

Expert Working Group “Bid Ladder”

June 14th, 2016

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Overview

- **Approval of MoM 10/5**
- **Feedback Febeg on counterbalancing & Imbalance Adjustment**
- **Feedback BRDA on Imbalance Adjustment**
- **Submetering & CDSO**
- **Publication Bidladder : Available Regulation Capacity**
- **ToE with Supplier: overview cases**
- **Wrap-up & next steps**



Approval of MoM 10/5/2016

Approval of MoM 25/5

Comments were received from 1 Party: Actility

- A representative of Actility asks whether the FDM should be an independent party or whether the FSP could be FDM? It is also asked whether the FDM determines the baselines to be used. *A representative of Actility stated that if multiple types of baseline methodologies are considered applicable to a certain access point, the baseline that is the best suited to represent its behavior should be selected based on statistical elements. The market party has more information on the consumption behavior, and therefore, it could potentially be more efficient to let him choose a baseline. Then, statistical tests should be conducted to verify its choice because according to the representative of Actility the baseline choice should remain with the market parties (e.g. due to the link with the underlying industrial process).* A representative of CREG – supported by various other stakeholders – replies that the FDM should be an independent party. According to CREG, an evolution towards regulated baselines will take place. The FDM will apply the baselines. A representative of CREG suggests to “keep it simple”, *to which the representative of Actility agreed.*

Approval of MoM 25/5

- A representative of Actility *stated that asks whether* in the future (e.g. over 10 years) multiple products/services could be offered from a single industrial site *and that in such cases we should pay attention to the fact that choosing a baseline that can adequately represent this multi-site approach is a challenge.* A representative of Energypool mentions in this context that already today some combinations of products are allowed (e.g. R1+ R3DP) and that for such combinations it is relevant to rely on adequate technical prequalification, which is a role of ELIA. ELIA adds that we are now at the stage of discussing a pilot Bidladder and that evolution may take place over the following years, including with respect to combining different products.
- A representative of Actility states that one should consider a settlement of activated flexibility at pay-as-cleared. ELIA confirms this is not the subject of this discussion. *The representative of Actility added that performing the settlement of the theoretically activated volume in a pay-as-bid procedure while considering over/under activated volumes as pay-as-cleared is also in some sense asymmetric.*

Feedback Febeg on counterbalancing & Imbalance Adjustment

Feedback BRDA on Imbalance Adjustment

Principles for imbalance adjustment

Under/Overdelivery

Issue: How are overdelivery & underdelivery (i.e. deviations from the by Elia requested volume) dealt with? Which BRP bears which imbalance?

Proposed solution:

Underdelivery	Overdelivery
→ BRP _{bsp} takes the imbalance in case underdelivery	→ BRP _{source} takes the imbalance in case overdelivery
<ul style="list-style-type: none"> • $BRP_{bsp} = -(Req - Del)$ • $BRP_{source} = 0$ (adjusted with delivered) 	<ul style="list-style-type: none"> • $BRP_{bsp} = 0$ • $BRP_{source} = + (Del - Req)$ (adjusted with requested)

Interpretation:

→ The BSP becomes only balance responsible for what he committed to towards Elia.

→ The overdelivered energy never left the portfolio of the BRPsource.

Imbalance adjustment

Example Over/Underdelivery

Example BidLadder I-Bid

Hypotheses:

- Bid with only 1 delivery point (multiple is analogous)
- Upwards bid (I-bid) of 10 MW by BSP, fully requested by Elia
- $BRP_{source} = BRP_{bsp}$
- Rref(upwards) for this DP = 12 MW, determined at contracting time

Underdelivery: 10 MW requested, only 6 MW delivered

Overdelivery: 10 MW requested, but 13 MW delivered

Underdelivery

- $BRP_{bsp} = Del - Req = 6 - 10 = -4$ MW
- $BRP_{source} = 0$ MW (adjusted by Delivered, i.e. +6 MW)

