



BritNed Nomination process

Presentation for Nomination procedure

BritNed, November 2018



From BritNed Access rules

According to BritNed Access rules (D.2.22):

- After customers submit valid requests for energy transmissions, the Allocation Platform (Kingdom) ensures all necessary notifications on GB side for balancing and settlement purposes
- On the NL side a notification is made to TenneT TSO B.V. via an Energy Program (E-Program)
- Every part connected to the Dutch grid must send a forecast of his exchange with the grid to TenneT (daily and per 15min. PTU) via the E-Program
- This E-Program sent by a Program Responsible Party (PRP) has to match the nominated capacity in Kingdom
- TSO costs of having to activate reserves and regulating power due to imbalances are charged to causers of those imbalance (respective PRP's)

If E-program sent by BritNed \neq E-program of PRP -> PRP pays imbalance NL price

When to nominate on BritNed ?



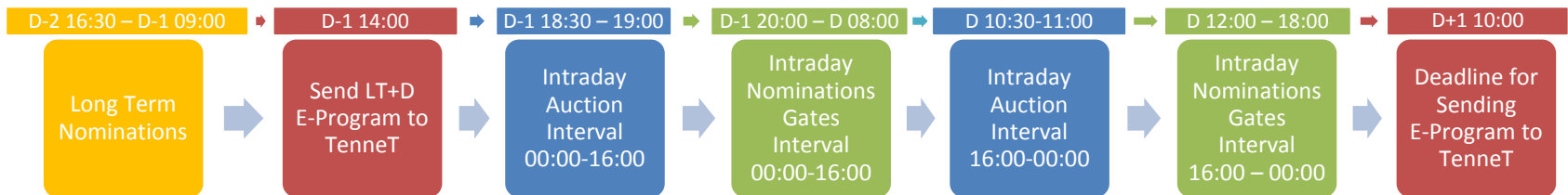
Nomination process description

Long Term Nomination

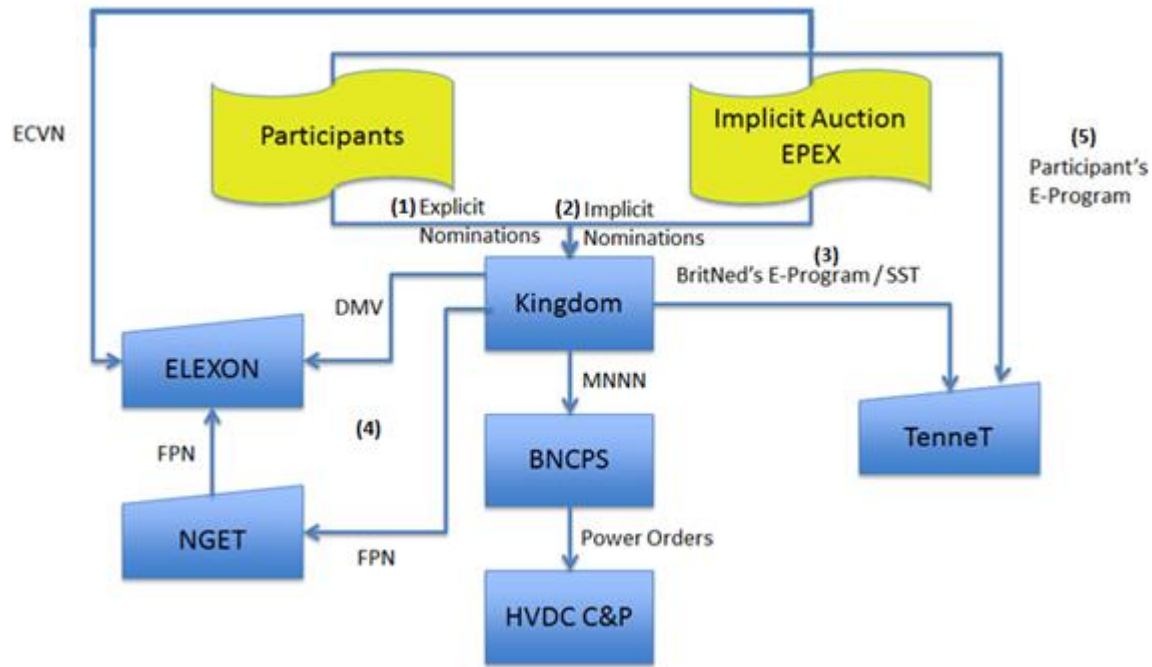
- Customers have the possibility to nominate their allocated transmission rights (ICEs)
 - **Nominations** = 'Confirmation' of what part of the allocated capacity will really be used
- Long Term nomination gate for delivery day D = from D-2 16:30 CE(S)T till D-1 09:30 CE(S)T
- ~ 13:00 **Day-Ahead Nomination files** are sent to both TSOs (Long Term + Daily nominations)

