



# Intra-Day market – development and integration in Single Intra-Day Coupling

OPCOM S.A.





> Single Intra-Day Coupling, SIDC

> Presentation of the local trading solution M7 ComTrader

> Integration in SIDC – SIDC trial period for market participants





## > Single Intra-Day Coupling, SIDC



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SIDC – Legislative and regulatory context

- **Target of the European Union** to maximize the efficiency of the use of energy production capacities to meet the consumption needs at European level, using the most efficient the European interconnected transmission network. To this goal, the creation of the European single power market was set as a target.
- The third legislative package for electricity adopted in 2009 (Directive 2009/72/EC concerning common rules for the internal electricity market, Regulation (EC) 2009/714 on the conditions of access to the network for cross-border exchanges of electricity), as well as subsequent related regulations (Regulation (EC) 2015/1222 establishing guidelines on capacity allocation and congestion management (CACM Regulation)) have set clear provisions on the European target for the intraday electricity market.
- For the short-term market, day-ahead and intra-day respectively, Regulation (EC) 2015/1222 sets the target model. A number of deliverables (documents according to CACM prepared by OPEEDs in colaboration with TSOs) complement the principles established by the CACM Regulation.
- Only exchanges designated in accordance with the provisions of the CACM Regulation can participate in the implementation of the European target. OPCOM was OPEED (Designated Electricity Market Operator / NEMO - Nominated Electricity Marke Operator) designated by ANRE for Romanian market.

Market participants' training session for using new intraday trading solution / 09-10 October 2019 / Online





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### SIDC – The state of coupling at European level

- **XBID** project is a initiative of some power exchanges (EPEX SPOT, NordPool Spot, APX/Belpex, Omie si GME) together with the Transmission and System Operators from 11 states in order to achieve the coupling (interconnection) of the Intra-day Markets so that they can trade cross-border in the coupled region.
- Subsequently, XBID was confirmed as the target solution of the Single Intra-day Coupling (SIDC) to enable continuous cross-border trading throughout Europe. The central IT solution provider is DBAG (Deutsche Borse AG).





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### **XBID/SIDC** solution

- **XBID** solution includes as the main modules the Shared Order Book (SOB), the common module of managing the available transmission capacities of interconnections (Capacity Management Modules, CMM) and the module that ensures physical (physical notifications) and financial (clearing and settlement) transmission for commercial cross-border trades (shipping).
- The solution offers the possibility of allocating implicit capacity through the continuous matching mechanism, also allowing explicit allocation where the regulatory authorities have requested.



### • SOB – Shared Order Book

It's the module that performs management and matching of the orders. The trades are concluded through this module.

The access to the SOB is done through the PMI (public message interface) or through the WebGUI (web interface).

Market members have access only to the local trading systems (LTS) through which they send the offers and receive the confirmation of concluded trades. The orders are submitted to SOB anonymously.

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### General differences between the current market vs. the new trading system & SIDC

Current IDM (CONDICO / local IDM)

Acess: USB token, user and password

**Terminology** – Market, Instrument

Trading time-zone – EET

Trading GOT D in (D-1) 19:00 EET

Trading GCT - 2h

Order type – Hourly orders

Quantity - MW with 3 decimals Currency (O/T) – RON with 2 decimals Matching type – continuos matching

**Closing Trade price** – Price of the counter-offer

M7 system / local IDM

Acess: user and password Terminology – Product, Contract Trading time-zone – CET Trading GOT D in (D-1) 15:00 CET Trading GCT - 1h Order type – Hourly Orders, Block Orders Quantity – MW with 1 decimal Currency (O/T) – EUR with 2 decimals Matching type – continuos matching Closing Trade price – Price of existing

order

No maintenance period

### M7 system/ SIDC

Acess: user and password

**Terminology** – Product, Contract

Trading time-zone - CET

Trading GOT D in (D-1) 15:00 CET

Trading GCT - 1h

**Tipuri de oferte** – Oferte orare, oferte bloc

Quantity – MW with 1 decimai Currency (O/T) – EUR with 2 decimals

Matching type – continuos matching, auction

**Closing Trade price** – Price of existing order

No maintenance period







## Order types

• REGULAR ORDER – can be executed totally or partially if the matching conditions are met

• ICEBERG ORDER - Iceberg orders are limit orders which are only visible with only part of their total quantity in the market. Quantity can be matched as soon as matching conditions are fulfilled, even if their full quantity is not entirely exposed to the market.

