Integration of the Electricity Market with the European Single Intra-Day Coupling and new MI-MSD coordination rules

Presentation of the blank tests with participants

Online Workshop
05/03/2021

Disclaimer

- **This document covers the entire continuous trading process**, from the submission of offers to the physical scheduling, **even if the tests in March 2021 are dedicated exclusively to the "negotiation" section and partially to the "scheduling" section** (for example, it will not be possible to access a test IPEX to receive the post XBID Unit schedules)
- Further test phases will be promptly communicated to participants
- The section relating to **imbalances** (delta between physical position and commercial position) **will not be the object** of testing in March 2021
- At this stage there is no interruption in the CRIDA opening hours (either for trading or for scheduling)
- In a future test phase, the following will be available:
  - **integration with IPEX**
  - an **API/Json** interface which will be used to automatically use all the trading features (it will be available after go-live)
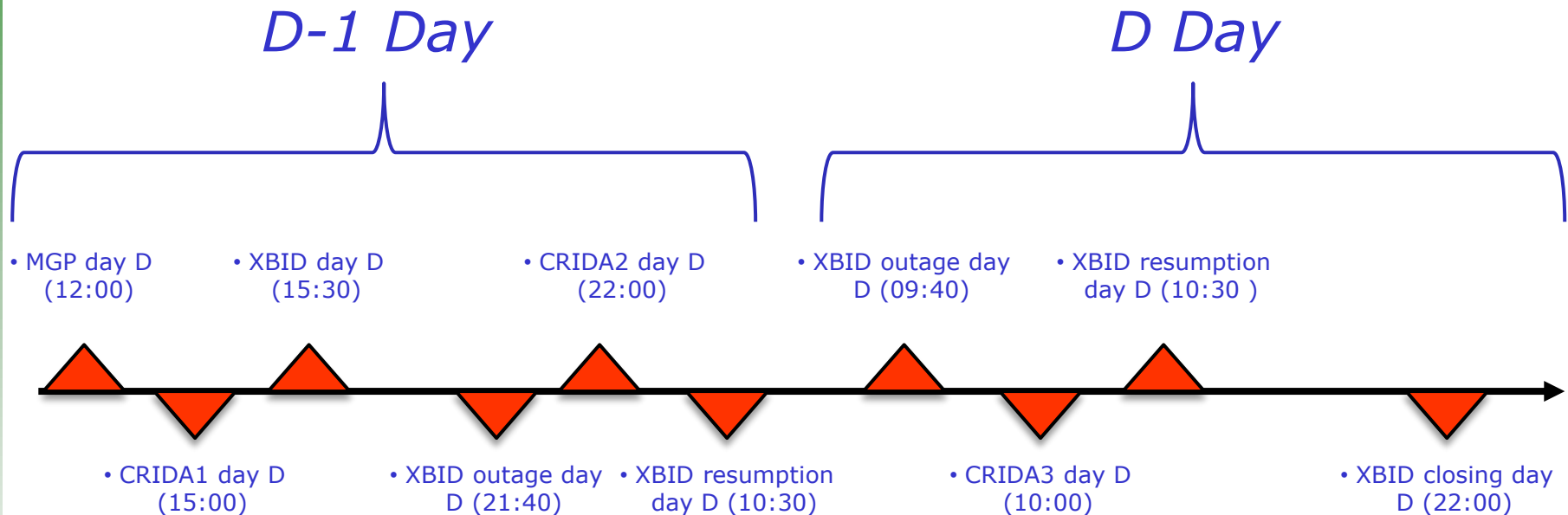
•**XBID: an introduction**

•**The CRIDA auctions**

•**First test phase (March 2021)**
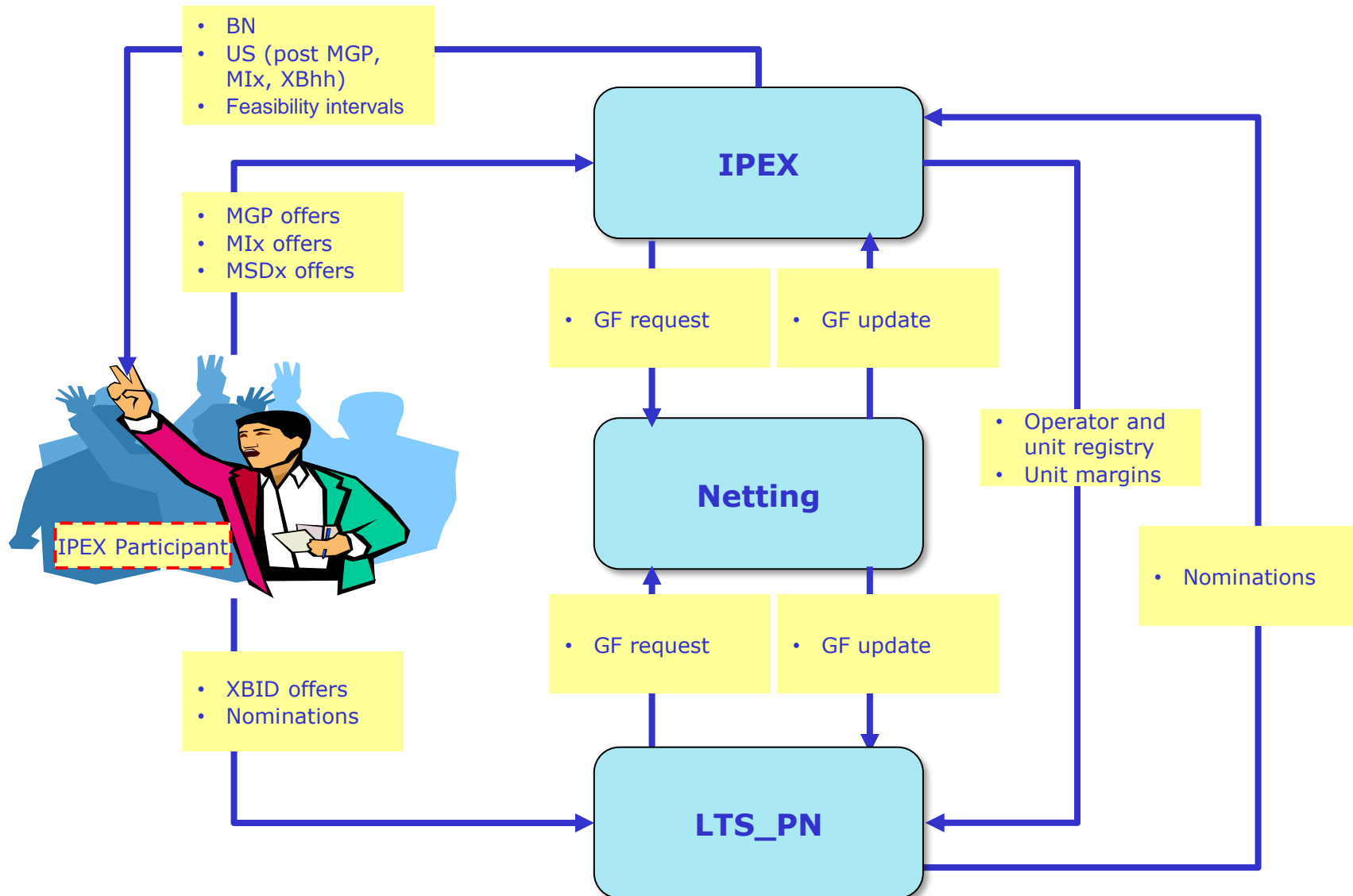
XBID - How implicit auction markets change