Intraday Auctions

- Not sold and still available capacity after Daily Implicit auctions will be offered in Intraday auctions
- Two Intraday auctions are performed with 3 nomination gates for each auction period (see Slide 6)
- After each Intraday nomination gate the nominations files are sent by BritNed to the TSOs again



Dataflows

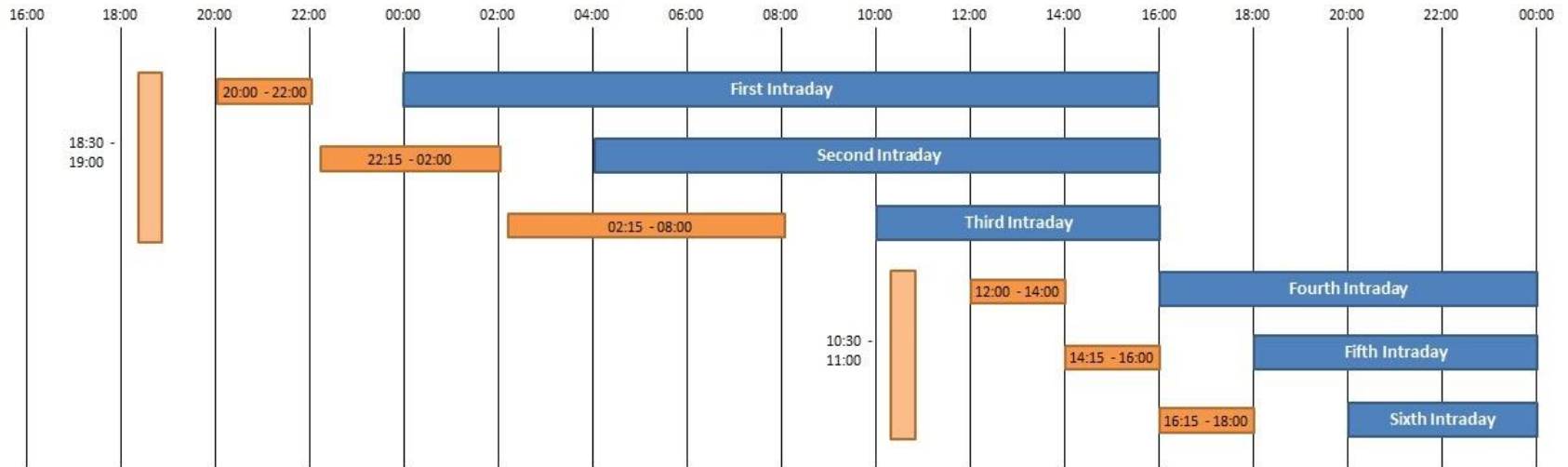





- (1) Entering Explicit Nominations in Kingdom (Nomination Gates CE(S)T for D: Long-term D-2 16:30 – D-1 9:30
6 Intraday Nomination Gates: Slide 6)
- (2) Kingdom receives Implicit nominations from EPEX (D-1 ~13:00 CE(S)T)
- (3) Kingdom provides E-Program to TenneT (D-1 ~ 13:00 CE(S)T for LT and Day-Ahead nominations, 6 times for Intraday)
- (4) All dataflows regarding Nominations are sent out from Kingdom
- (5) Customer sends E-Program to TenneT (Deadlines CE(S)T: D-1 14:00 CE(S)T for Day-Ahead,
D+1 10:00 CE(S)T for Intraday)

- Legend:
- Kingdom – BritNed's trading platform
 - BNCPS - BritNed Control Point System
 - HVDC C&P – HVDC Control & Protection
 - MNNN – Mid-North Sea Netted Nominations
 - E-Program – Energy Program
 - DMV – Deemed Metered Volume
 - FPN – Final Physical Notification
 - ECVN - Energy Contract Volume Notification
 - SST – Single Sided Transaction



Intraday nomination gates



-  Intraday Auction
-  Nomination gates
-  Intraday Interval

How to nominate on BritNed ?