Overdelivery

- $BRP_{bsp} = 0$ MW
- $BRP_{source} = Del - Req = 13 - 10 = +3$ MW (adjusted by Requested, i.e. +10 MW)

Example BidLadder D-Bid

Hypotheses:

- Bid with only 1 delivery point (multiple is analogous)
- Downwards bid (D-bid) of -10 MW by BSP, fully requested by Elia
- $BRP_{source} = BRP_{bsp}$
- Rref(downwards) for this DP = -12 MW, determined at contracting time

Underdelivery: -10 MW requested, only -6 MW delivered

Overdelivery: -10 MW requested, but -13 MW delivered

Underdelivery

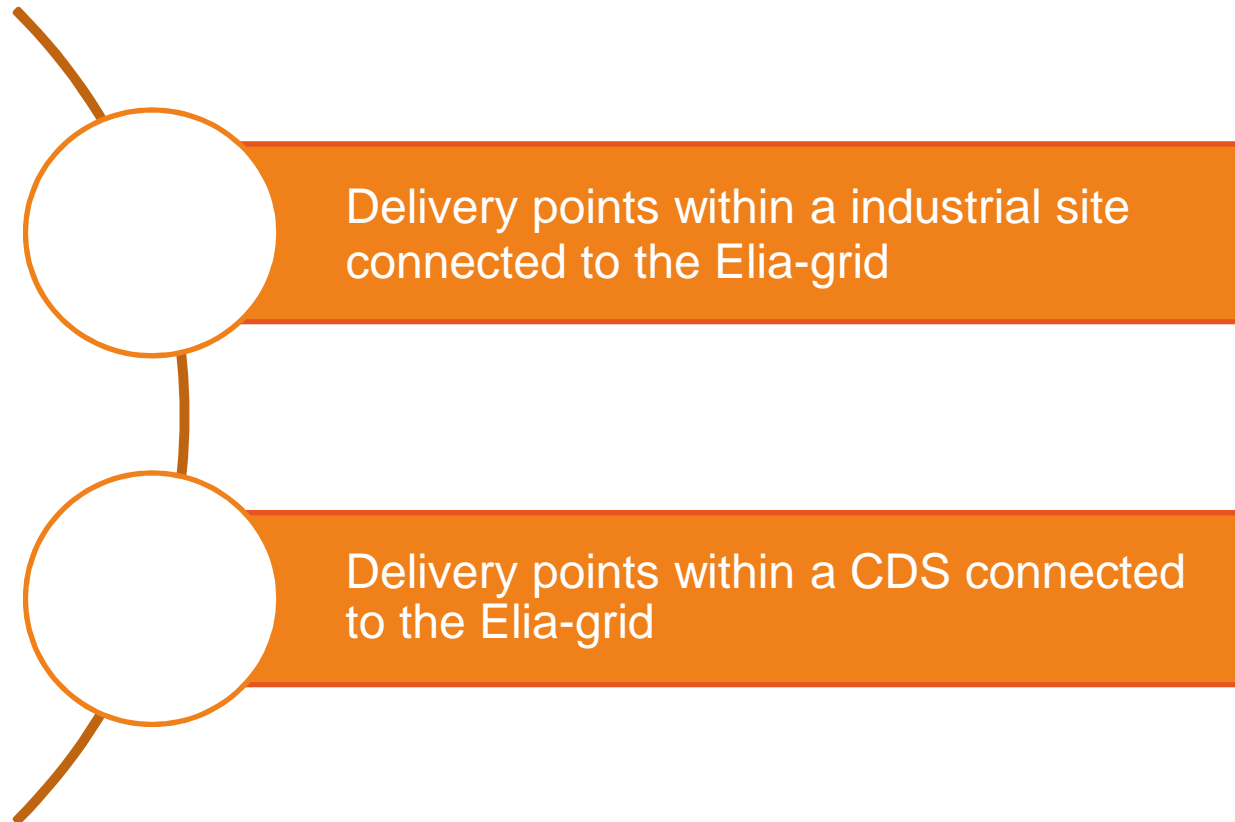
- $BRP_{bsp} = Del - Req = (-6) - (-10) = +4$ MW
- $BRP_{source} = 0$ MW (adjusted by Delivered, i.e. -6 MW)

