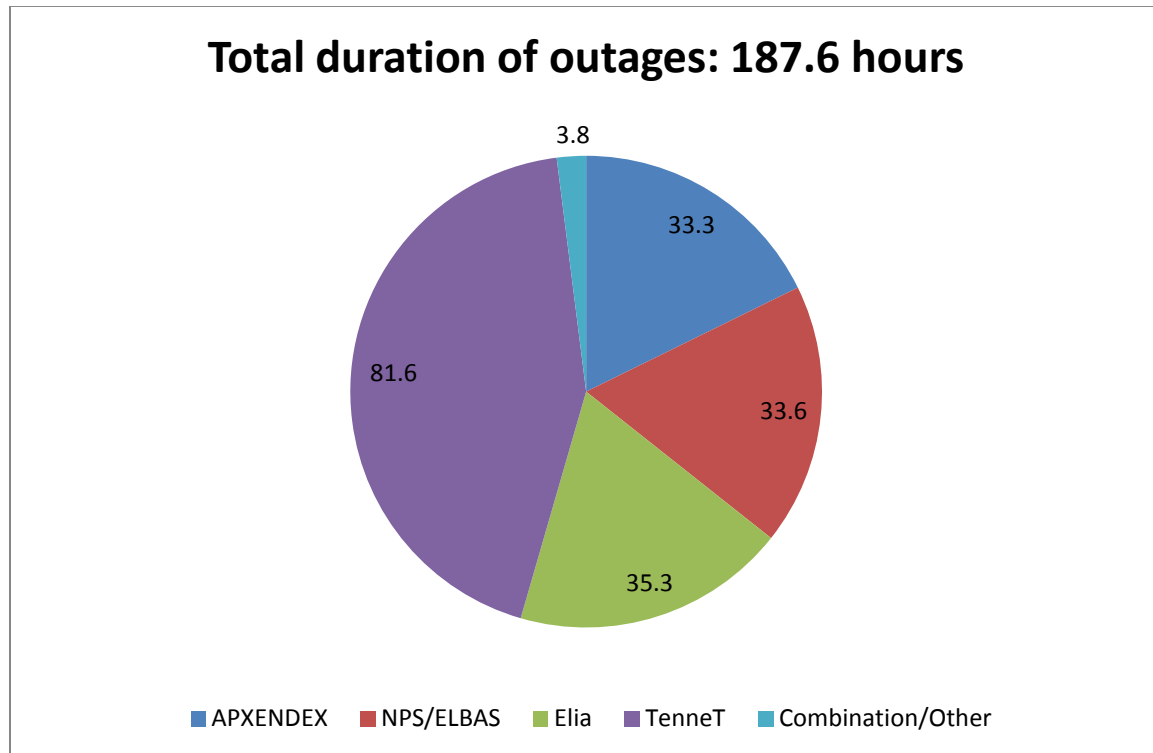


Figure 9 Breakdown of the total duration of outages per party

The chart above shows the duration of all outages per party, which have been splitted up into planned and unplanned outages per party in the chart below.