Kingdom Nominations entering screen

In Kingdom there are 3 ways to enter and edit Nominations:

- Enter Nominations Screen (Menu -> Nominations Tab -> Enter)
- Upload (XML) Screen
(Menu -> Tab Nominations -> Click on orange triangle to show menu with Upload(XML) functionality)

The screenshot shows the Kingdom Nominations interface. The top navigation bar includes 'Long Term Auctions', 'Daily Auctions', 'Intraday Auctions', 'Entitlements', 'Secondary Market', 'Nominations', and 'Finance'. The 'Nominations' tab is active. Below the navigation bar, there are three rows of 'Opened' status indicators for different nomination types and directions. The main content area shows the 'Current State' section with dropdown menus for 'Border Direction' (set to NL-GB), 'Nomination Type' (set to Daily), and 'Trader'. A 'Show data' button is visible. To the right, a menu is open showing 'Upload (XML)' and 'Download (XML)' options, with 'Upload (XML)' highlighted.

- Generate Default Nominations
(Menu -> Nominations Tab -> Default -> Choose what type of nominations to be nominated automatically by selecting Yes or No per direction and Nomination Type)

The screenshot shows the Kingdom Nominations interface with the 'Default' option selected in the top navigation bar. The 'Current State' section shows 'Nominator' as 'BritNed' and 'Border' as 'BritNed'. Below this, there is a table for configuring default nominations. The table has three columns: 'Border Direction', 'Nomination Type', and 'Default Nomination'. The 'Default Nomination' column contains dropdown menus with 'Yes' or 'No' selected. A 'Save' button is located at the bottom of the table.

Border Direction	Nomination Type	Default Nomination
GB-NL	Daily	Yes
GB-NL	Long Term	No
GB-NL	Intraday	No
NL-GB	Daily	Yes
NL-GB	Long Term	No
NL-GB	Intraday	No

E-Program

The Energy Program (E-Program) High level File Structure

- Provides BritNed's trade position with other Program Responsible Parties (PRP) in the Dutch market, and the netted import or export position of BritNed at the Dutch reference point.

In the file these sections are respectively called PRP segment and Import Export Transactions (IET) segment

- E-Program nomination volumes are stated in 15 minute resolution in kWh.

Purpose of E-Program

- To inform both TSOs about BritNed nomination positions
- For Settlement purposes



E-Program values in Kingdom

Aggregated Nominations Overview (A.N.O)

Values for customer which needs to be used in his E-Program are available in Kingdom

- Navigation to overview: Nominations-> Aggregated nominations overview. It is needed to select Transformation of Nomination at NL end (E-Program) from the drop down selection box.

Information available on overview:

- Mid-North sea: nominations per border direction (kWh)
- Netted nominations after application of loss factor (kWh)
- **Customer E-Program values = values to be used in the E-Program submitted by BritNed's customers to TenneT TSO**
- BritNed E-Program values – values to be used in BritNed's E-Program sent from Kingdom to TenneT TSO. Each value has the opposite sign in comparison to the Customer E-Program values

Nominations overview NL end

[Long Term Auctions](#)
[Daily Auctions](#)
[Intraday Auctions](#)
[Entitlements](#)
[Secondary Market](#)
[Nominations](#)
[Finance](#)

Opened DD:26-10-2018 ID GB-NL CD:26-10-2018 1...
1 HOURS 1 MINUTES 12 SECONDS
Overview
Aggregated Overview
Curtailment Overview
DMVs
UIOLI / UIOSI
Ex-post Curtailment

