

BSP Model Commissioning Plan

Version 2.0

Commission plan for Balance Service Provider (BSP) Model

- Purpose of this document is to describe on a high-level how the introduction of the BSP model affects
 - Imbalance Settlement model
 - the market participants' operations and
 - eSett's interfaces
- This document describes what will change when the Balance Service Provider Model will be taken into use:
 - main principles of the BSP model
 - the difference between technical go-live and business go-live
 - the visible technical changes in the operations between market participants and eSett
 - the changes on Online Service user interface
 - the summary of the changes in reporting of imbalance settlement results from eSett to BRP
- This document is an initial commissioning plan, and it will be updated based on the updated information on the BSP model and input from the market participants

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BSP Model

High level concept



Overview

- Balance Service Provider is a new market role who maintain reserves and provide balancing services in the regulation markets
- Current BRPs that deliver balancing services will have a BSP role which allows them to continue to act on the balancing markets as today
- Mutual settlement solution in the NBS countries
 - TSOs report activated reserves and capacity reserves to eSett (as currently)
 - The BSP will not be responsible for imbalances -> reported activated reserves will be calculated by eSett to imbalance adjustments and included in imbalance settlement of the BRP as today
 - In addition to BRP invoicing, eSett will be responsible for the invoicing of BSPs
 - The time of introduction of the BSP role in NBS countries will differ and the time schedule(s) will be specified in the NBS Handbook



Which market participant will be affected?

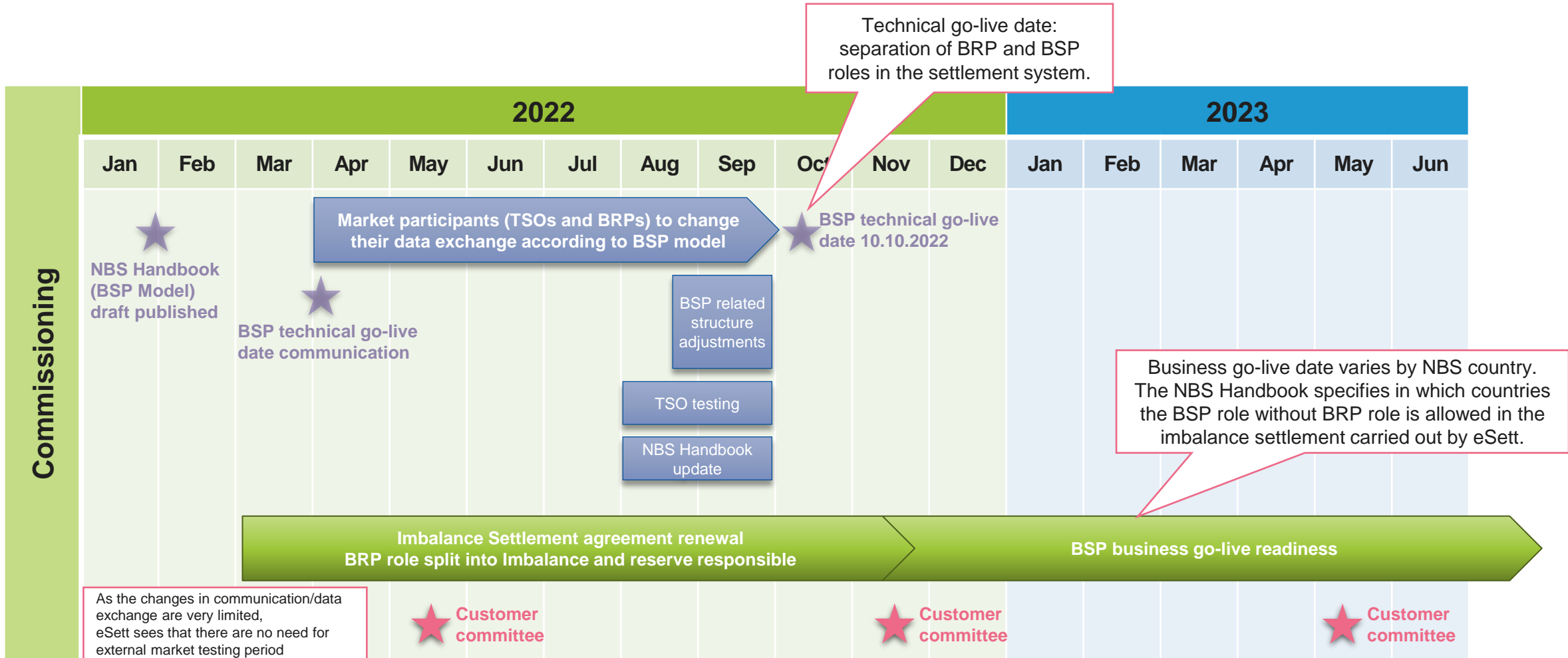
- This implemented BSP model is affecting **only for TSOs and BRPs** which have valid activated and/or capacity reserves in the imbalance settlement carried out by eSett.
- This implemented BSP model **doesn't have affect** to these market participants in the imbalance settlement carried out by eSett:
 - REs
 - DSOs
 - National datahubs
 - BRPs which do not have valid activated and/or capacity reserves in the imbalance settlement carried out by eSett.



Technical go-live and business go-live difference

- The BSP technical go-live date will be **10.10.2022 00:00 CET**
 - A BSP role will be created for current BRPs that deliver balancing services in any NBS country
 - No individual BSPs allowed - each BSP needs to also have a BRP role in Nordic imbalance settlement
- The business go-live schedule is still open
 - The go-live date will be separately decided for each country
 - After business go-live, individual BSPs are allowed to enter in the market settled by eSett
 - For successful business go-live, a new agreement setup needs to be revised