Overdelivery

- $BRP_{bsp} = 0$ MW
- $BRP_{source} = Del - Req = (-13) - (-10) = -3$ MW (adjusted by Requested, i.e. -10 MW)

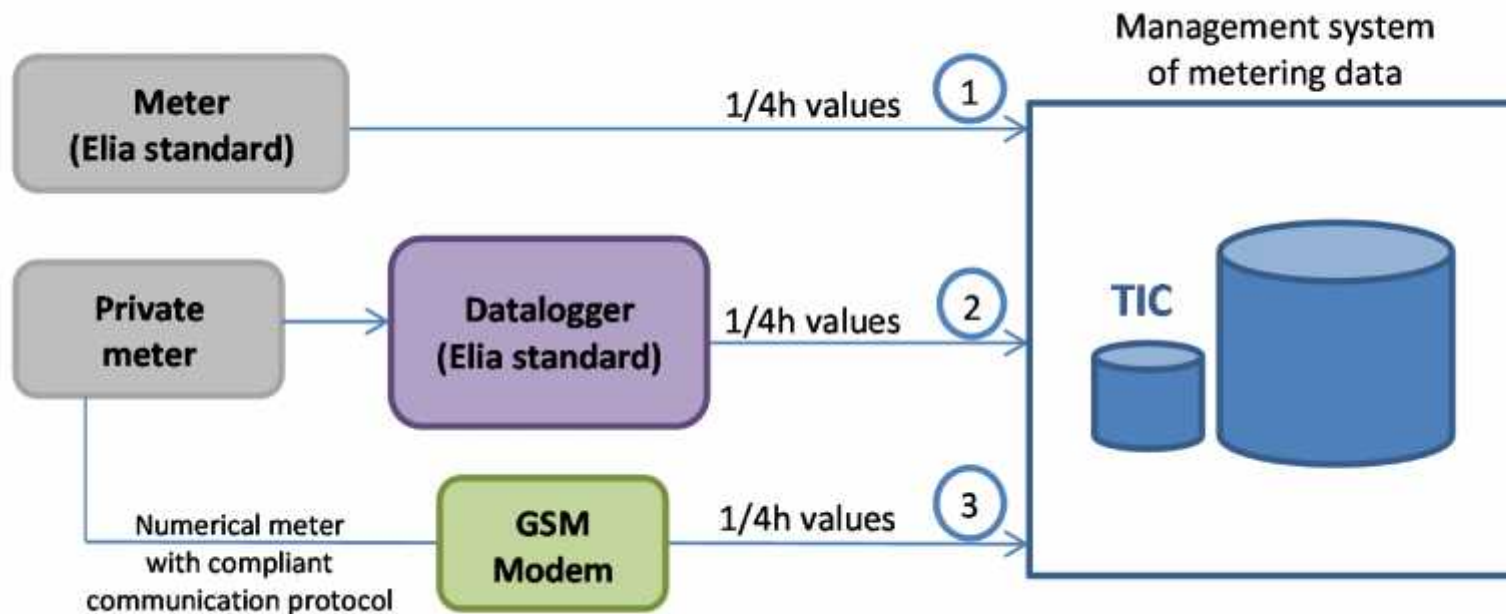
Submetering & CDSO

Agenda



TSO Submetering

Allowed solutions



Accuracy class (active energy)	Option 1			Option 2	Option 3
	a	b	c		
	0,2S	0,5S	1		
TI	Private			Private	Private
TP	Private			Private	Private
Meter	Standard Elia			Private	Private
Datalogger	n.a.			Standard Elia	(Private)
GSM modem	included in the cubicle Elia			included in the cubicle Elia	Standard Elia