- **Timeline (excluding MSD):**

D-1 Day   D Day

- MGP day D (12:00)
- XBID day D (15:30)
- CRIDA2 day D (22:00)
- XBID outage day D (09:40)
- XBID resumption day D (10:30)

- CRIDA1 day D (15:00)
- XBID outage day D (21:40)
- XBID resumption day D (10:30)
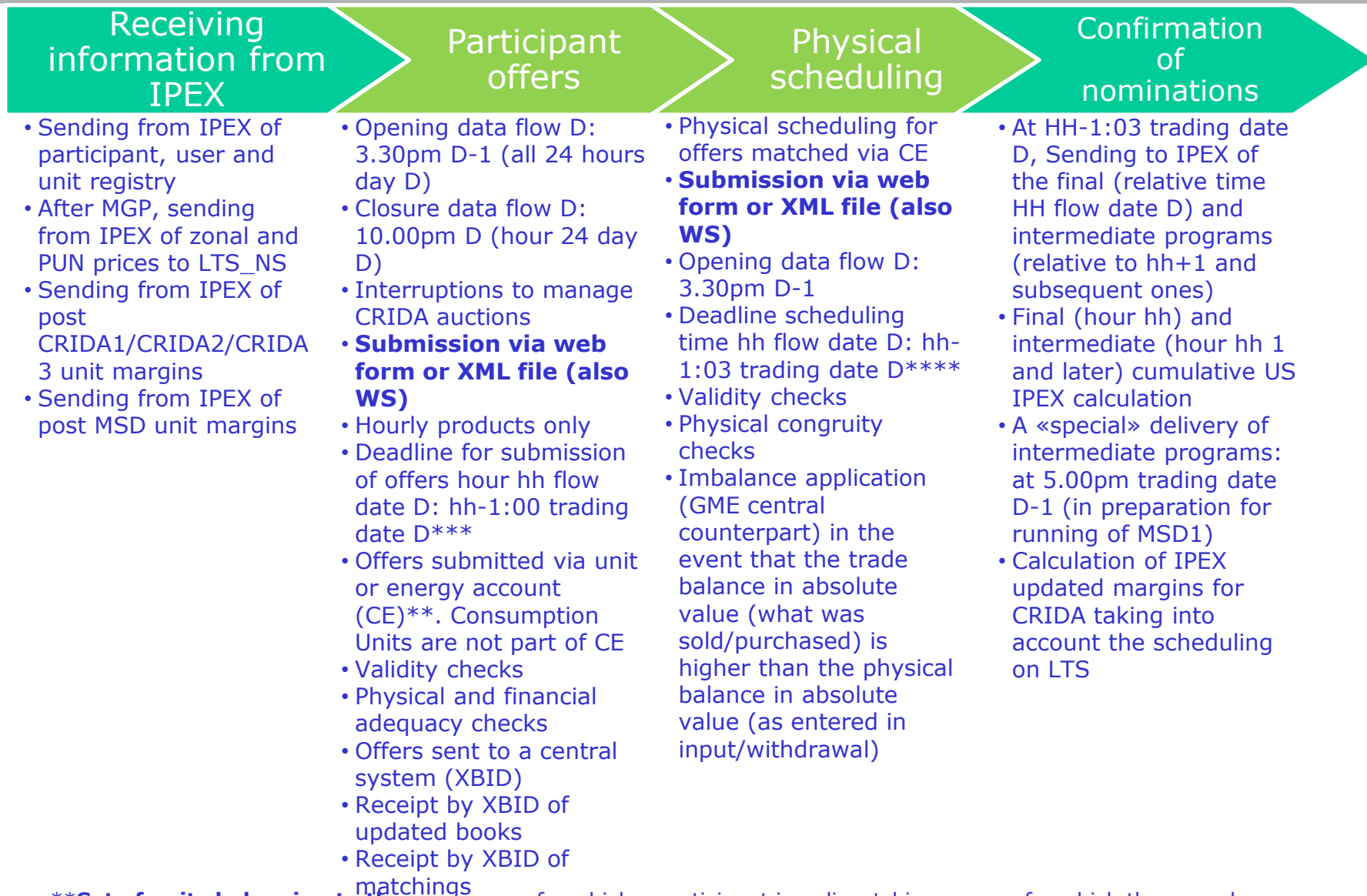- CRIDA3 day D (10:00)
- XBID closing day D (22:00)