BSP Commissioning Time Schedule

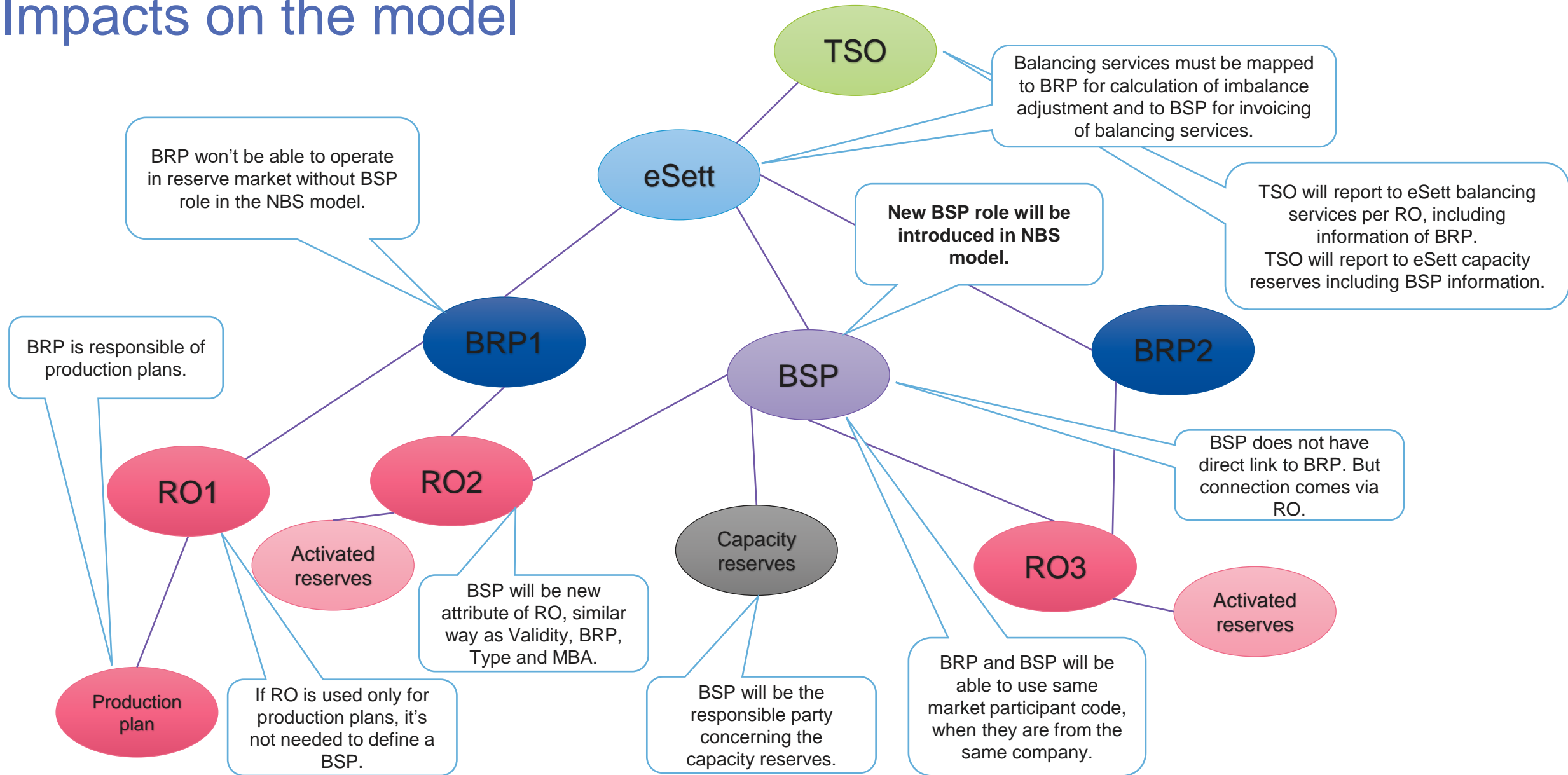


Agreements

- The Agreement setup is under planning and will be discussed in the future Customer committee meeting(s)