Demand flexibility products with TSO submetering

AS IS

Flexibility products	R3DP	SDR
Metering requirement	Measure of ¼ h-value of active power	
	Accuracy of metering installations must be compliant with Technical Regulation (except existing installations)	
Validation of the metering data	By BSP	
Metering data exchange	Acquisition of metering data by Elia	
Publication of metering data	To BSP for validation purposes	
Specific contractual framework	Document similar to annex “metering” of connection contract	

Technical information to be supplied to ELIA :

- single-line diagram
- metering equation
- technical information (see check-list)
- site plan
- maintenance report (incl. accuracy check) **or** calibration report (of the meter(s))

Delivery points with submetering

Conditions for participation

- **Accuracy of the metering chain (meter, TI, TP)**

- ❖ **Accuracy class**
Compliance with technical regulation **mandatory**.
- ❖ **Control of the compliancy**
Via calibration/precision control report + proof of TI and TP compliance (pragmatic way).

Aansluitingsvermogen	Spanningsniveau waarop de meetinrichting aangesloten is	Minimaal vereiste nauwkeurigheidsklasse van de onderdelen in de meetinrichting			
		TP	TI	Wh-meter	VARh-meter
≥ 5 MVA	HS	0.2	0.2	0.2	A
> 1 MVA tot 5 MVA	HS	0.2	0.2	C	A
> 250 kVA tot 1 MVA	HS	0.5	0.5	B	A
	LS(uitzonderlijk)	nvt	0.5	B	A
≥ 100 kVA tot 250 kVA	HS	0.5	0.5	B	A
	LS	nvt	0.5	B	A
< 100 kVA	LS zonder TI	nvt	nvt	A	A

- **Calibration of the meter**

- ❖ **Calibration**
Copy of calibration report to transmit to ELIA.
If calibration report <5 years doesn't exist, perform a precision control following the technical specifications of ELIA.
- ❖ **Precision control of the meter**
Mandatory every 5 years following technical specifications of ELIA.
Copy of the report to transmit to ELIA.

- **Sealing**

- ❖ **Required.** If not possible (to motivate), possibility for Elia to control (or let control) anytime the metering installations. In case of fraud, penalty applies.

Delivery points with submetering

Validation

- **Validation of the metering data**

- ❖ **Who ? When ?**

Publication of the metering data to the BSP **and** the GU.

The BSP has **10 working days** to contest the data. If so, the BSP has to motivate (and if possible prove) why the metering data are not correct. The BSP can propose replacement values.

- ❖ **Responsibility for the validation**

ELIA has the final responsibility of the metering data and as such, assess case by case the admissibility of the request for replacing the values.



GU provides to ELIA all relevant information about the flexible process in case of lack of metering data or in case of contestation in the framework of a flexibility contract with ELIA.

- ❖ **Process in case of equipment failure**

If the problem is not solved after **30 calendar days**, the delivery point is cancelled as long as the problem is not solved.

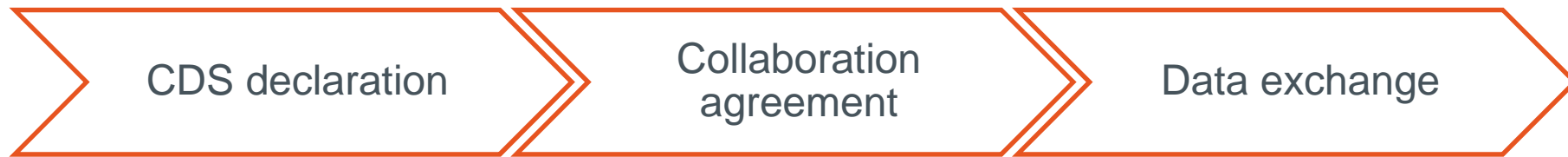
Demand flexibility products for CDS

AS IS

Flexibility products	R3DP	SDR
Metering requirement	Measure of ¼ h-value of active power	
	Compliant with Technical Regulation	
	Metering facilities must already be used by the CDS Operator for its invoicing obligations regarding its CDS access points.	
Validation of the metering data	CDS Operator	
Metering data exchange	Transfer of metering data through specific exchange format	
Collaboration agreement	A cooperation agreement between Elia and the CDS Operator must be signed and executed by both parties before the start of the Flexibility Contract.	
Publication of metering data	To BSP	