Current State
Nominations
Settlement
Ex-post

Date: 21.10.2018
 Border: BritNed
 Nomination Type: Balancing energy, Daily, EP - Emergency Assistance, EP - Intertipping, EP - Push-button
 Transformation: Nominations at NL end (E-Program)
[Show data](#)

Date: 21-10-2018
 Border: BritNed
 Transformation: Nominations at NL end (E-Program)

Time (CET/CEST)	Mid-North Sea Nominations [kWh]		Netted Nominations [kWh]		Customer E-Program Values [kWh]	BritNed E-Program Values [kWh]
	GB-NL	NL-GB	Volume (NL-end)	Direction		
00:00-00:15	37,000	65,750	29,175	NL-GB	-29,175	29,175
00:15-00:30	37,000	65,750	29,175	NL-GB	-29,175	29,175
00:30-00:45	37,000	65,750	29,175	NL-GB	-29,175	29,175
00:45-01:00	37,000	65,750	29,175	NL-GB	-29,175	29,175
01:00-01:15	57,750	65,750	8,100	NL-GB	-8,100	8,100
01:15-01:30	57,750	65,750	8,100	NL-GB	-8,100	8,100
01:30-01:45	57,750	65,750	8,100	NL-GB	-8,100	8,100
01:45-02:00	57,750	65,750	8,100	NL-GB	-8,100	8,100
02:00-02:15	70,250	65,750	4,425	GB-NL	4,425	-4,425
02:15-02:30	70,250	65,750	4,425	GB-NL	4,425	-4,425
02:30-02:45	70,250	65,750	4,425	GB-NL	4,425	-4,425
02:45-03:00	70,250	65,750	4,425	GB-NL	4,425	-4,425
03:00-03:15	70,250	65,750	4,425	GB-NL	4,425	-4,425
03:15-03:30	70,250	65,750	4,425	GB-NL	4,425	-4,425
03:30-03:45	70,250	65,750	4,425	GB-NL	4,425	-4,425
03:45-04:00	70,250	65,750	4,425	GB-NL	4,425	-4,425



Nominations overview GB end

[Long Term Auctions](#)
[Daily Auctions](#)
[Intraday Auctions](#)
[Entitlements](#)
[Secondary Market](#)
[Nominations](#)
[Finance](#)

Opened DD:26-10-2018 ID GB-NL CD:26-10-2018 1...
0 Hours 32 Minutes 17 Seconds
Overview
Aggregated Overview
Curtailment Overview
DMVs
UIOLI / UIOSI
Ex-post Curtailment

Current State
Nominations
Settlement
Ex-post

Date: 21.10.2018
 Border: BritNed
 Nomination Type: Balancing energy, Daily, EP - Emergency Assistance, EP - Intertipping, EP - Push-button
 Transformation: Nominations at GB end
 Show data

Date: 21-10-2018
 Border: BritNed
 Transformation: Nominations at GB end

Time (CET/CEST)	Mid-North Sea Nominations [MWh]		Netted Nominations [MWh]	
	GB-NL	NL-GB	Volume (GB-end)	Direction
00:00-00:30	74.000	131.500	56.638	NL-GB
00:30-01:00	74.000	131.500	56.638	NL-GB
01:00-01:30	115.500	131.500	15.760	NL-GB
01:30-02:00	115.500	131.500	15.760	NL-GB
02:00-02:30	140.500	131.500	9.135	GB-NL
02:30-03:00	140.500	131.500	9.135	GB-NL
03:00-03:30	140.500	131.500	9.135	GB-NL
03:30-04:00	140.500	131.500	9.135	GB-NL
04:00-04:30	150.000	131.500	18.778	GB-NL
04:30-05:00	150.000	131.500	18.778	GB-NL
05:00-05:30	135.500	131.500	4.060	GB-NL
05:30-06:00	135.500	131.500	4.060	GB-NL
06:00-06:30	135.500	131.500	4.060	GB-NL
06:30-07:00	135.500	131.500	4.060	GB-NL
07:00-07:30	135.500	131.500	4.060	GB-NL
07:30-08:00	135.500	131.500	4.060	GB-NL
08:00-08:30	123.000	131.500	8.373	NL-GB



E-Program values calculation

For NL-GB Direction :