Impacts on the model





Changes to BRPs

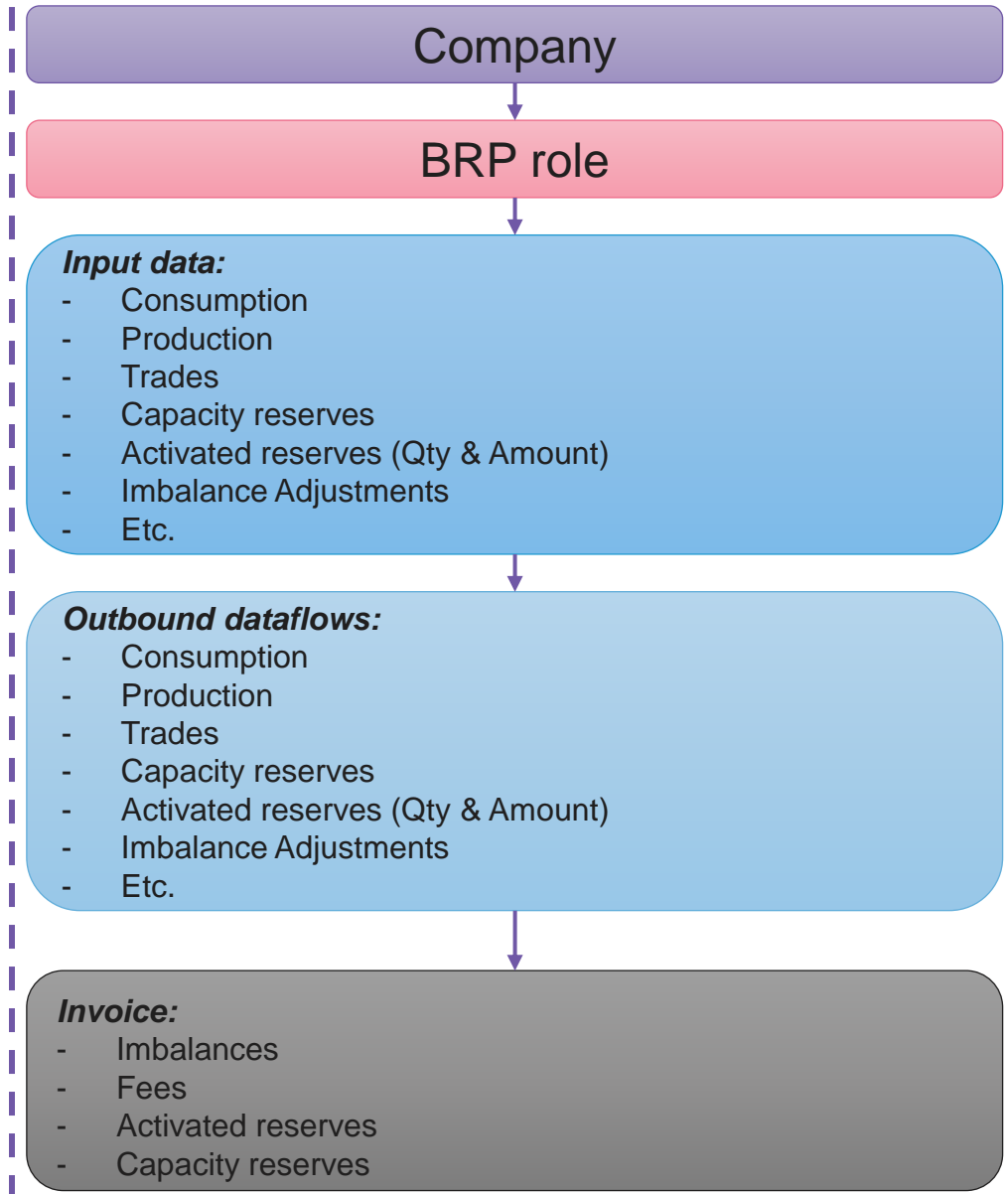


Changes on BRP having reserves

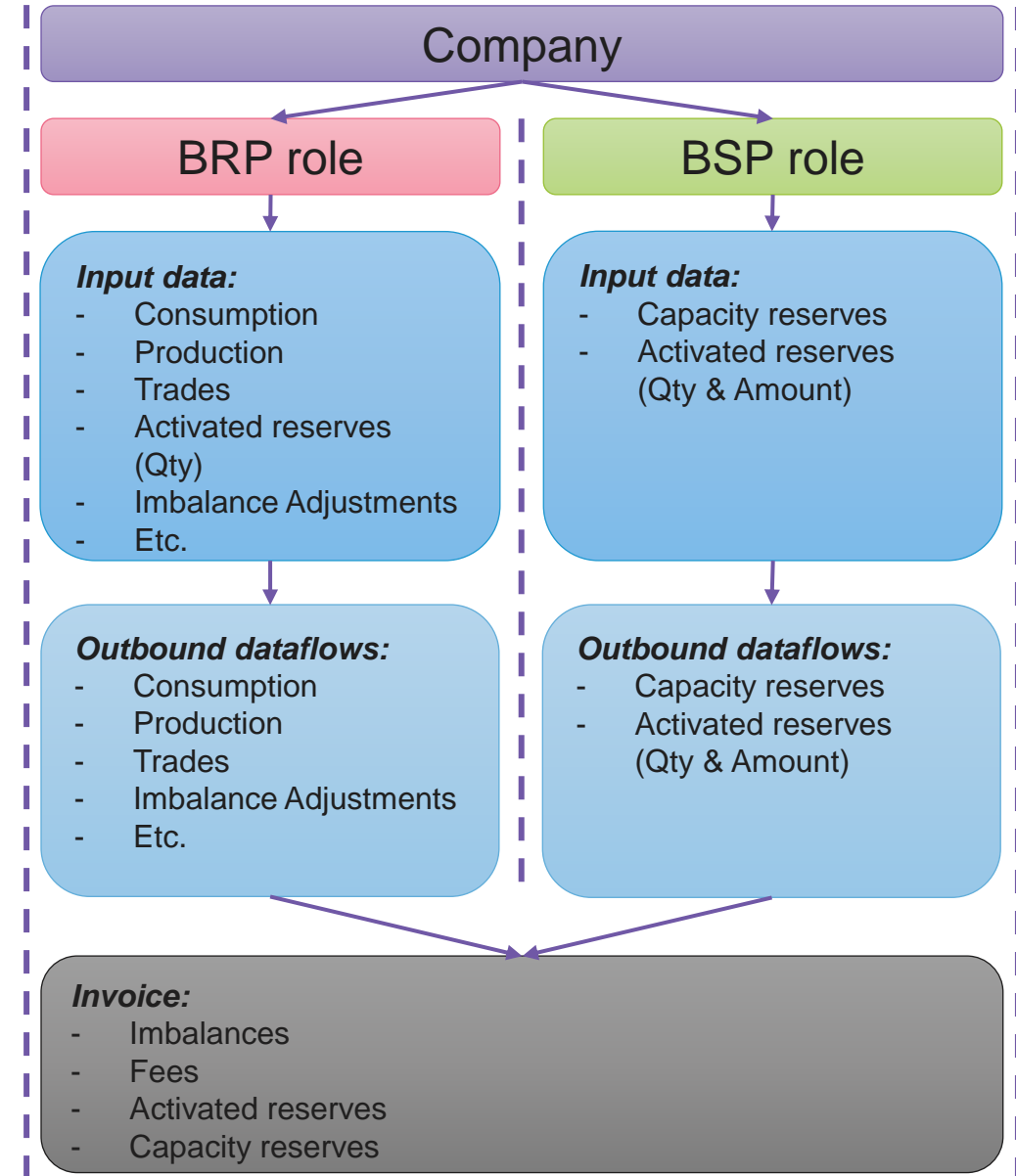
- BRP role will be split into two different roles in the Online Service: BRP and BSP role
- The Activated reserves' (AR) amounts will be moved under BSP role
- ARs' quantities are visible under BRP role as today
- Imbalance Adjustments' amounts won't be visible for the business days after BSP go-live date
- Capacity reserves (CR) will be moved under the BSP role
 - When a company has a BRP and BSP role, quantities and amounts are visible on BSP side
- AR and CR related data packages will be moved to the BSP side (see the data package changes starting on page 24)