+ Technical information to be supplied to ELIA

Delivery points within a CDS



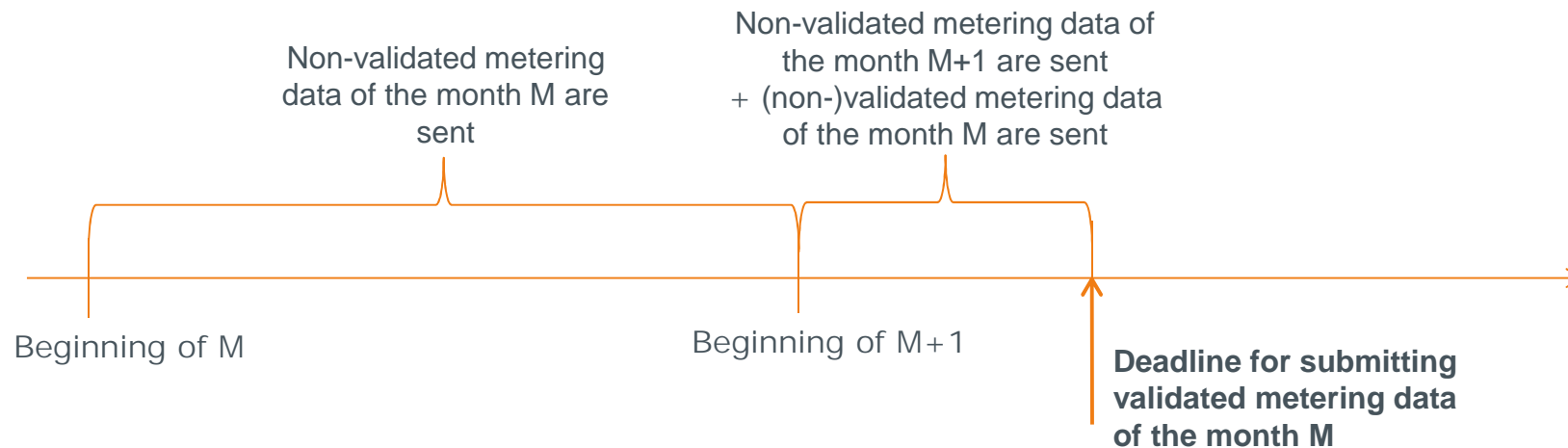
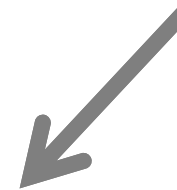
= Annex to GFA

- Allows participation;
- Accepts to sign a collaboration agreement with Elia;
- Informs Elia about a risk of load transfer;
- Confirms he can transmit to Elia confidential information.

- ARP of the CDS GU
- Supplier of the CDS GU
- ...



- Id of the Service Point and the CDS Access Point;
- 1/4h values of (aggregated) active power;
- 1/4h validity status.



Publication Bidladder : Available Regulation Capacity

Publication Bidladder : Available Regulation Capacity (and linked publications)

About the publications today:

- This publication informs about the **available balancing reserves** Elia has at its disposal. It is based on bids and nominations – day ahead and intraday programs – introduced by ARPs, taking into account the known technical (Pmax, Pmin, ramping rate) and contractual limitations.
- This publication should not be regarded as a ex-ante simulation of the effective activated volumes and reached prices due to potential additional constraints such as grid, technical and/or safety constraints that are unknown beforehand.

Principles with respect to introducing BidLadder

- The volumes available on the BidLadder platform will be integrated in a separate category in the publications and/or be taken into account in calculations, in order to reflect the “energy limited” character of the volumes.
- “Intraday” refreshment rate = 15 mins, meaning that changes on the bidding platform will taken into account almost directly.
- The duration of a bid taken into account in the publications will be based on the information included in the bid with respect to “prolongation” (i.e. 1-2-3-4 quarter hours) as for this time period there is a reasonable certainty on the volume being available. Beyond this time period, uncertainty is much higher.