- **Minimum and maximum bid price:**
  - **For MGP: -500 €/MWh; 3000 €/MWh**
  - **For the CRIDA: -9999 €/MWh; 9999 €/MWh (aligned to XBID)**
- **It is possible to submit sales and purchase offers at a negative price**
- **Offers without price indication are no longer effective**

GME
Gestore
Mercati
Energetici

GME data flows ⇔ Participants

- BN
- US (post MGP, MIx, XBhh)
- Feasibility intervals

- MGP offers
- MIx offers
- MSDx offers

IPEX Participant

- XBID offers
- Nominations

IPEX

- GF request

- GF update

Netting

- GF request

- GF update

- Operator and unit registry
- Unit margins

- Nominations

LTS_PN

LTS_NS - Trading, scheduling and sending of data to IPEX

Receiving information from IPEX	Participant offers	Physical scheduling	Confirmation of nominations

Receiving information from IPEX
- Sending from IPEX of participant, user and unit registry
- After MGP, sending from IPEX of zonal and PUN prices to LTS_NS
- Sending from IPEX of post CRIDA1/CRIDA2/CRIDA3 unit margins
- Sending from IPEX of post MSD unit margins

Participant offers
- Opening data flow D: 3.30pm D-1 (all 24 hours day D)
- Closure data flow D: 10.00pm D (hour 24 day D)
- Interruptions to manage CRIDA auctions
- **Submission via web form or XML file (also WS)**
- Hourly products only
- Deadline for submission of offers hour hh flow date D: hh-1:00 trading date D***
- Offers submitted via unit or energy account (CE)**. Consumption Units are not part of CE
- Validity checks
- Physical and financial adequacy checks
- Offers sent to a central system (XBID)
- Receipt by XBID of updated books
- Receipt by XBID of matchings

Physical scheduling
- Physical scheduling for offers matched via CE
- **Submission via web form or XML file (also WS)**
- Opening data flow D: 3.30pm D-1
- Deadline scheduling time hh flow date D: hh-1:03 trading date D****
- Validity checks
- Physical congruity checks
- Imbalance application (GME central counterpart) in the event that the trade balance in absolute value (what was sold/purchased) is higher than the physical balance in absolute value (as entered in input/withdrawal)

Confirmation of nominations
- At HH-1:03 trading date D, Sending to IPEX of the final (relative time HH flow date D) and intermediate programs (relative to hh+1 and subsequent ones)
- Final (hour hh) and intermediate (hour hh 1 and later) cumulative US IPEX calculation
- A «special» delivery of intermediate programs: at 5.00pm trading date D-1 (in preparation for running of MSD1)
- Calculation of IPEX updated margins for CRIDA taking into account the scheduling on LTS

**Set of units belonging to the <u>same area</u> for which a participant is a dispatching user or for which the same has received a proxy. The national consumption units DO NOT belong to the CE ***example: offers for the hour 3pm (2.00pm-3.00pm) of the day D can be presented until 1.00pm of the day D itself ****example: the scheduling for the hour 3pm (2.00pm-3.00pm) of the day D, can be sent up to 1.03pm of the same day D

GME
Gestore
Mercati
Energetici

How to get started - User guide

- Access the LTS_NS via a digital authentication certificate at the link: https://provelts-pn.ipex.it/LTSWeb/ through the **CHROME or EDGE web browser**

- **Record the signature** in the markets section➔Signature Management. The signature is valid for 24 hours:
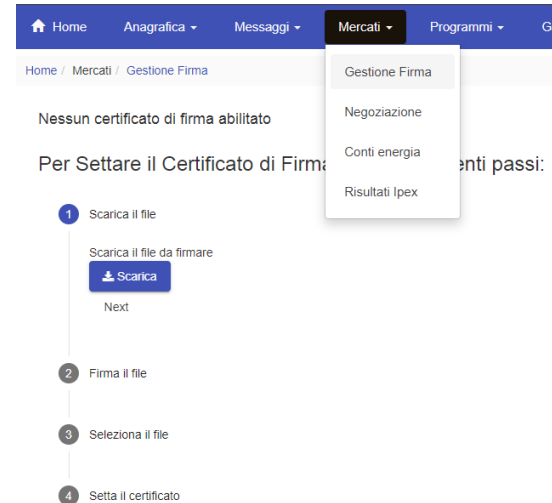
a.Download the file to be signed
b.Sign the file with a signature tool external to the platform (posteOK!; Bit4Id ...)
c.Upload the signed file
d.Save the certificate

Getting started - Booking of financial guarantee

- **Book a financial guarantee** if you wish **to make offers to buy (sell) at a positive (negative) price** and you do not have (on the LTS_NS) credits accrued for the flow date to which the transaction refers, in the section **negotiation➔markets**, indicating the amount and flow date for which to book the GF* (the guarantee can also be booked via xml file and via web service):

Unit master data

Unit

- Updated margins

- Possibility to receive proxy for units on which operator is no Dispatching User

- There is a specific XBID proxy

- **100% capacity delegation**

List of Energy Accounts (CE)

Home / Mercati / Conti energia

Data Flusso	Operatore	Zona	Ora	
21/1/2021		Tutti	Tutti	Q Cerca

Margin UP   **Margin Down**

Filter   Exporta Excel

Operatore	Zona	Ora	Salire	Salire Impegnato	Salire Disponibile	Scendere	Scendere Impegnato	Scendere Disponibile
112591	CNOR	1	35.051	0	35.051	0	0	0
112591	CNOR	2	35.051	0	35.05	0	0	0
112			35.051	0	35.051	0	0	0
11			35.051			0	0	0
11			35.051			0	0	0
11			35.051			0	0	0
11			35.051			0	0	0
11			35.051			0	0	0
11			35.051	0	35.051	0	0	0
112591	CNOR	10	35.051	0	35.051			
112591	CNOR	11	35.051	0	35.051			
112591	CNOR	12	35.051	0	35.051			