- For netted nominations from NL to GB, $1+1/2$ DC loss factor is used as coefficient to calculate the value at the Dutch reference point. As this is export from NL to GB, the polarity in the BritNed E-Program is positive.
- The sign in the customer E-Program should therefore be negative for NL-GB.
- Original E-Program values = (MNS Netted Nominated capacity NL-GB (in MW) * 1.015 * 1000)/4. This is then truncated (rounded down) to kWh (for each 15 minute period within an hour), ending on 00, 25, 50 or 75 . Example:

				Original values	00
				without truncation	25
-61550	kWh	<=	-61562.5	kWh	50
63425	kWh	<=	63437.5	kWh	75

For GB-NL Direction:

- For netted nominations from GB to NL, $1-1/2$ DC loss factor is used as coefficient to calculate the value at the Dutch reference point. As this is import from GB to NL, the polarity in the BritNed E-Program is negative.
- Original E-Program values = (MNS Netted Nominated Capacity GB-NL (in MW)*0.985*1000)/4. This is then truncated (rounded down) to end on 00, 25, 50 or 75 per kWh figure for each 15 minute period within an hour - The sign in the customer E-Program should be positive for GB-NL.

How do I know my E-Program is correct ?



E-Program check

TenneT responds to received E-Program by sending CTRL, APERAK and ACK messages.

- An Application Error and Acknowledgement (APERAK) message is send by TenneT as a result of validation on every E-Program send by Customer
 - Two types of validations: Internal and External Consistency check.
- A CONTRL message is only sent in case an EDINE file includes syntax errors.
- An ACK is send by TenneT as technical confirmation of receiving the file.

CONTRL message

Control message (CONTRL) message is sent by TenneT to Customer if a file does not pass the technical format check (syntax),

```
UNA:+.?  
'UNB+UNOC:3+8716867999983:14+8712423022348:14+130508:2032+30508203207565  
'UNH+30508203207565+CONTRL:D:96A:ZZ:EDINEO  
'UCI+APERAK000070+8712423022348:14+8716867999983:14+4+39  
'UNT+3+30508203207565  
'UNZ+1+30508203207565'
```

CONTRL message
error code

CONTRL codes explanation

Error code	Description	Explanation
2	Syntax level or version not supported	Test on UNOC:3
12	Invalid Date	Test on date (e.g. 30-02-2000) in UNB segment
13	Missing	Check on mandatory segments of UNA, UNB, UNH, UNT, UNZ. If any other segments are missing, than message 33 is issued
18	Unspecified error	All other errors
21	Invalid characters	<ul style="list-style-type: none"> - Outside UNOC (e.g. @) - Numeric vs Alphanumeric
22	Invalid service characters	This should always be checked, because there can be new message types
23	Unknown interchange sender	Test on interchange sender
25	Test indicator not supported	At a given point in time the test indicator is to be used per message type and message version. (For example a DELFOR message should at that time should at that moment never be in test mode, but QUOTES message should always be in test mode)
29	Control count does not match	UNT and UNZ have to be checked
33	Invalid occurrence outside message or functional group	The order of the segments is not ok. E.g. one would expect a BGM segment, but isn't one.
39	Data element too long	E.g. a field with a maximum length of numeric 15 is 16 in the message
43	Unknown interchange recipient	Test on interchange recipient

Internal Consistency check

Semantical Check

- APERAK message with code 29 (Accepted with Amendments) is sent by TenneT if a file does pass the business rules, an

```
UNA:+. ? '
UNB+UNOC:3+8716867999983:14+8712423022348:14+140728:1315+1002943396'
UNH+1002943396+APERAK:D:96A:ZZ:EDTNE1'
BGM+12E::9+A_201407281002943396+29'
DTM+137:201407281315:203'
DTM+178:201407281316:203'
DTM+735:2:805'
RFF+AAAN:EP20140729000001'
NAD+SO+8716867999983::9'
NAD+PRC+8712423022348::9'
UNT+9+1002943396'
UNZ+1+1002943396'
```