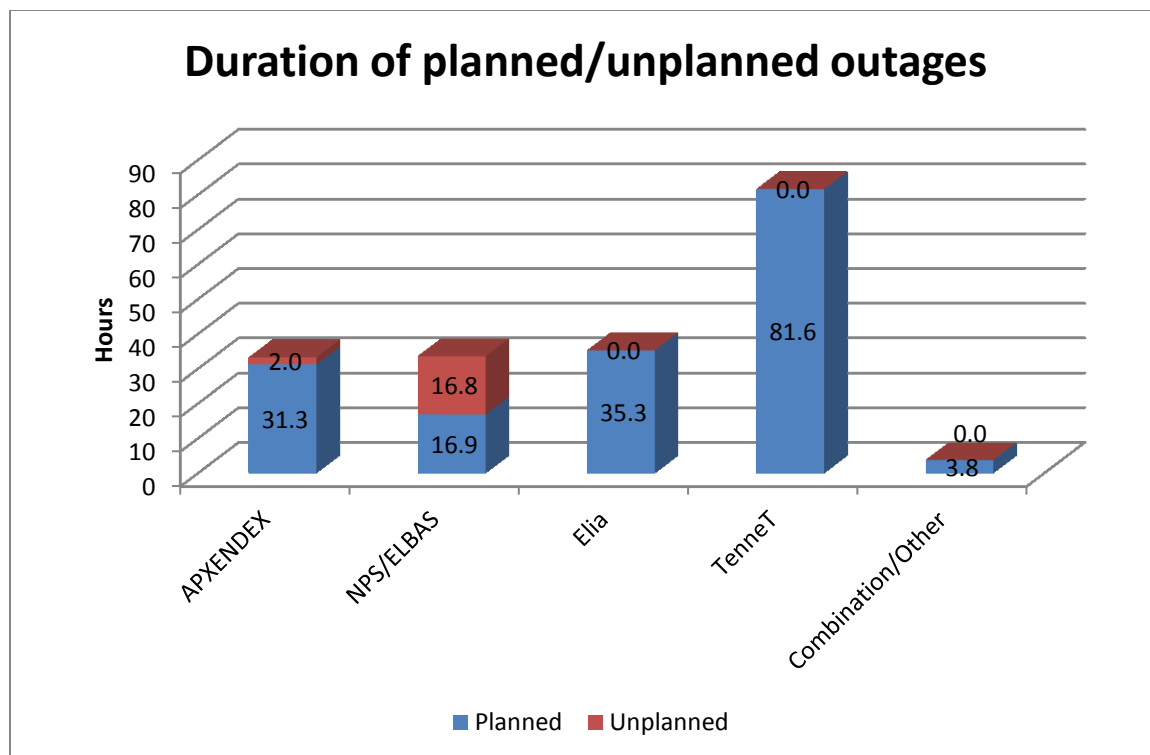


Figure 10 Breakdown of the total duration of outages per party and type of outage

The figures in the graphs above, are the result of the following aspects:

- Planned outages at TenneT and Elia force closing of the Elbas platform up to almost 2 hours ahead of the planned maintenance window as concluded trades have to be nominated by APX-ENDEX and matched by the TSOs. The above figures include these additional hours
 - TenneT approximately 40.75 hours
 - Elia approximately 10.5 hours
- Due to the fact that TenneT and Elia have integrated IT systems (e.g. day ahead, intraday), maintenance on the non-intraday part of the IT systems, leads to an outage of the intraday process as well. Most of the outages are not related to intraday processes.
- The intraday trading process is a 24/7 process. This makes it impossible to implement system updates outside of operational hours, in contradiction to day-ahead processes where maintenance easily can be planned outside of operational hours.