• BLOCK ORDER – can be entered from 2 up to 30 consecutive active hourly contracts .

• **EASKET** – the possibility by which a market participant can enter at once more orders in local order book and with the possibility of being activated at once in the market at his request.

Order type	Execution Restriction	Validity Restrictions	Predefined Market	User-Defined market
Regular predefined	NON (None) IOC (Immediate or Cancel) FOK (Fill or Kill)	GTD (Good till Date) GFS (Good for session)	YES	NO
Iceberg	NON	GTD GF\$	YES	NO
User-Defined Block Order	AON (All or nothing)	GTD GFS	NO	YES
Basket orders	None Valid Linked		YES	NO

### Validity Restriction:

GTD – good till date – The order is deleted when the trading end time of the contract is reached.

✓GFS – good for session – The order is deleted at the specified date/time.

### **Execution Restriction:**

 $\checkmark$  NON – None – orders without restrictions.

 $\checkmark$  IOC – Immediate or Cancel – The order is executed immediately after submission or is cancledby the system; the order could be executed in whole or in part.  $\checkmark$  FOK – Fill or Kill – The order must be executed immediately at the whole quantity

after entry into the system or it is automatically cancelled.

 $\checkmark {\rm AON} - {\rm All}$  or nothing – the way that block orders are traded

### Order State:

 $\checkmark$  ACTIVE – The order is active in the system and can be matched if matching conditions are met.

 $\checkmark$  HIBE – Hibernate – The order can be seen only by the participant without being visible in the market; it can be activated later by the participant .

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## > Presentation of the local trading solution - M7 ComTrader



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# **Technical requirements**

#### Client PC

To run the ComTrader application a PC is required with at least 2 Gigabyte Memory and a processor that runs with not less than 3 GHz single core or not less than 2 GHz dual core processors.

ComTrader application requires a dedicated amount of 1.1 GB of memory, optimal amount of memory is 6 Gb or 8 Gb depending on version used.

Sound card is also required.

Supported Graphics Cards are listed below. In addition, to avoid rendering issues on Windows platform, upgrade the ATI driver to Catalyst 11.09 or later.

Graphics	Supported Graphics Processing Units (GPUs)
Card	
NVIDIA	Mobile GPUs: GeForce 8M and 100M series or higher, NVS 2100M
	series or higher, and Mobility Quadro FX 300M series or higher
ATI	Mobile GPUS: Mobility Radeon HD 3000, 4000, and 5000 series
	Desktop GPUs: Radeon HD 2400, 3000, 4000, 5000, and 6000 series
Intel	Mobile GPUs: GMA 4500MHD and GMA HD
$(\bigcirc)$	Desktop GPUs: GMA 4500 and GMA HD

Windows 7, 8, 10 and Linux Ubuntu (both 64 bit versions) are the Operating Systems supported for M7 ComTrader application,

Running ComTrader on a Virtual Desktop based Infrastructure, as well as any other type of virtualisation setup (e.g. Citrix) is currently possible, but is not supported.

The Client PC must have a suitable internet connection.

### HTTP and SOCKS proxies are supported.

The ComTrader needs a Java Plugin (JRE) with version 8 update 60 or higher version (latest 64 bit version is recommended). Furthermore, the end-user of ComTrader needs access rights to the Java Plugin (e.g. Plugin cache).

When standalone version is used, the proper Java version is bundled and does not require a separate installation.

To access the initial website an internet browser is required (Java Web Start supports primarily Internet Explorer 4 or higher and Mozilla).

For the export functionality Microsoft Excel 2010 is supported.