- CE initial capacity (if any, UC are not part of the energy account), obtained as the sum of the capacities relating to the account (net of any transactions in the auction markets)

- Capacity committed for unit operations related to the account or for transactions performed on the same account

- Initial capacity - Committed capacity

Each participant can access at any time the total capacity of their energy account by zone, time and date flow
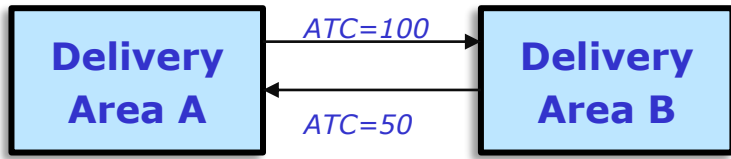
GME Gestore Mercati Energetici

Book example

1.Initial situation:

| Delivery Area A | ATC=100 → ← ATC=50 | Delivery Area B |
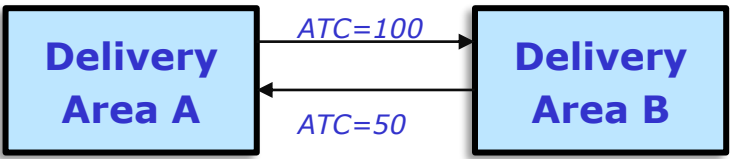
BID	ASK

BID	ASK

2.Insertion of orders delivery area A

| Delivery Area A | ATC=100 → ← ATC=50 | Delivery Area B |

BID	ASK
100 @30	100 @50

BID	ASK
50 @30	100 @50

3. Order insertion delivery area A

| Delivery Area A | ATC=100 → ← ATC=50 | Delivery Area B |
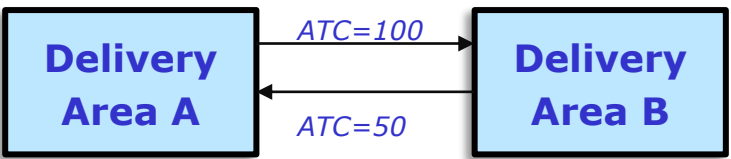
BID	ASK
100 @30	75 @35
	100 @50

BID	ASK
50 @30	75 @35
	25 @50

4.Order insertion delivery area B*

| Delivery Area A | ATC=30 → ← ATC=120 | Delivery Area B |
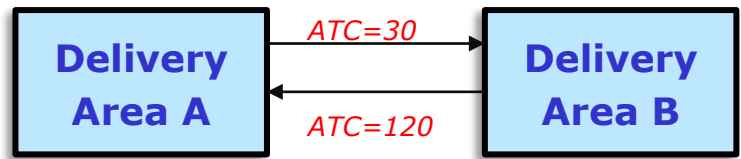
BID	ASK
100 @30	5 @35
	100@50

BID	ASK
100 @30	5 @35
	25 @50

GME
Gestore Mercati Energetici

Submission via Web Form – Book and depth

• Access via Markets/Trading

• Double click on volume, to access the depth of the book

• The price highlighted in blue indicates the presence of one or more offers from the selected participant

• Offer of the selected participant

Submission via Web Form - Simple offer

- Access via Markets/Trading

- Executive limitations
- Time limitations
- Basket Offer
- Iceberg Offer

- Optional
- If empty, it implies CE use

- WD=day D
- DA=day D+1

- As long as it is hidden, an offer cannot be matched

- Maximum 2 decimals
- Min:-9999 €/MWh
- Max:+9999 €/MWh

- Maximum 1 decimal

Submission via Web Form – Advanced offer

Submission via Web Form – Basket offer (example)

- None: no limitation
- Valid: if even just one offer is rejected, none of the offers from the basket enter the book
- Linked:
  - Each basket offer must be marked as EOD (Execute Or Delete)
  - If even just one basket offer does not match immediately and entirely, no offer enters the book

- By clicking "+" it is possible to add more offers

Submission via Web Form - Iceberg offers (example)

Sottometti offerta

Opzioni Avanzate

Operatore

Tipo *
Standard

Offer 1

Data di flusso *
WD

Ora *
15

Zona *
NORD

Unità

Qtà *
50

Qtà Nascosta *
45

Prezzo *
10

Delta Prezzo *
1

Tipo *
Iceberg

Scopo *
Vendita

Esecuzione *
Normal

Modo *
None

Invia   Invia Come Nascosta   Chiudi

- Total quantity of the offer

- Price of the first slice (base price)

- Hidden quantity
- The visible quantity (slice; Qty-Hidden Qty) must be a multiple of 5

- Each time a slice is fully matched, another slice is presented on the book with a price equal to price + (price delta * n), with n=number of slices already matched

Submission via XML– Example of a simple offer file with indication of units

Home / Messaggi / Upload Download

• Select the file to be uploaded

• Sending of files

Data inizio 3/3/2021   Tempo 00:00:   Data fine 3/3/2021   Tempo 23:59:   📂Sfoglia   ⬆Upload   🔍 Cerca

Upload   Download

• Participant submitting the offer

Filter

```
<?xml version="1.0" encoding="iso-8859-1"?>
<Message xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" MessageType="Request"
MessageDate="2021-03-03" MessageTime="08:17:22.2242454Z" xmlns="urn:XML-LTS">
  <Header>
   <Sender>
    <CompanyName>XXXXX</CompanyName>
    <UserMsgCode>XXXXX</UserMsgCode>
    <OperatorMsgCode>XXXXX</OperatorMsgCode>
   </Sender>
   <Receiver>
    <OperatorMsgCode>IDGME</OperatorMsgCode>
   </Receiver>
  </Header>
  <Transaction>
   <Offer>
    <OperatorCode>XXXXX</OperatorCode>
    <FlowDate>YYYY-MM-DD</FlowDate>
    <ZoneCode>XXXX</ZoneCode>
    <UnitId>XXXXXXXX</UnitId>
    <Interval>HH</Interval>
    <Purpose>S</Purpose>
    <Status>A</Status>
    <Mode>NOT</Mode>
    <ExpiryTime>2021-03-03T23:00:00Z</ExpiryTime>
    <Qty>2</Qty>
    <Price>43</Price>
   </Offer>
  </Transaction>
</Message>
```