Publication Bidladder : Available Regulation Capacity (and linked publications)

Quarter	Downward regulation						Upward regulation						Total [MW]
	Total [MW]	inter-TSO Export* [MW]	D LC [MW]	D C [MW]	R2- [MW]	R2+ [MW]	I C [MW]	R3 [MW]	R3DP [MW]	ICH [MW]	I LC [MW]	inter-TSO Import* [MW]	
00:00 > 00:15	-520.4	-250.0	-55.8	-74.6	-140.0	140.0	327.9	337.0	244.0	280.0	0	250.0	1578.9
00:15 > 00:30	-520.3	-250.0	-56.5	-73.8	-140.0	140.0	327.9	337.0	244.0	280.0	0	250.0	1578.9
00:30 > 00:45	-520.4	-250.0	-57.1	-73.3	-140.0	140.0	327.9	337.0	244.0	280.8	0	250.0	1579.7
00:45 > 01:00	-505.8	-250.0	-57.7	-58.1	-140.0	140.0	343.4	337.0	244.0	281.0	0	250.0	1595.4

→ Additional column will be added.

Quarter	Marginal prices (€/MWh) for activation of										
	inter-TSO Export*	D LC	D C	R2-	R2+	I C	R3	ICH	I LC	inter-TSO Import*	
00:00 > 00:15	-100.00	-180.00	-100.00	15.06	44.06	300.34	300.34	75.00			539.24
00:15 > 00:30	-100.00	-180.00	-100.00	15.06	44.06	300.34	300.34	75.00			539.24
00:30 > 00:45	-100.00	-180.00	-100.00	15.06	44.03	300.34	300.34	75.00			539.24
00:45 > 01:00	-100.00	-180.00	-100.00	15.06	44.03	300.34	300.34	75.00			539.24

→ Bidladder will be taken into account.

Quarter	Marginal prices (€/MWh) for activation of																	
	-Max	-800 MW	-700 MW	-600 MW	-500 MW	-400 MW	-300 MW	-200 MW	-100 MW	100 MW	200 MW	300 MW	400 MW	500 MW	600 MW	700 MW	800 MW	Max
00:00 > 00:15	-180.00					-180.00	-180.00	-180.00	16.05	44.06	85.76	85.75	85.76	300.34	300.34	300.34	300.34	539.24
00:15 > 00:30	-180.00					-180.00	-180.00	-180.00	16.05	44.06	85.76	85.75	85.76	300.34	300.34	300.34	300.34	539.24
00:30 > 00:45	-180.00					-180.00	-180.00	-180.00	16.05	44.03	85.76	85.75	85.76	300.34	300.34	300.34	300.34	539.24
00:45 > 01:00	-180.00					-180.00	-180.00	-180.00	16.05	44.03	85.76	85.75	85.76	300.34	300.34	300.34	300.34	539.24

→ BidLadder will be taken into account

Publication Bidladder : Available Regulation Capacity (and linked publications)

“Using Regulation Capacity”: based on what actually happened
 → Integration of BidLadder

		Strategic Reserve	Upward regulation Volume						Downward regulation Volume				
Quarter	NRV (MW)	SR (MW)	GUV (MW)	IGCC+ (MW)	R2+ (MW)	Bids+ (MW)	R3+ (MW)	R3DP+ (MW)	GDV (MW)	IGCC- (MW)	R2- (MW)	Bids- (MW)	R3- (MW)
00:00 > 00:15	-45,443		27,563	3,673	23,890				73,000	58,206	14,790		
00:15 > 00:30	-70,671		3,793	0,022	3,770				74,463	55,603	17,860		
00:30 > 00:45	-103,996		3,603	2,113	1,490				107,593	60,549	47,040		
00:45 > 01:00	-269,060								209,000	129,670	139,330		
01:00 > 01:15	-58,185		75,628	0,778	75,640				80,033	45,893	38,760		