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# Login window

- Menu
- Connection
  - Direct connection or via proxy

### Safeguards

- Forgotten password. This facility enables the recovery of the password. The new password will be sent at the user's coreponding e-mail adress. After login the Forgotten Password button will transform in change password, option that allows change the password
- Action in case of disconnection
  - No action
  - Deactivate orders on trader level
  - Deactivate orders on account level





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# Workspace view

- The size of the displayed windows can be changed by adjusting them with the mouse;
- The trading window allows for features such as adding new panels by pressing the button "+";
- Each added panel can be individually configured.





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# **Application Menu**

• The menus can be accessed through the menu bar at the top of the screen :

Name	Action
<u>General</u>	
New Trading Window	Opens a new trading window
Logfiles	Opens the file location of the ComTrader log files
Settings	Opens the settings menu
Exit	Closes the application
<u>Profile</u>	
Save Profile	Saves the current profile
Load Default Profile	Load the default profile
Load Last Saved Profile	Load the last saved profile
Import Profile	Imports the profile from another file
Export Profile	Exports the profile in a file
Change Password	Opens the password change menu

	1
General Profile Layout Cor	Profile Layout Connection He
New Trading Window Alt+N	Save Profile Ctrl+S
Logfiles	Load Default Profile
Settings	Load Last Saved Profile
Exit Alt+F4	Import Profile
	Export Profile
	Change Password
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# **Application Menu**

Application Me	nu					
• The menus can be a bar at the top of the s	ccessed through the menu creen:		S	Je		
Name	Action	Layout Connection Hel	þ	Connection Help	Help	
<u>Layout</u>		Design Mode	Alt+C	Open Login Window	Manual F1	
Design Mode	Opens the design mode of ComTrader to add, modify or remove trading panels	Hide Tabs Hide Instrument Navigator	Alt+T rs Alt+P	Logout from Exchange	About	1
Hide Tabs	Toggles the selection tabs in all trading boards off.	AP1	LUV		<u>_</u>	<u>19</u>
Hide Instrument Navigators	Toggles the instrument navigators in all panels off.					
<u>Connection</u>						
Open Login Window	Opens login window					
Logout from Exchange	Disconnects the participant from the application				/	
Help			$\bigcirc$	$(O) \cap \mathcal{L}$		
Manuai	Opens the application manual in pdf. form		$\mathcal{O}_{(C)}$			
About	Shows details about the application version		77			



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# Adding a panel to the main window 📀

- Adding action can be done via the button "+" or from the Layout menu and the Design Mode submenu;
- Using the drag & drop method, hold down the mouse and drag the desired panel to the screen. If it is in the center of a current panel, it will replace it. If it is positioned next to a current panel, it will be added without replacing the existing one;
- All existing panels on the screen can be resized.







Predefined and defined market



**Predefined market (Predifined products)** represents the market for predefined products. (For the Romanian bidding area, the predefined product is the hourly product). Contracts are instances of the predefined product and are automatically generated by the system.

E.g.: for the hourly product (XBID\_Hour\_Power) 24 contracts are generated automatically for each trading day.

**User defined market (User defined delivery period)** represent the market of block orders. Block contracts are generated instantaneously at the time of placing orders, based on the active tradable contracts from the predefined market.



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# **Iceberg orders**

ICEBERG ORDERS – are visible with a partial quantity (peak quantity) of the total quantity offered. Once the displayed quantity is traded, a
new quantity is displayed. The quantity in the Iceberg order is traded as soon as the matching conditions are met even though at the time of
matching not all the quantity that is to be matched was displayed. The order can be defined so that the price varies with a predetermined
value (peak price delta) for each displayed predefined quantity of the order.

### Iceberg order features:

- Total quantity
- Peak quantity
  - ✓ When entering an order, the displayed quantity is always equal to the declared peak quantity;
  - ✓ Following the trading of a quantity from the order of Iceberg, the total quantity is reduced. There are following possibiliies:
    - The traded quantity is smaller than the peak quantity the non-traded quantity within the peak quantity remains visible without changing the timestamp;
    - The traded quantity is greater than the peak quantity a new quantity equal to the peak quantity is displayed (if greater than the peak quantity) with a new timestamp;
- Price variation
  - If a price change is declared, the price of each new slice quantity is given by the price of the previous displayed quantity plus the price variation;
  - The declared price variation can be negative or zero for the buy orders and positive or zero for the sell orders.