• H for hidden sending

GME
Gestore
Mercati
Energetici

Modifying an order from the book

- Selected participant

- Double click on volume, to access the depth of the book

- The book shows only the best offers (the cheapest on sale, the most expensive for purchase)

- The offers of the selected participant are highlighted in blue
- By clicking on the price of an offer relating to the selected participant, it is possible to change it:
  - Change price and/or quantity
  - Hide (uncover) an uncovered (hidden) offer
  - Withdraw the offer

Modifying an order from "open orders"

- Selected participant

Home / Mercati / Negoziazione

| Books | Attività Giornaliera | Ordini Aperti | Scambi | Abbinamenti Cross Border | Contratti |

Zona
Tutti

Data di flusso
Tutti

Ora
Tutti

Operatore

Filter

Exporta Excel

Operatore	Zona	Unità	Id	Data flusso	Scopo	Ora	Qtà	Qtà Abb.	Pr.	Pr. Abb.	Stato	Mode	Tipo	Hidden	Delta	Timestamp	Scadenza
IDAU	NORD	-	46450	WD	Vendita	20	1	0	5	-	Attivo	Good for Session	Standard	-	-	2 16:	1 16:2021/01/2021 18:00

Revoca

Scopri

Nascondi

Modifica

Items per page: 25   – 1 of 1

- Download report

- By clicking on the open order, a drop-down menu opens for its withdrawal, hiding (uncovered), modification

GME
Gestore
Mercati
Energetici

Checks carried out during the offer phase

Formal checks

- Deposit of the **digital signature** of the user submitting an order
- **Self-matching** control: prevention of the insertion of a purchase (sale) order that can be combined with a sale (purchase) offer presented by the same participant, in the same area for units relating to the same account or between the account itself and the units relating to it*.
- Check that the **contract** subject of the offer is **still negotiable**
- **Session status** control (session open, not suspended or closed)
- **Participant status** control (in enabled, not suspended or excluded status)
- **Unit control (for unit offers only)**: the participant must be the Dispatching User of the unit used or must have received a proxy; unit in enabled status
- **Quantity limit**: orders with more than one decimal place cannot be entered
- **Price limit**: orders with a price higher (lower) than 9.999 €/MWh (-9.999 €/MWh) cannot be entered; no more than 2 decimal places
- In the event of a single control violation: **order not entered**

Congruity checks

- **Physical congruity**: the amount offered in purchase (sale) must not exceed the residual downward (upward) margins of the selected account or of the selected unit.
- **Financial congruity**: the financial guarantee commitment linked to the submission of the offer must not exceed the guarantee amount booked;
- In case of **violation** of a single control: **order not entered**

GME Gestore Mercati Energetici

Offers status check (1 of 2)

Offers status check (2 of 2)

Daily activity

Home / Mercati / Negoziazione

| Books | Attività Giornaliera | Ordini Aperti | Scambi | Abbinamenti Cross Border | Contratti |

StartDate: 30/9/2020 Tempo: 00:00:00 Operatore: Tipo Offerta: Tutti Tipo Proposta: Tutti

EndDate: 30/9/2020 Tempo: 23:59:00 Operazione: Tutti Zona: Tutti Ordine:

Q Cerca

• Download report

Filter

Exporta Excel

Ordine	Timestamp	Operatore	Contratto	Utente	Zona	Qtà	Prz	Proposta	Stato	Operaz.	Limitaz.	Tipo	Bskt id	Qtà tot	Qtà dis	Pr. base	Delta	Not.	Unità
21750	30/09/2020 11:24:47.454		20200930 24	admin	NORD	1	11	Vendita	Attivo	Abbina	None	Iceberg	-	30	10	11	1	-	-
21752	30/09/2020 11:24:47.454		20200930 24	admin	CNOR	1	11	Acquisto	Attivo	Abbina	None	Standard	-	-	1	11	-	-	
21750	30/09/2020 11:24:47.		20200930 24	admin	NORD	9	11	Vendita	Attivo	Residua	None	Iceberg	-	29	9	11	1	-	-
21752	30/09/2020 11:24:47.000		20200930 24	admin	CNOR	1	11	Acquisto	Attivo	Sottometti	None	Standard	-	-	1	11	-	-	
21750	30/09/2020 11:08:41.791		0930 24	admin	NORD	10	10	Vendita	Attivo	Abbina	None	Iceberg	-	40	10	10	1	-	-
21751	30/09/2020 11:08:41.791			admin	CNOR	10	10	Acquisto	Attivo	Abbina	None	Standard	-	-	15	10	-	-	

• Through the Order ID it is possible to follow the "history" of an offer

• If the field is empty, the offer was submitted on CE

GME Gestore Mercati Energetici

*NOTE: The net position is indicated in the «Physical scheduling» and «Net Position» reports with a negative (positive) sign for net sales (net purchases), while input (withdrawal) is indicated with a positive (negative) sign (as is the case on PCE)

23

Scheduling - Physical scheduling

What is it?