Incidents

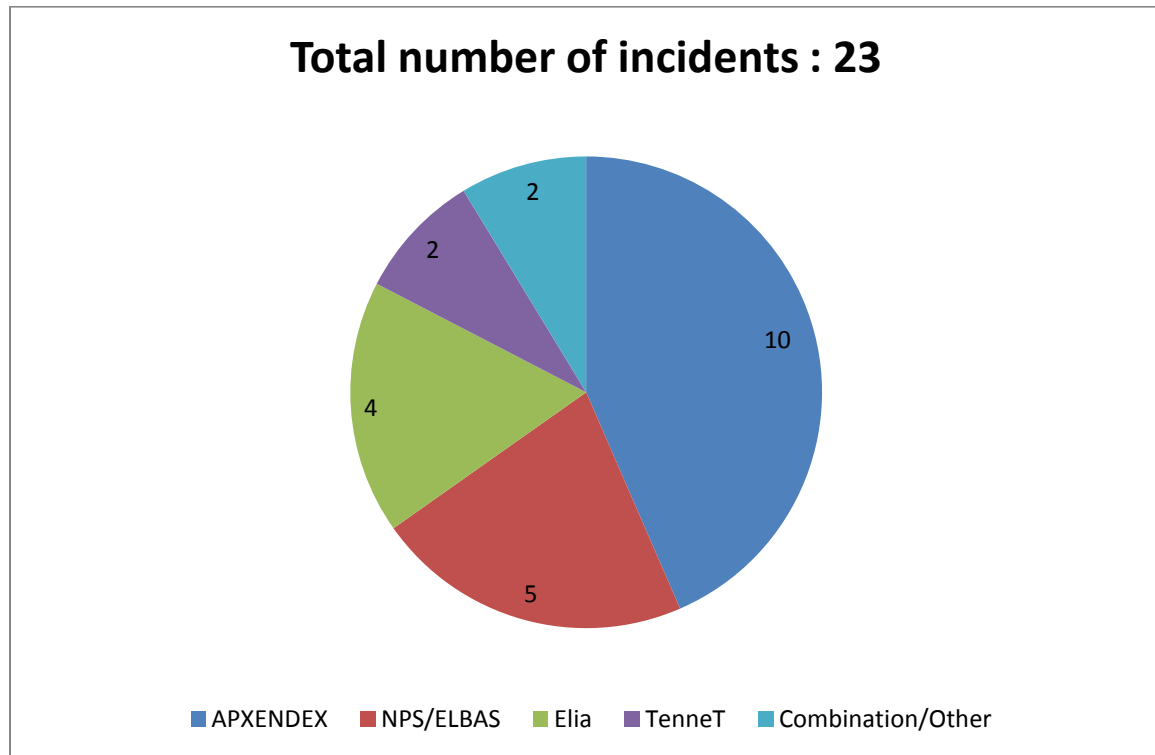


Figure 11 Breakdown of the number of incidents per party

Total duration of incidents : 255.3 hours

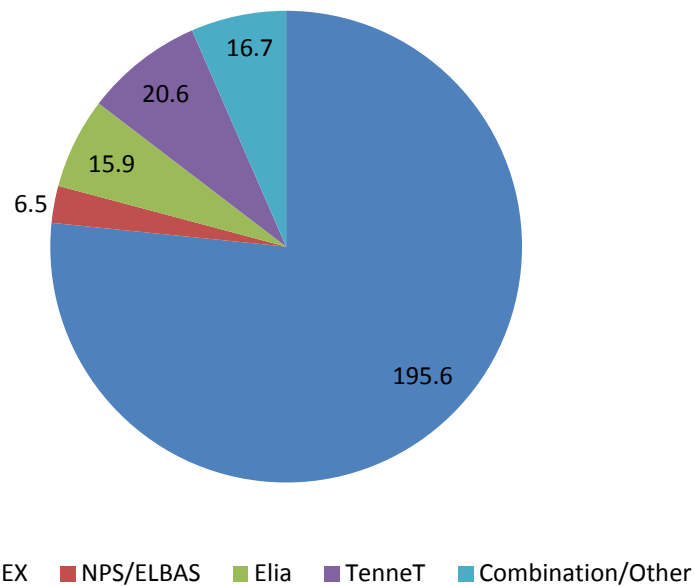


Figure 12 Breakdown of the total duration of incidents per party

The charts above show a large number of outages related to APX-ENDEX. Four major incidents caused the main part (179.75 hours) of the total of 195.6 hours.

Operational changes and/or improvements

Implemented relevant improvements

The following most significant improvements have been implemented in order to make the process more robust and less error-prone, which should lead to higher availability of the intraday cross border capacity allocation mechanism:

- **5th of March 2011**
Change of the Instrument Expiry from 90 minutes prior to start of delivery to 120 minutes prior to start of delivery for delivery hours which start at odd clock hours. This gives the APX-ENDEX operator 60 minutes instead of 30 minutes to resolve inconsistent nominations with Dutch market parties and/or to take trades out of the nominations to prevent imbalance on the APX-ENDEX position.
- **7th of June 2011**
Removal of consistency chain check at TenneT. The consistency chain check required that all changed nominations for the Dutch internal market were consistent with each other one hour before the hour of delivery. If changed nominations were not consistent with each other in time, all changes would be rejected.
Since the removal of the consistency chain check internal trade nominations only have to be consistent between both counterparties and a Dutch market party can no longer block the approval of nominations of parties which are not its counterparty.
- **12th of October 2011**
The Instrument Expiry is reverted from 120 minutes prior to start of delivery to 90 minutes prior to start of delivery for delivery hours which start at odd clock hours. After removal of the chain consistency check at TenneT, the APX-ENDEX operator no longer has to deal with multiple parties which cause inconsistencies. The APX-ENDEX operator only has to cope with a deadline for cross border nomination and inconsistencies of one single counter party in the Dutch market. The extra 30 minutes to nominate were no longer required, and could be given back to the market as extra trade time.
- **14th of February 2012**
Introduction of Ex-post nominations in the Dutch market
 - Nomination deadline for internal trade nominations shifted from one hour before delivery to the day after delivery 10h00 a.m.

- Reduces the risk of unplanned outages since nomination deadlines for local trade legs are no longer critical, i.e. market parties can nominate all trades ex-post, only the cross-border part, which is taken into account by the exchanges, still has to be done before delivery. The approval of cross border nominations submitted by APX-ENDEX cannot be blocked by any other party.
 - Indirect benefit: as of 21/09/2012, instrument expiry on the Dutch intraday market has been changed to 5 minutes prior to start of delivery. Trading on the Dutch local market is possible until 5 minutes before the hour of delivery, as it is the case in Belgium
- **May and June 2012**
Improved incident management procedures. Procedure which describes the steps which have to be taken by the parties have been reviewed and rewritten. Especially the procedures for submitting nominations and handling nomination problems have been rewritten.

Improvements in progress

The following improvements are still in progress or have been planned for the near future.

- Procedural improvements
 - Considering to update procedures following 18 months of operational experience
 - Followed by training of involved staff
- Outages harmonization
 - Try to synchronize the moment when different parties perform their planned outages as much as possible
- Outage communication
 - Improved communication concerning the planned outages
- APX-ENDEX Infrastructure renewal and enhancements
 - Most of Incidents at APX-ENDEX were caused by network, infrastructure or server failures. Consequently, APX-ENDEX has planned technical upgrades its network facilities to extend its resilience by renewing hardware & using the latest technologies. These changes will be implemented during the end of 2012.
- NWE enduring intraday solution, which offers possibilities to
 - Remove the 12 gates principle.
 - Implement a more robust cross border nomination process. TSOs might receive the cross border trade information directly from the implicit allocation platform.
 - Shorten the expiry of cross border trading instrument. Trading on the cross border market could be possible until one hour before the hour of delivery.

- New Elbas releases
 - o In November 2012, several new or improved functionalities for members and operators will be implemented.

Other relevant changes

To make the intraday market more attractive to market parties, several changes have been implemented

- **11th of October 2011**
Change of volume tick size from 1MW to 0.1 MW
- **12th of March 2012**
Extension of the Intraday Cross-border trading mechanism to the Nordic Region and Germany by implicit allocation of the on the Norwegian – Dutch interconnector (NorNed)
- **30th of May 2012**
Creation of an “Elbas Development group” composed by APX-ENDEX and NPS relevant experts; the main tasks of this group is to analyse how the current system can be improved with respect to operational robustness and market functionalities
- **3rd of July 2012**
Elbas performance upgrade
 - o Improved performance (response time) of the Elbas system
 - o Increased trading efficiency