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1	Basket	>											$\sim$	$\sum$		
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	TEL	¥ s	T12-T1		12.0			11.00		₽	REG	$\checkmark$	No	NON	GFS	
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+	+ 5 Submission restriction: 💿 None 🔿 Valid 🔿 Linked 🖉 👘 Cancel 🍞 Add 🕼 Modify 📀 submit 🏷 Clear															

Basket

- This feature allows the entry of multiple orders (max 100) at the same time in the system;
- Basket orders can have restrictions at activation (None, Valid, Linked);

Selecting a restriction is applied for all orders:

- None: Basket orders are treated independently. If an order is invalid (the contract on which the entry of the order is wanted had expired) not all Basket orders are going to be refused, but only the invalid one;
- Valid: All orders should be valid, otherwise they all are going to be refused at activation;
- Linked: All orders need to be matched or none is matched. For this type of restriction all orders type needs to be FOK (Fill or Kill).
- Switch all to FOK: Switching of all orders in FOK.
- Cancel: The cancelling of all selected orders.
- Add: Adding a new order.
- Modify: Modifying an order.
- Submit: Activates the orders in the system.
- Clear: Deletes all the orders from Basket.



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# Order Basket import:

Export All to CSV file is selected, so there will be a CSV file created with the matching columns that need to be filled. The file is filled with the orders that you want. Example in the table below:

	Α	В	C	D	E	F	G	Н	1	1	R	L	M	N	0	Р	Q	R	S
1	Area	B/S	Ctrct	RCtrct	Qty	PQty	PPD	Prc	SPrc	Accnt	Туре	State	AOT	ExeRes	ValRes	ValDate	Txt	BG	o/c
2	TEL	В	04-05_XB		10.000			10.000	$\langle \rangle$	P	REG	ACTIVE	No	FOK	NON			TEST1-BG1X	
3	TEL	В	07-08_XB		5.000			8,000	$\left( \bigcirc \right)$	P	REG	ACTIVE	No	FOK	NON			TEST1-BG1X	
4	TEL	S	07-08_XB		15.000			11.000	$\mathcal{I}$	Р	REG	ACTIVE	No	FOK	NON			TEST1-BG1X	$\langle \langle \rangle$
5	TEL	S	09-10_XB		2.000	~	$\langle \rangle$	5,000		Р	REG	ACTIVE	No	FOK	NON			TEST1-BG1X	
6							///												

After the CSV was filled, the file is saved and is introduced in the system by pressing the Import from CSV button.

> Basket Export All to CSV file Copy Selection (Excel) 1 Export Selection to CSV file 📥 Import from CSV file

Paste (Excel)





## Order and trading reports

For the download of order and trade reports the connection at M7 Web GUI with the reporting user (RPT1XXXX) is necessary. The reports that can be downloaded are:

- Order report (TC540)
- Trade report (TC810)
- Maintenance report OTC (TC820 not applied for IDM)

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Subscribe Reports	a hist	
P Freq Name		Subscribe
TC540 D Daily Order Maintenance Report		
TC810 D Daily Trade Confirmation Report	$\Diamond$ ( $\land$ ) $\lor$	$\checkmark$
TC820 D Open Otc Maintenance Report		
		Save subscriptions
Download Reports		
ID Size Date Filename		
TC540 429 bytes 30.09.2019 xrpm_TC540_20190929_0	COM_RPTDPC01.xml.zip	
TC540 1 KB 01.10.2019 xrpm_TC540_20190930_O	RCOM RFTOPC01.xml.zip	
TC540 427 bytes 02.10.2019 xrpm_TC540_20191001_OF	PCOM_RPTOPC01.xml.zip	
TC810 428 bytes 30.09.2019 xrpm_TC810_20190929_OF	PCOM_RPTOPC01.xml.zip	
TC810 1 KB 01.10.2019 xrpm_TC810_20190930_0F	PCOM_RPTOPC01.xml.zip	
TC810 427 bytes 02.10.2019 xrpm_TC810_20191001_OF	PCOM_RPTOPC01.xml.zip	
TC820 426 bytes 30.09.2019 xrpm_TC820_20190929_OF	PCOM_RPTOPC01.xml.zip	(())
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The generating of reports needs before hand checking the relevant subscribe boxes and saving the changes.