Current situation, a company with the BRP role

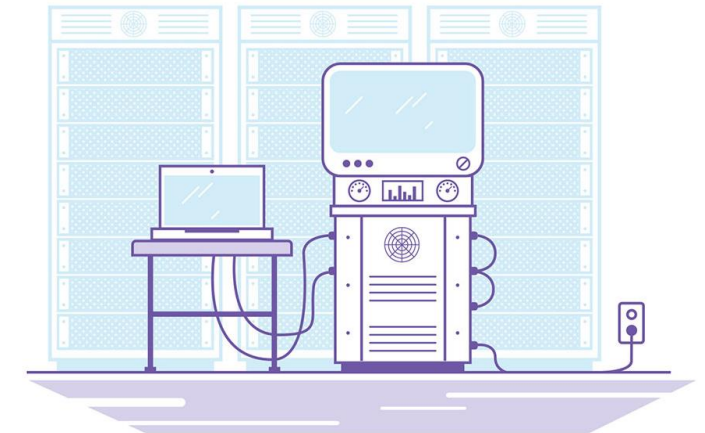


Situation after BSP technical go-live



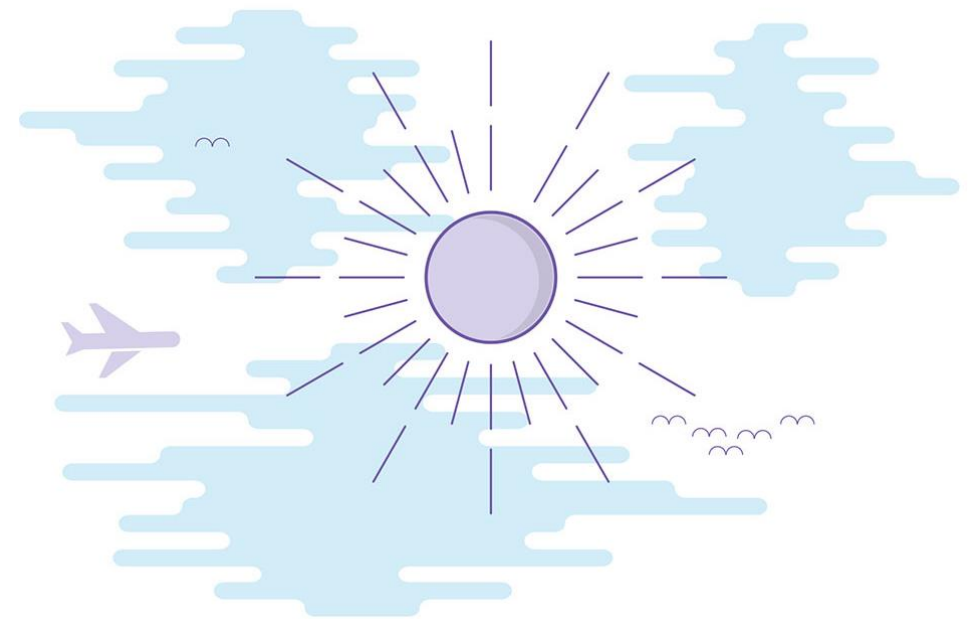
What the technical GL means from structure point of view?

- eSett will create for all BRPs that have activated reserves and/or capacity reserves a BSP role for that specific country where the BRP is active
 - In practice it means BSP role and BSP branch
 - Structure info, like market party code, contact person etc., will be taken based on the BRP information
 - Start date: 10.10.2022 00:00 CET for all BSPs
- RO-BSP relation will be created starting from 10.10.2022 00:00 CET and BSP will be same as RO's BRP
- All Activated reserves will get also a BSP structure information starting from 10.10.2022 00:00 CET
 - BRP will continue normally as a structure information
- All Capacity reserves' BRP attribute will be replaced by the BSP attribute
 - In practice all current time series will be terminated to timestamp 9.10.2022 24:00 CET and same, but new ones with market party BSP, will be created starting from 10.10.2022 00:00 CET
- Activated & capacity reserves' data package subscriptions will be added to the BSP side reflecting the BRP's subscription selections



Main principles will be same for BRPs

- No changes for these system parts if company operates as a BRP:
 - Invoicing content and products will be kept same
 - If the company operates as BRP and BSP, it will receive only one which invoice which includes same invoice products as today (imbalances, activated reserves, capacity reserves, fees)
 - Dynamic collateral calculation will be used as currently
 - Fees will be kept as currently
- Imbalance settlement calculation will be kept same



Transition phase reporting (data packages)

- eSett will start to use the new model after the BSP model technical Go-Live date (GL) is introduced
- Delivery days before technical GL will be using the current model where a BRP is the responsible participant concerning activated reserves and capacity reserves
- Delivery days after technical GL will be using the BSP model where a BSP is the responsible participant concerning activated reserves and capacity reserves
- eSett will report settlement results based on which model the delivery day is using (before or after technical GL). During the transition period the data packages' values will be send based on the responsible participant:
 - Before the technical GL for BRPs
 - After the technical GL for BSPs
- More specific information is presented in the slides 25-26



New BSP role in NBS model

Introduced after BSP business go-live date

Please notice,
individual BSPs are
introduced after the BSP
business go-live date

BSP Invoicing and Fees

- A weekly *BSP Fee* can be introduced for the BSPs
- BSPs will be invoiced on weekly basis, with same schedule as BRPs (activated reserves, capacity reserves, fees)

Delivery days	Days in the settlement process																								
	Week 1							Week 2							Week 3							Week 4			
	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Mon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Tue	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Wed	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25		
Thu	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25			
Fri	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25				
Sat	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25					
Sun	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25						

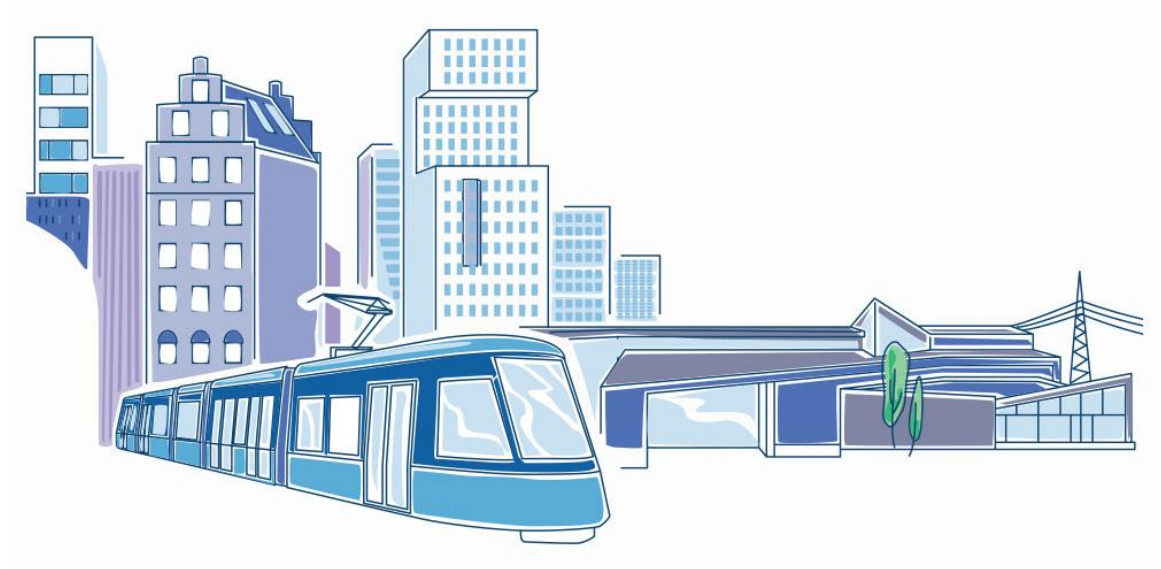
 Delivery day	 Settlement final	 Incoming payments to eSett debited
 Data reported	 Settlement invoiced	 Outgoing payments to BRP credited