- APEARAK with code 27 is sent by TenneT, if Internal consistency check is not correct
- Also received in case E-Program was received by TenneT after closing time.

```
UNA:+. ? '
UNB+UNOC:3+8716867999983:14+8712423022348:14+120304:1315+24033228'
UNH+24033228+APERAK:D:96A:ZZ:EDTNE1'
BGM+12E::9+A_20120304100030668+27'
DTM+137:201203041315:203'
DTM+178:201203041315:203'
DTM+735:1:805'
RFF+AAAN:EP20120305000001'
NAD+SO+8716867999983::9'
NAD+PRC+8712423022348::9'
ERC+00050:60'
FTX+AAO+++IET-prog BRITNEDP/2012-03-05/1?: Contract D201203050601, Hvh (-1040900): voor 06?:00-07?:00 valt buiten de contractgrenzen (0--1032000) (E)
IET:prog BRITNEDP/2012-03-05/1?: Contract D201203050601, Quantity (-104090:0) of period 06?:00-07?:00 lies beyond lim'
ERC+00079:60'
FTX+AAO+++E-programma is NIET in behandeling genomen (E) E-program has NOT been: taken up'
UNT+13+24033228'
UNZ+1+24033228'
```

External Consistency check

Second business validation check of E-Programme performed by TenneT.

- APERAK message with code 45 (Accepted with Reserves) is sent by TenneT as result of inconsistency check.

```
edine[2] - Notepad
File Edit Format View Help
UNA:+. ? '
UNB+UNOC:3+8716867999983:14+8712423022348:14+140726:2002+1002933444 '
UNH+1002933444+APERAK:D:96A:ZZ:EDTNE1 '
BGM+12E::9+A_201407261002933443+45 '
DTM+137:201407262002:203 '
DTM+178:201407262003:203 '
DTM+735:2:805 '
RFF+AAN:EP20140727000002 '
NAD+SO+8716867999983::9 '
NAD+PRC+8712423022348::9 '
ERC+00074::60 '
FTX+AAO+++BRITNEDP/2014-07-27/??: kruispost 5398888512728 is NIET aanwezig (E) BR:ITNEDP,
UNT+1+1002933444 '
UNZ+1+1002933444 '
```

Following business validations are performed for the external consistency check:

- A check is done if the available PRPs in the BritNed Program have taken BritNed up in their E-Program (and vice versa) to confirm the trade.
- The values per PRP in the BritNed E-Program are matched with the BritNed values in each separate PRP E-Program which is sent by the other PRPs towards TenneT (difference should be zero per PTU).

What are the deadlines for E-Program submission ?

Nomination Process Deadlines for NL market

ID Interval	D-2		D-1						D	
	16:30	09:00	13:00	14:00	00:00-16:00		1		2	
Customer	Open Long Term Nominations	Close Long Term Nominations		Send LT+D E-Program to TenneT	Open Intraday Auction Bidding Gate	Close Intraday Auction Bidding	Open Intraday Nominations	Close Intraday Nominations	Open Intraday Nomination	Close Intraday Nomination
Kingdom			Daily Nominations from EPEX							
			Send LT+D BDL E-Program					Send BDL E-Program		Send BDL E-Program

ID Interval	D										D+1
	3		16:00-00:00		4		5		6		
Customer	Open Intraday Nomination	Close Intraday Nomination	Open Intraday Auction Bidding	Close Intraday Auction Bidding	Open Intraday Nomination	Close Intraday Nomination	Open Intraday Nomination	Close Intraday Nomination	Open Intraday Nomination	Close Intraday Nomination	Deadline for sending E-Program to TenneT
Kingdom		Send BDL E-Program				Send BDL E-Program		Send BDL E-Program		Send BDL E-Program	

Gate closed for Nominations
 Gate closed for auction
 Deadline for Customer to send E-Program

	Intraday	Intervals
1	00:00-16:00	4 16:00-00:00
2	04:00-16:00	5 18:00-00:00
3	10:00-16:00	6 20:00-00:00



Deadlines for customer E-Program

Please consider following deadlines for sending your E-Programs to TenneT to avoid being charged for unnecessary imbalances

- D-1 14:00 CE(S)T for Day-Ahead
- D+1 10:00 CE(S)T for Intraday containing all latest nominations made in Kingdom in D