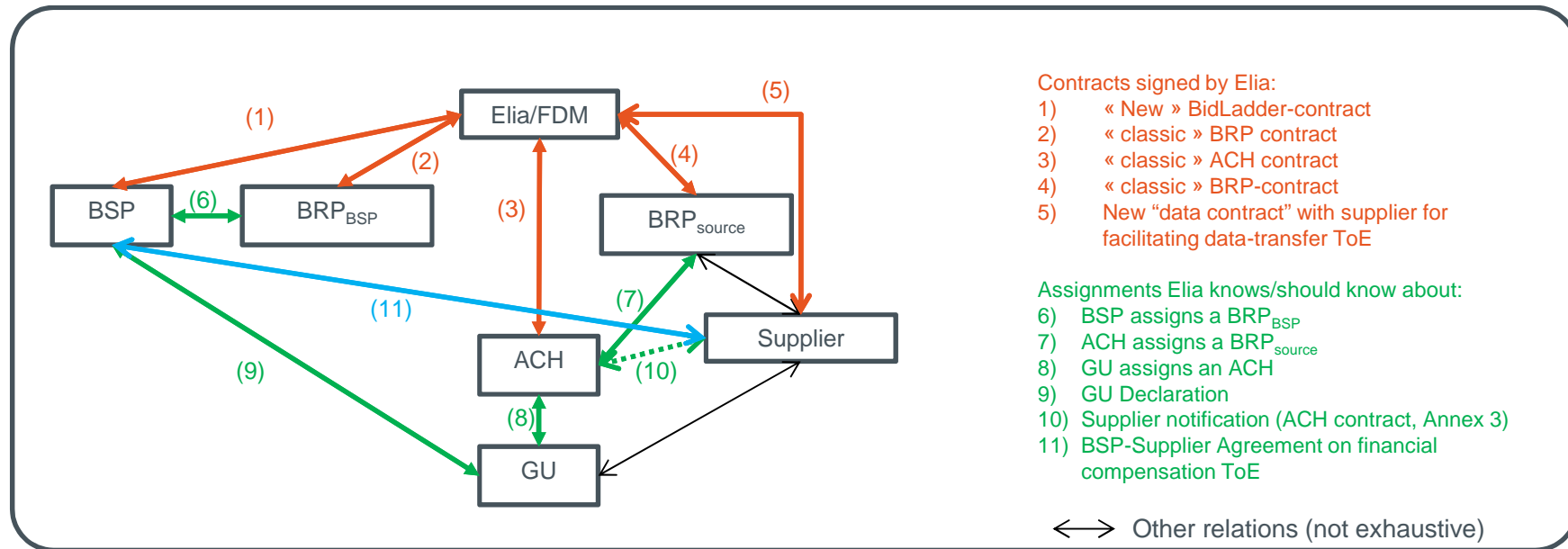
→ Bidladder will be taken into account.

		Strategic Reserve	Incremental Prices					Decremental Prices				
Quarter	NRV (MW)	SR (€/MWh)	MIP (€/MWh)	IGCC+ (€/MWh)	R2+ (€/MWh)	Bids+ (€/MWh)	R3+ (€/MWh)	MDF (€/MWh)	IGCC- (€/MWh)	R2- (€/MWh)	Bids- (€/MWh)	R3- (€/MWh)
00:00 > 00:15	-45,443		44,06	44,06	44,06			16,06	16,06	15,06		
00:15 > 00:30	-70,671		44,06	44,06	44,06			16,06	16,06	15,06		
00:30 > 00:45	-103,996		44,03	44,03	44,03			16,06	16,06	15,06		
00:45 > 01:00	-269,060							16,06	16,06	15,06		
01:00 > 01:15	-58,185		44,03	44,03	44,03			16,06	16,06	15,06		
01:15 > 01:30	-26,209		44,03	44,03	44,03			16,06	16,06	15,06		

→ BidLadder will be taken into account

ToE with Supplier: overview cases

The “generic” model



BSP= Balance Service Provider (~FSP)
 BRP= Balance Responsible Party
 ACH= Access Holder
 GU= Grid User
 FDM = Flexibility Data Manager

What happens when one party takes up multiple roles?