- Direct debit will be used also with companies which are operating only as a BSP role

Please notice,
individual BSPs are
introduced after the BSP
business go-live date

Collateral requirement for BSPs

- eSett is the financial counterpart of the BSP invoicing which introduces a counterparty risk for eSett
- To manage the risk eSett will place collateral requirement for BSPs
- BSPs that act only in BSP role will have a risk-based defined and manually set collateral requirement
 - Each country will define the locally used collateral regime
 - The long-term goal is to develop a common Nordic collateral model
- Collateral for BSP which also act as a BRP is covered by the existing dynamic collateral requirement for the BRPs





BSP role's visibility in Online Service

BRPs having reserves will also have these
views

BSP data on Online Service

- Activated reserves
 - Details, RO, MWh and EUR
- Capacity reserves
 - Details, MW and EUR

The screenshot shows the eSett Online Service interface. A blue sidebar menu is open, highlighting 'Others' and 'Reserves'. The main content area shows a search and filter section for 'Balancing Sub Service' and 'Direction Type'. Below this is a table with columns: From, To, Regulation Object, BRP, MBA, Balancing Service, Balancing Sub Service, and Direction Type. The table contains several rows of data for various reserve types and regulation objects.

From	To	Regulation Object	BRP	MBA	Balancing Service	Balancing Sub Service	Direction Type
15.03.2021 00:00	Undefined	S1 RO1	S1 BRP1	FI	Frequenc...	FCR	Consumption
15.03.2021 00:00	Undefined	S1 RO3	S1 BRP2	FI	Frequenc...	FCR	Consumption
15.03.2021 00:00	Undefined	S1 RO5	S1 BRP3	FI	Frequenc...	FCR	Consumption
15.03.2021 00:00	Undefined	S1 RO4	S1 BRP2	FI	Frequenc...	FRR-A	Production
15.03.2021 00:00	Undefined	S1 RO6	S1 BRP3	FI	Frequenc...	FRR-A	Production
15.03.2021 00:00	Undefined	S1 RO4	S1 BRP2	FI	Frequenc...	Hour Cha...	Production
15.03.2021 00:00	Undefined	S1 RO6	S1 BRP3	FI	Frequenc...	Hour Cha...	Production

The screenshot shows the 'Aggregations' tab in the eSett Online Service. It displays a detailed time series table for 'Balancing Sub Service' (Frequency Containment Reserve) with 'MBA' set to 'FI' and 'Direction Type' set to 'Consumption'. The table shows data for the period from 01.11.2021 to 05.11.2021, aggregated by hour. The columns include Date, Day, and numerical values for each hour. A 'Time Series' dropdown menu is open, showing options for 'Up Amount', 'Up Quantity', 'Down Quantity', 'Up Amount', and 'Down Amount'.

Date	01.11.2021	02.11.2021	03.11.2021	04.11.2021	05.11.2021
00:00-01:00	-1 620,00	-1 260,00	-270,00	-1 170,00	
01:00-02:00	-1 350,00	-1 080,00	-2 520,00	-2 430,00	
02:00-03:00	-3 510,00	-2 250,00	-3 690,00	-2 430,00	-2 790,00
03:00-04:00	-3 690,00	-4 410,00	-4 140,00	-3 420,00	-3 150,00
04:00-05:00	-4 860,00	-4 050,00	-4 050,00	-5 400,00	-4 230,00
05:00-06:00	-5 040,00	-5 400,00	-6 120,00	-5 670,00	-5 670,00
06:00-07:00	-7 301,10	-6 131,10	-6 041,10	-5 861,10	-7 121,10
07:00-08:00	-6 480,00	-6 750,00	-7 290,00	-7 290,00	-7 740,00
08:00-09:00	-8 291,07	-8 381,07	-8 831,07	-8 381,07	-8 381,07
09:00-10:00	-9 180,00	-9 540,00	-9 900,00	-9 540,00	-8 910,00
10:00-11:00	-9 900,00	-9 360,00	-9 720,00	-10 620,00	-11 160,00
11:00-12:00	-10 080,00	-10 350,00	-11 070,00	-11 790,00	-11 340,00
12:00-13:00	-11 250,00	-11 880,00	-12 150,00	-12 150,00	-12 600,00
13:00-14:00	-12 060,00	-11 880,00	-12 060,00	-13 590,00	-13 410,00
14:00-15:00	-14 220,00	-14 130,00	-13 320,00	-14 490,00	-14 220,00
15:00-16:00	-14 760,00	-13 860,00	-13 860,00	-15 210,00	-15 480,00
16:00-17:00	-15 840,00	-15 210,00	-15 120,00	-15 750,00	-15 930,00
17:00-18:00	-16 740,00	-16 920,00	-17 370,00	-17 100,00	-15 750,00
18:00-19:00	-17 010,00	-17 190,00	-17 100,00	-17 460,00	-18 360,00
19:00-20:00	-17 910,00	-17 910,00	-17 820,00	-18 900,00	-17 820,00
20:00-21:00	-19 091,10	-18 911,10	-18 911,10	-19 361,10	-18 101,10
21:00-22:00	-19 698,90	-20 688,90	-20 148,90	-20 058,90	-20 238,90
22:00-23:00	-20 970,00	-20 070,00	-21 870,00	-21 420,00	-21 240,00
23:00-24:00	-21 150,00	-20 970,00	-20 970,00	-22 770,00	-21 150,00
Min	-21 150,00	-20 970,00	-21 870,00	-22 770,00	-21 240,00
Max	-1 350,00	-1 080,00	-270,00	-1 170,00	-540,00
Total	-272 002,17	-268 582,17	-274 342,17	-281 272,17	-277 582,17