- Through scheduling, **participants can indicate** explicitly **on which units they intend to inject (withdraw) electricity** sold (purchased) through CE
- For the **offers matched through units**, the **scheduling is implicit** (the program is automatically assigned to the unit used to make the offer)
- **Programs** received **implicitly cannot be changed through explicit scheduling** (offer on unit)

Program= balanced action

- It is possible to **replicate the functionality of balanced offers through scheduling**: with the same zonal balance it is possible to indicate one or more units, belonging to the CE of zone Y, upwards for a total of X and one or more units, belonging to the same account, downwards for the same total
- Example:
  - CE_{NORD} balance 18 hours of day D: 0 MWh
  - Insert a program to move upwards 12 MWh on UP1 (relating to CE_{NORD})
  - Insert a downward program of 5 MWh on UP2 and 7 MWh on UP3 (both relating to CE_{NORD})

Scheduling*

- **Submission of programs by flow date D, from 3.30pm of day D-1 (all 24 hours) to hh-1:03 of day D** (for example, it is possible to send the program of hour 19, 6.00pm-7.00pm, of the day 20200930 from 3.30pm of 20200929 until 5.03pm of 20200930)
- **Scheduling inhibited during CRIDA running for the hours that are part of the CRIDA**
- Sending via **web-form** or **XML file** (sending via web service is also permitted)
- When submitting a program, **only formal checks**
- A VBA Macro will be available for participants

GME
Gestore
Mercati
Energetici

*Only for programs explicitly presented. Implicit programs CANNOT be withdrawn

24

Programming via web form

- Clicking on the row relating to an hour, the basket of available units opens

- Withdraw program*

- Not equal to 0 in case of implicit scheduling

- They populate at hh-1: 03 on day D
- In the example at 1.03pm on 30/09/2020

- It must always be entered positive

- Entry or withdrawal

Programming via XML

```xml
<?xml version="1.0" encoding="iso-8859-1"?>
<Message xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" MessageType="Request"
MessageDate="2020-09-30" MessageTime="13:58:52.5597404Z"
xmlns="urn:XML-LTS">
  <Header>
    <Sender>
      <CompanyName>XXXXX</CompanyName>
      <UserMsgCode>XXXXX</UserMsgCode>
      <OperatorMsgCode>XXXXX</OperatorMsgCode>
    </Sender>
    <Receiver>
      <OperatorMsgCode>IDGME</OperatorMsgCode>
    </Receiver>
  </Header>
  <Transaction>
    <Program>
      <OperatorCode>XXXXX</OperatorCode>
      <FlowDate>2020-09-30</FlowDate>
      <UnitId>UXXXXX</UnitId>
      <Interval>24</Interval>
      <Direction>I</Direction>
      <OperationType>SUB</OperationType>
      <Qty>1</Qty>
    </Program>
  </Transaction>
</Message>
```

- I for Injection
- W for withdrawal

- SUB for submission
- REVOKE to revoke

GME *Gestore Mercati Energetici*

Checks be carried out (formal checks only)

Digital signature

- Deposit of the **digital signature** of the user submitting a program

Master data

- **Participant status**: the participant on behalf of whom the program is submitted must be in "enabled" status
- **User status**: in "enabled" and not viewer status,
- **Unit status**: the unit on which the program is submitted must be in "enabled" status
- **Participant enabling**: the participant is authorised to submit programs for the indicated unit (dispatching user or proxy)
- **User enabling**: user authorised to submit programs on behalf of the indicated participant

Validity checks

- **Nomination deadline**: the deadline for submitting the nomination (hh-1:03) has not expired
- **Flow date**: flow date D+1 or D (other dates are not permitted)
- **Completeness of information**: the program contains all the required information (unit, flow date, time, quantity, direction), in the required format.

Controls violation

- The **program** is **discarded**

Programs for unit before final dispatch

- Participant has a net position for sale of 30 MWh in the CNOR and of 20 in the NORD for the hour 3pm (from 2.00pm to 3.00pm) of 26/10/2020
- Participant has programmed 12 MWh to move upwards on CNOR and 30 MWh at the NORD for the hour 3pm (from 2.00pm to 3.00pm) of 26/10/2020
- Participant has until 1.03pm of 26/10/2020 to update his programs
- Until 1.03pm of 26/10/2020 the items "programs sent" and "balance sent" will be equal to 0

Confirmation of nominations - Process description

What is it?

- **Sending of final programs for the hours no longer negotiable** (not modifiable by participants)
- **Sending of intermediate programs for all other hours** (editable by participants)
- **At each sending**, both the **final and intermediate programs are sent**
- The programs affect:
  o **The margins of the units**
  o **The MSD results**

The checks carried out

- **Formal** checks
- Controls of **physical congruity** on the individual unit
- Controls of **consistency between net position and physical planning**

Impact on IPEX

- **Programs are sent through IPEX**
- Generation **simple and cumulative US**
- **Update "offer list" page** (similar to MSD offer list)
- Unit margins update

GME
Gestore
Mercati
Energetici

Confirmation of nominations - When it happens

*CRIDA 3 covers the hours from 13 to 24. Final nominations for hour 13 takes place at 11:03am **2 results files: MSD results (impact only on hours 13 to 16) and feasibility interval (impact on hours 13,14,15,16,17,18,19,20)

- **At 5pm on day D-1:** nominations for all the hours day D, necessary for TERNA to calculate the results MSD1 data flow D (IPEX generates US day D including the results of MGP, CRIDA1 and the provisional nominations LTS_PN)
- **At 9.40pm on the day D-1**: provisional nominations for all hours day D, necessary to calculate the margins available for CRIDA2 (the MGP margins are updated on the basis of the results of MGP, CRIDA1 and the provisional nominations of LTS_PN). No US is generated on IPEX.
- **Every hour, starting at 11:03pm**: final nominations for hour HH and provisional for subsequent ones (i.e. at 11.03pm D-1, LTS_PN sends to IPEX: final nominations for hour 1, 00:00-01:00, of day D and provisional nominations for hours 2-24; at 00:03 D, LTS_PN sends to IPEX: the final nominations for hour 2, 01:00-02:00, of day D and the provisional nominations for hours 3-24...)
- **At 09.40am on day D.**: provisional nominations for all hours from 13 to 24, necessary to calculate the margins available for CRIDA3 (the MGP margins are updated on the basis of the results of MGP, CRIDA1, CRIDA2, MSD4** and of the provisional nominations of LTS_PN*). On IPEX no US is generated
- Example of (provisional) US post delivery XBID format available for participants in the section **IPEX upload/download**:

US_XBhhD_YYYY
994892102370667.