(e.g. BRP_{bsp} = BRP_{source}, BSP = Supplier, ...)

From “generic” model to different cases



	BSP = Supplier	BSP Supplier
$BRP_{bsp} \neq BRP_{source}$	<ul style="list-style-type: none"> Imbalance adjustment via “new scheme” (asymmetric) No ToE/No FDM <p>Likely?</p>	<ul style="list-style-type: none"> Imbalance adjustment via “new scheme” (asymmetric) ToE/FDM
$BRP_{bsp} = BRP_{source}$ “=” for BRPs means <u>the exact same legal entity, i.e. same BRP-contract</u>	<ul style="list-style-type: none"> Imbalance adjustment via Incentive Correction No ToE/No FDM 	<ul style="list-style-type: none"> Imbalance adjustment via “new scheme” (asymmetric) ToE/FDM

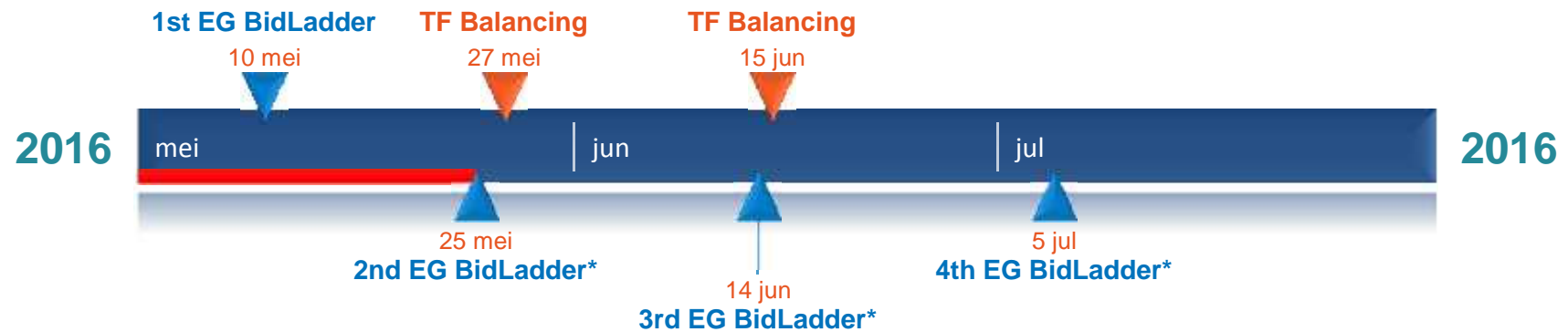
→ Always ToE/FDM as soon as BSP Supplier (1&3 versus 2&4)
 → Only “incentive correction” if there is only one BRP and this BRP has only one counterparty (1&2&4 versus 3)

Wrap-up & next steps

Wrap-up & next steps

- **This meeting** we discussed:
 - Feedback Febeg on counterbalancing & Imbalance Adjustment
 - Feedback BRDA on Imbalance Adjustment
 - Submetering & CDSO
 - Publication Bidladder : Available Regulation Capacity
 - ToE with Supplier: overview cases
- **Next meeting (5/7)**, at least the following topics will be discussed:
 - Final Proposal for Technical Prequalification
 - Mutual exclusivity
- **Stakeholders are kindly invited to share their visions (in writing in between Task Force meetings, via presentation during EWG meetings).**

Wrap-up & next steps



Proposed Meeting schedule Expert Group Bidladder

10 May 2016, 14h-16h, Elia Emperor

25 May 2016, 10h-12h, Elia Emperor

14 June 2016, 10h-12h, Elia Emperor

5 July 2016, 10-12h, Elia Emperor