BSP data on Online Service

- Regulation Object (RO) structural information
- Invoices
- Fees
- Collaterals
- Messages
- Market structures

Status	Number	Week	Invoice Date	Invoice Due Date	Total Amount	Country	Invoice Type	File
Paid	2000104108	35 (30.08.-05.09.)	27.10.2021	29.10.2021	17 726.43 EUR	Finland	Debit Notice	PDF XML

Rows count: 1 of 1

Regulation Object	MBA	Type	BRP	From	To
S1 RO1	FI	Consumption	S1 BRP1	01.01.2021 00:00	Undefined
S1 RO2	FI	Production (Normal)	S1 BRP1	01.01.2021 00:00	Undefined
S1 RO3	FI	Consumption	S1 BRP2	01.01.2021 00:00	Undefined
S1 RO4	FI	Production (Normal)	S1 BRP2	01.01.2021 00:00	Undefined
S1 RO5	FI	Consumption	S1 BRP3	01.01.2021 00:00	Undefined
S1 RO6	FI	Production (Normal)	S1 BRP3	01.01.2021 00:00	Undefined

Total pages: 1 (6 rows)

BSP data on Online Service

- Data packages:

Name	Format	Frequency	Period from ⓘ	Period to ⓘ	Granularity	Subscription	
Tertiary Replacement Reserves (RR)	BSP Activated Reserves	Daily	D-14	D-1	Hourly	Inactive	☰
Primary Frequency Containment Reserves (FCR)	BSP Activated Reserves	Daily	D-14	D-1	Hourly	Active in CET	☰
Secondary Frequency Restoration Reserves (FRR)	BSP Activated Reserves	Daily	D-14	D-1	Hourly	Inactive	☰
Secondary Frequency Restoration Reserves (FRR) – contracted reserves	BSP Capacity Reserves	Daily	D-14	D-1	Hourly	Active in CET	☰
Tertiary Replacement Reserves (RR) – contracted reserves	BSP Capacity Reserves	Daily	D-14	D-1	Hourly	Inactive	☰
Primary Frequency Containment Reserves (FCR) – contracted reserves	BSP Capacity Reserves	Daily	D-14	D-1	Hourly	Inactive	☰
Imbalance prices per Market Balance Area (MBA)	Prices	Daily	D-14	D-1	Hourly	Active in CET	☰

- One attribute (receiver role) will be changed in the dataflows due to the BSP model:

BRS/document	Change	New value
NEG ERRP Reserve Allocation Result document	One new <i>Receiver Role</i> attribute	A46 (Balancing Service Provider)

- BRS documentation [link](#)

BSP role and outbound messages

BRPs having reserves will have effects
based on these slides

Reporting from eSett around the GL – activated/capacity reserves data packages for BRPs (D-14 ... D-1 in CEST)

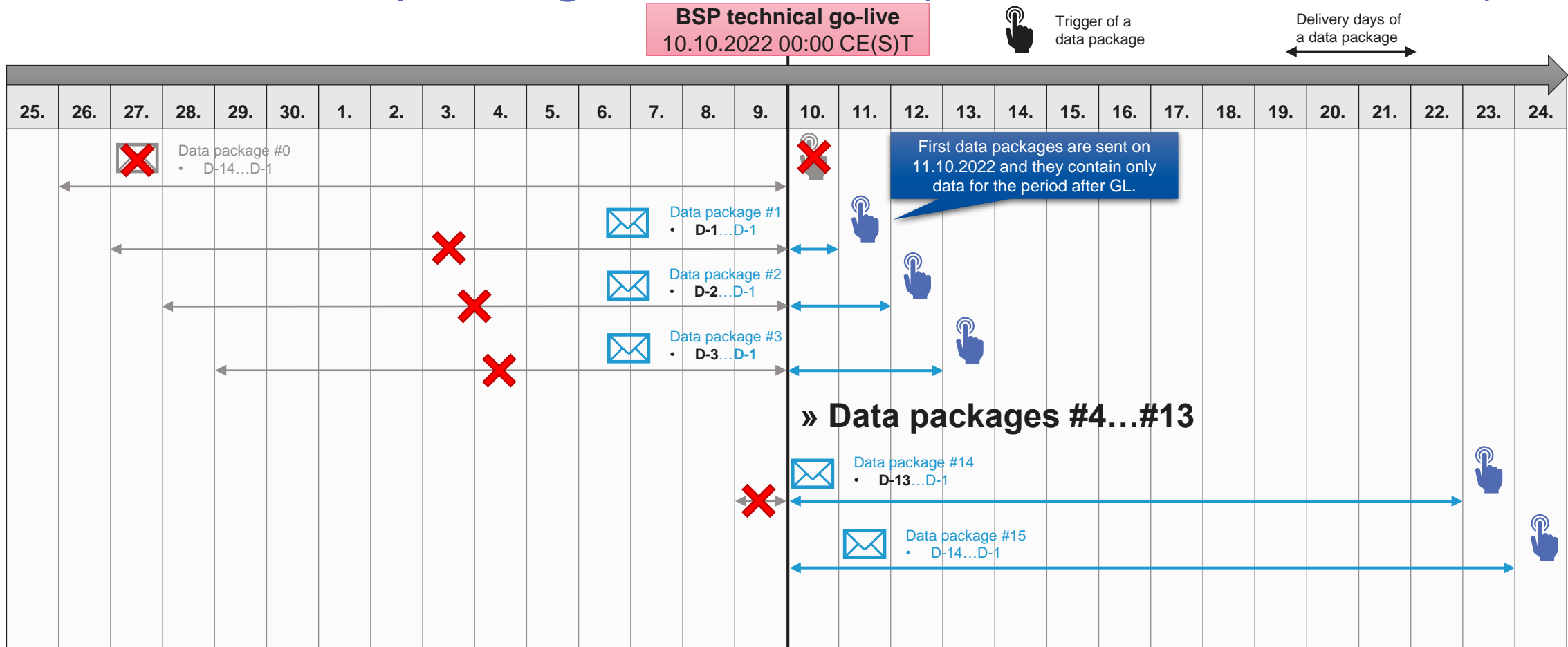
BSP technical go-live
10.10.2022 00:00 CE(S)T