US_XBhhD_YYYY
_0.99489210845148

GME
Gestore
Mercati
Energetici

Confirmation of nominations - Checks carried out

Formal checks

- **Program** attributed to **participant not "enabled":** program is cut

---

Unit margin controls

- **Upward programs**:
  Last upward margin communicated by IPEX - implicit nomination of entry + | implicit nomination of withdrawal | - explicit nomination of entry + | explicit nomination of withdrawal | ≥0
- **Downward programs**:
  Last downward margin communicated by IPEX- | implicit withdrawal nomination |+ implicit nomination entry- | explicit nomination withdrawal |+ explicit nomination entry≥0
- **In case of violation: the program is accepted up to capacity**

Net position vs Presented Programs

- **| Net position |<| Program presented |**: Programs are accepted up to capacity, respecting the program insertion order
- **| Net position |> | Program presented |**: Imbalance application:
  - Imbalance valuation prices communicated by TERNA to GME in D+2 and published on IPEX
  - The imbalance can absorb or increase the participant financial guarantee on the netting
  - In case of insufficient financial guarantee: the residual part is invoiced to TERNA

Program update for unit after sending to IPEX

- At 13.03pm the final programs are sent for the hour 3pm of 26/10/2020 (and intermediate for the following hours)
- In the CNOR zone, Participant presents a balance of -18 MWh: they will pay the imbalance for 18 MWh
- In the Nord Zone, Participant has programmed too much (balance different than 0). Programs are cut (for explicit scheduling, according to priority order of insertion; implicit ones are always accepted).

Unit programs

Sending to IPEX - Impacts on IPEX

- New market for (automatic) registration of provisional and definitive programs from XBID

- Programs are registered as accepted offers
- Until final, each new submission revokes previous hour offers and replaces them with new accepted offers (such as MSD)

Agenda

- **XBID: an introduction**

- **The CRIDA auctions**

- **First test phase (March 2021)**

CRIDAs KPIs

- **Markets in implicit auction coupling (such as MGP),** only hourly products

- **Same architecture as the CH-IT coupling**

- **3 CRIDAs per day of flow D:**

  - MI1*: 3.00pm D-1 (covers all 24 hours of day D)

  - MI2*: 10.00pm D-1 (covers all 24 hours of day D)

  - MI3*: 10.00am D (covers the hours from hour 13 to 24 of the day D)

- **CRIDAs replace the 7 intraday markets** currently run by GME

- **Go live** of the CRIDAs**:** same go live of the XBID

- To the CRIDA adhere**: GME** (Italian NEMO), **BSP** (Slovenia NEMO) and **HENEX** (Greek NEMO)

- **In the future, the CRIDAs will merge into the IDAs**: **3 intraday markets** will be run at European level**, for all nemos participating in the XBID market**

- **XBID: an introduction**

- **The CRIDA auctions**

- **First test phase (March 2021)**

First test phase

Timing

- From 08.00am on **Wednesday 10** to 24.00 on **Friday 12 March**
- From 08.00am on **Wednesday 17** to 24.00 on **Friday 19 March**
- In the LTS section, **trading** with respect to **each hour** can be carried out **until the end of h-1**
- In the PN section, it will be possible to **make nominations** up to the end of **h-57 ''**
- GME will disclose further information relating to the operating procedures for performing of this first test phase through the platform **https://provelts-pn.ipex.it/LTSWeb**

Object of the tests

- **Basic operation:** digital signature registration; participants registry availability
- **LTS section**: booking of financial guarantee; web submission; submission via xml file (including webservice); simple submission of offers (on units or on energy accounts) with/without limitations (execute or delete; execute and delete; Good til date); submission of the basket offer; iceberg offer submission; modification/revocation/hidding of an offer
- **PN Section**: web scheduling; scheduling via xml (including webservice); balanced scheduling

How to access the evidence

Access

- the LTS/PN IT platform will be accessible from **9 March** at the address https://provelts-pn.ipex.it/LTSWeb and only with the Chrome and Edge browsers
- Access for **all users** that are already previously enabled to access the platform **https://proveipex.ipex.it** at the end of the day **8 March 2021** (no further registration required)
- **Users not enabled** for the test platform https://proveipex.ipex.it as of 8 March 2021, **can request registration by sending an e-mail** to **proveME@mercatoelettrico.org**

Relevant data

- All **information** relating to participants (including that relating to the offer points for which each participant is the owner as a Dispatching User) **aligned with that available on https://proveipex.ipex.it** as of **8 March 2021**
- The market participant will be able to send a **request for proxy from the Dispatching User by sending an e-mail to** proveME@mercatoelettrico.org specifying: unit subject to delegation, duration of the delegation (from/to)
- **Financial guarantees** will be provided for each participant, to **€ 999,999,999**
- **The operating manual, implementation guide and web services address will be available on the test platform homepage**

Agenda

Backup slides

Financial guarantee check

Positive priced purchase offers (absorbs FG)

$$Booked\ financial\ guarantee$$

$$-\sum QO_{buy}PO_{buy} + \sum QO_{sell}PO_{sell} - \sum QA_{buy}PA_{buy} + \sum QA_{sell}PA_{sell} \geq 0$$

Negative priced sales offers (absorbs FG)