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## **Downloading the reports**

- The download of reports for trading D day is available starting with 05:00 CET of the trading D+1 day, until D+5 day;
- Reports are downloaded by selecting the wanted report from the Download Reports window.
- Reports are in XML format, archived.

Jownload Reports							
ID	Size	Date	Filename				
TC540	429 bytes	30.09.2019	xrpm_TC540_20190929_OPCOM_RPTOPC01.xml.zip				
TC540	1 KB	01.10.2019	xrpm_TC540_20190930_OPCOM_RPTOPC01.xml.zip				
TC540	427 bytes	02.10.2019	xrpm_TC540_20191001_OPCOM_RPTOPC01.xml.zip				
TC810	428 bytes	30.09.2019	xrpm_TC810_20190929_OPCOM_RPTOPC01.xml.zip				
TC810	1 KB	01.10.2019	xrpm_TC810_20190930_OPCOM_RPTOPC01.xml.zip				
TC810	427 bytes	02.10.2019	xrpm_TC810_20191001_OPCOM_RPTOPC01.xrnl.zip				
TC820	426 bytes	30.09.2019	xrpm_TC820_20190929_0FCOM_RPTOPC01.xml.zip				
TC820	427 bytes	01.10.2019	xrpm_TC820_20190930_OPCOM_RPTOPC01.xml.zip				



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## Collateral and settlement of IDM trades (1)

- > In order to participate in trading with offers to buy at positive prices / for sale with negative prices, the IP Participants must conclude:
- A Direct Debit Mandate SEPA Direct Debit (MDD) in lei, with its Settlement Bank, which will record in TRANFOND, as the case may be; - Letter of bank guarantee of payment in favor of OPCOM, issued by the Guarantee Bank in lei, endorsed by the Central Account Bank, as the case may be, with the maintenance of the current facility to be common for IDM and DAM.
- Each IDM member who recorded trandes will be able to access for the respective delivery day 2 (two), Daily Settlement Notes, namely:
- Daily Settlement Note in EUR;
- Daily Settlement Note in LEI,
- > The daily settlement notes will contain the following information:

- the quantity of electricity traded, the price and the related value (including VAT if applicable), on each contract and on each trading interval;



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## Collateral and settlement of IDM trades (2)

- the quantity of electricity traded, cumulated, at the level of the day of delivery, for sale, respectively for purchase;
- the value related to the transactions (including VAT if applicable) at the level of the day of delivery, sale and purchase, respectively, as well as the net daily value of payment obligations / collection rights.
- The conversion of EUR into LEI will be done at the exchange rate published by the BNR, on trading day D (if this is a working banking day), for the Contracts for the next delivery day (D + 1), which will be in active status at 15:00 CET on trading day D.
- According to the stipulations of the BNR Regulation no. 4/2005, with the subsequent modifications and completions, the receipts and payments will be made in the LEI, even if the transactions and the service provide are done in EUR.
- > The mutual invoices between OPCOM and the IDM member will be executed in LEI.

Settlement notes and hourly physical notifications (for BGs) will be accessible through a separate FTP over HTTPS computer system based on digital certificate and password, similar to the REMIT reporting system.

A test system is available at <u>https://testm7pt.opcom.ro:4443</u> and will be accessible through the initial username and password, communicated for access to the trading system.



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## Integration in SIDC - The trial period of SIDC with market participants

OPCOM website:

### 02.10.2019

• Single Intraday Coupling (SIDC) - 2nd Wave Pre-Launch Event

We want to inform you about the Pre-Launch event of the 2<sup>nd</sup> wave of the Single Intra-Day Coupling, which took place on 1 October 2019 in Prague.

Please consult with this occasion the presented and discussed documents:

Single Intraday Coupling (SIDC): Questions & Answers;

Single Intraday Coupling (XBID) Information Package,

Single Intraday Coupling (SIDC) - 2nd Wave Pre-Launch Event - Presentation.



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Thank you for your attention!

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