Trigger of a data package

Delivery days of a data package



Reporting from eSett around the GL – activated/capacity reserves data packages for BSPs (D-14 ... D-1 in CEST)



Example of xml change in Online Service

```

<?xml version="1.0" encoding="utf-8"?>
<ReserveAllocationResultDocument xsi:schemaLocation="urn:ediel.org:neg:errp:reserveallocationresultdocument:1:0 ur
<DocumentIdentification v="doc8a4316e0a48cd91b60ccbdb008ab4" />
<DocumentVersion v="1" />
<DocumentType v="A38" />
<ProcessType v="A30" />
<SenderIdentification v="44X-00000000004B" codingScheme="A01" />
<SenderRole v="A05" />
<ReceiverIdentification v="987654321" codingScheme="A10" />
<ReceiverRole v="A05" />
<CreationDateTime v="2022-01-01T00:00:00Z" />
<ReserveBidTimeInterval v="2022-01-01T00:00Z/2022-01-01T22:00Z" />
<Domain v="10Y1001A1001A91G" codingScheme="A01" />
<AllocationTimeSeries>
  <TimeSeriesIdentification v="123456789" />
  <TenderingParty v="123456789" codingScheme="A10" />
  <BusinessType v="A10" />
  <AcquiringArea v="10YFI-1-----U" codingScheme="A01" />
  <ConnectingArea v="10YFI-1-----U" codingScheme="A01" />
  <MeasureUnitQuantity v="MWH" />
  <Currency v="EUR" />
  <MeasureUnitPrice v="MWH" />
  <ReserveObject v="123ABC" codingScheme="NFI" />
  <Direction v="A01" />
  <Period>
    <TimeInterval v="2022-01-01T00:00Z/2022-01-01T23:00Z" />
    <Resolution v="PT1H" />
    <Interval>
      <Pos v="1" />
      <Qty v="0" />
      <SettlementAmount v="0" />
    </Interval>
    <Interval>
      <Pos v="2" />
      <Qty v="0" />
      <SettlementAmount v="0" />
    </Interval>
    .....
    <Interval>
      <Pos v="24" />
      <Qty v="0" />
      <SettlementAmount v="0" />
    </Interval>
  </Period>
  <Reason>
    <ReasonCode v="Z31" />
  </Reason>
</AllocationTimeSeries>
</ReserveAllocationResultDocument>

```

New receiver role "A46"

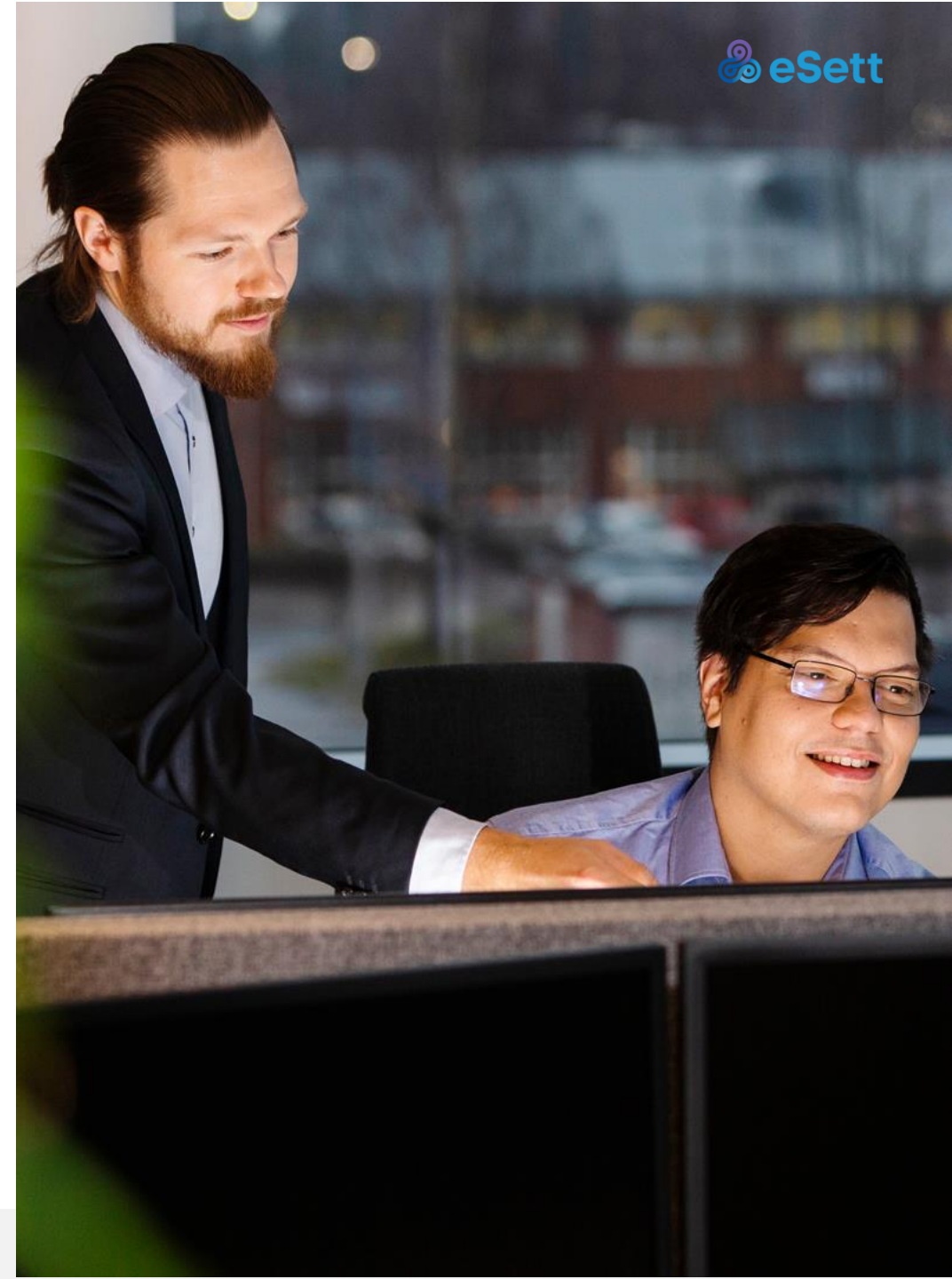
```

<?xml version="1.0" encoding="utf-8"?>
<ReserveAllocationResultDocument xsi:schemaLocation="urn:ediel.org:neg:errp:reserveallocationresultdocument:1:0 ur
<DocumentIdentification v="doc8a4316e0a48cd91b60ccbdb008ab4" />
<DocumentVersion v="1" />
<DocumentType v="A38" />
<ProcessType v="A30" />
<SenderIdentification v="44X-00000000004B" codingScheme="A01" />
<SenderRole v="A05" />
<ReceiverIdentification v="987654321" codingScheme="A10" />
<ReceiverRole v="A46" />
<CreationDateTime v="2022-01-01T00:00:00Z" />
<ReserveBidTimeInterval v="2022-01-01T00:00Z/2022-01-01T22:00Z" />
<Domain v="10Y1001A1001A91G" codingScheme="A01" />
<AllocationTimeSeries>
  <TimeSeriesIdentification v="123456789" />
  <TenderingParty v="123456789" codingScheme="A10" />
  <BusinessType v="A10" />
  <AcquiringArea v="10YFI-1-----U" codingScheme="A01" />
  <ConnectingArea v="10YFI-1-----U" codingScheme="A01" />
  <MeasureUnitQuantity v="MWH" />
  <Currency v="EUR" />
  <MeasureUnitPrice v="MWH" />
  <ReserveObject v="123ABC" codingScheme="NFI" />
  <Direction v="A01" />
  <Period>
    <TimeInterval v="2022-01-01T00:00Z/2022-01-01T23:00Z" />
    <Resolution v="PT1H" />
    <Interval>
      <Pos v="1" />
      <Qty v="0" />
      <SettlementAmount v="0" />
    </Interval>
    <Interval>
      <Pos v="2" />
      <Qty v="0" />
      <SettlementAmount v="0" />
    </Interval>
    .....
    <Interval>
      <Pos v="24" />
      <Qty v="0" />
      <SettlementAmount v="0" />
    </Interval>
  </Period>
  <Reason>
    <ReasonCode v="Z31" />
  </Reason>
</AllocationTimeSeries>
</ReserveAllocationResultDocument>