- If >0 ➜ FG release
- If <0 ➜ FG absorption

- If >0 ➜ FG absorption
- If <0 ➜ FG release

With:
- QO: Offered quantity. ≥0.
- QA: Accepted quantity. ≥0.
- PO: Price offered. **If the offer is presented on national UC:**
  - For purchase offers, this is to be understood as the offer price + | non-arbitrage consideration$^-$| - non-arbitrage fee
  - For sales offers, this should be understood as the offer price + | non-arbitrage consideration| - non-arbitrage fee$^-$
- PA: Matching price. **If the offer is matched on national UC:**
  - For purchase offers, this is to be understood as the matching price + | non-arbitrage fee$^-$| - non-arbitrage fee$^+$
  - For sales offers, this should be understood as the matching price + | non-arbitrage fee$^+$
  - | - non-arbitrage fee$^-$
- $QO_{sell}\ PO_{sell} \leq 0$
- $QO_{buy}\ sir_{buy} \geq 0$
- Non-arbitrage fee rule*:

Purpose	MGP>PUN zonal price	MGP<PUN zonal price
Purchase	Participant Receives NA fee	Participant pays NA fee
Sale	Participant pays NA fee	Participant Receives NA fee

Financial guarantee: examples

- Financial guarantee booked: € 1000 flow date D
- PUN hour 17: 100 €/MWh; PZ $_{MGP\ NORD}$ hour 17: 80 €/MWh; PZ $_{MGP\ CNOR}$ hour 17: 120€/MWh (all prices refer to flow date D)

1. CE_{NORD} buy proposal 10MWh@20 €/MWh hour 17➔ Commitment € 200; guarantee available=1000-200=800 €
2. Sell CE_{CNOR} proposal 10MWh@8 €/MWh hour 17 ➔ Proposed countervalue sell >0: no financial guarantee commitment; guarantee available=1000-200=800 €
3. UC_{CNOR} buy proposal 8@5 €/MWh hour 17 ➔ Corrected offer price for non-arbitrage consideration (in favour of the participant): 5-(100-120) = -15➔ Purchase proposal countervalue <0: no financial guarantee commitment; warranty available=1000-200=800 €
4. Sell CE_{CNOR} proposal 1MWh@-15 €/MWh hour 17 ➔ Proposed value <0: guarantee available=1000-200-15=€ 785
5. Combination proposal referred to in point 2 (matching price: 8 €/MWh) ➔ Matching value: 80; guarantee available=1000-200-15+80=865 €
6. Withdrawal proposal referred to in point 4: guarantee available=1000-200+80=880 €
7. Matching proposal referred to in point 1 (matching price 20): 1000-200+80=880 € (proposed financial guarantee is released, immediately reabsorbed by matching with buying at a price >0)
8. CE_{sici} buy proposal 100MWh@100 €/MWh➔ Proposed equivalent value >0: reserved guarantee-committed guarantee=1000-200+80-10000 <0➔Proposal rejected due to insufficient financial guarantees
9. Financial guarantee reservation modification: reduction from 1000 € to 100 €➔ reserved guarantee-committed guarantee=100-200+80<0➔Reduction not permitted (reduction up to 120 € permitted)

GME
Gestore
Mercati
Energetici

*With the implicit scheduling of -3 MWh (withdrawal), the trader moved further away from the net position of -19 (net position for sale)

Implicit nominations vs explicit nominations (examples)

Net position	Programs presented	Programming necessary?
• Participant A has **sold 10** MWh hour X on **UP_NORD_1** • Participant A has **sold 12** MWh hour X on **UP_NORD_2** • Participant A has **bought 3 MWh** on **UP_NORD_1** • **Net position** hour X NORD area: 10+12-3=**-19 MWh**	• **7 MWh on UP_NORD_1** (implicit nomination in the offers) for hour X • **12 MWh on UP_NORD_2** (implicit nomination in the offers) for hour X • **Total programs** presented hour X: **19 MWh**	• NORD net position hour X = -19 MWh • Total programs presented hour X NORD = 19 MWh • **Net position NORD + Programs presented NORD for hour X = 0** • It is not necessary to program (unless balanced operations are required in the NORD zone)
• Participant A has **sold 10** MWh hour X on **UP_NORD_1** • Participant A has **sold 12** MWh hour X on **CE_NORD** • Participant A has **bought 3** MWh on **UP_NORD_1** • **Net position** hour X NORD zone: 10+12-3=**-19 MWh**	• **7 MWh on UP_NORD_1** (implicit nomination in the offers) for hour X • **Total programs** presented hour X: **7 MWh**	• NORD net position hour X = -19 MWh • **Total programs presented hour X NORD = +7 MWh** • Net position NORD + Programs presented NORD hour X = -12 MWh • **If** the participant does **not schedule by deadline**, imbalance for 12 MWh
• Participant A has **sold 10** MWh hour X on **CE_NORD** • Participant A has **sold 12** MWh hour X on **CE_NORD** • Participant A has **bought 3** MWh on **CE_NORD** • Net position hour X NORD zone: 10+12-3=**-19 MWh**	• **Total programs** presented hour X: **0 MWh**	• NORD net position hour X = -19 MWh • Total programs presented hour X NORD = 0 MWh • **NORD net position - Programs presented NORD hour X = -19 MWh** • **If** the participant does **not schedule** by deadline, **imbalance for 19 MWh**
• Participant A has **sold 10** MWh hour X on **CE_NORD** • Participant A has **sold 12** MWh hour X on **CE_NORD** • Participant A has **bought 3** MWh on **UP_NORD_1** • Net position hour X NORD zone: 10+12-3=**-19 MWh**	• **-3 MWh on UP_NORD_1** (implicit nomination in the offers) for hour X • **Total programs** presented hour X: -**3 MWh**	• NORD net position hour X = -19 MWh • Total programs presented hour X NORD = -3 MWh • **Net position NORD + Programs presented NORD hour X = -22 MWh** • **If** the participant does **not schedule** by deadline, **imbalance for 22 MWh***

GME
Gestore
Mercati
Energetici