```

Information Service

- One attribute A46 (receiver/sender role) will be added to the Information Service dataflows
- BSP model affects three different Information Service data flows and data can be searched as follows:
 - Capacity reserves (CRE_INF):
 - Respective BRP for the data from the time interval before BSP go-live date (that are related to requesting BRP)
 - Respective BSP for the data from the time interval after BSP go-live date (that are related to requesting BSP)
 - Activated reserves (ACR_INF):
 - Respective BRP for the data from the time interval before BSP go-live date
 - Respective BSP for the data from the time interval after BSP go-live date
 - Imbalance Adjustment (IBA_INF):
 - Respective BRP's Imbalance Adjustment Amounts won't be included in the response if the end date for the request is after the BSP go-live date
 - No changes for the time interval before BSP go-live date



Example of xml change in Information Service

```

<?xml version="1.0"?>
- <soap:Envelope xmlns:urn="urn:entsoe.eu:wgedi:components" xmlns:inf="http://www.basse.eu/inform
  <soap:Header/>
  - <soap:Body>
    - <inf:GetData>
      - <inf:request DtdRelease="?" DtdVersion="?">
        <urn:DocumentIdentification v="1"/>
        <urn:DocumentType v="A25"/>
        <urn:SenderIdentification v="BRP01" codingScheme="A01"/>
        <urn:SenderRole v="A08"/>
        <urn:ReceiverIdentification v="BASSE" codingScheme="A01"/>
        <urn:ReceiverRole v="A05"/>
        <urn:CreationDateTime v="2015-07-20T00:00:00Z"/>
      - <urn:RequestComponent>
        <urn:RequestedAttribute v="Dataflow"/>
        <urn:RequestedAttributeValue v="ACR"/>
      </urn:RequestComponent>
      - <urn:RequestComponent>
        <urn:RequestedAttribute v="TimeInterval"/>
        <urn:RequestedAttributeValue v="2015-03-01T22:00:00Z/2015-11-02T22:00:00Z"/>
      </urn:RequestComponent>
      - <urn:RequestComponent>
        <urn:RequestedAttribute v="TimeResolution"/>
        <urn:RequestedAttributeValue v="PT1H"/>
      </urn:RequestComponent>
    </inf:request>
  </inf:GetData>
</soap:Body>
</soap:Envelope>

```

New sender role "A46" →

```

<?xml version="1.0"?>
- <soap:Envelope xmlns:urn="urn:entsoe.eu:wgedi:components" xmlns:inf="http://www.basse.eu/information-service-1.0"
  <soap:Header/>
  - <soap:Body>
    - <inf:GetData>
      - <inf:request DtdRelease="?" DtdVersion="?">
        <urn:DocumentIdentification v="1"/>
        <urn:DocumentType v="A25"/>
        <urn:SenderIdentification v="BSP01" codingScheme="A01"/>
        <urn:SenderRole v="A46"/>
        <urn:ReceiverIdentification v="BASSE" codingScheme="A01"/>
        <urn:ReceiverRole v="A05"/>
        <urn:CreationDateTime v="2022-10-10T00:00:00Z"/>
      - <urn:RequestComponent>
        <urn:RequestedAttribute v="Dataflow"/>
        <urn:RequestedAttributeValue v="ACR"/>
      </urn:RequestComponent>
      - <urn:RequestComponent>
        <urn:RequestedAttribute v="TimeInterval"/>
        <urn:RequestedAttributeValue v="2022-10-10T22:00:00Z/2022-10-15T22:00:00Z"/>
      </urn:RequestComponent>
      - <urn:RequestComponent>
        <urn:RequestedAttribute v="TimeResolution"/>
        <urn:RequestedAttributeValue v="PT1H"/>
      </urn:RequestComponent>
    </inf:request>
  </inf:GetData>
</soap:Body>
</soap:Envelope>

```

Change Log

Version	Date	Changes
1.0	24.05.2021	- First version of the BSP model commissioning plan released
1.1	10.11.2021	- Commissioning schedule updated - Screenshots added to BSP data on Online Service
2.0	01.04.2022	- Updated information about technical go-live date 10.10.2022 - Commissioning schedule updated - Updated layout and structure to give more informative overall picture - Added information about Information Service changes - Added examples about xml messages' changes - Added data package reporting examples around go-live



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