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XMtrade®/PXS User Manual (V. 2.4.2)

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# 1. XMTRADE®/PXS SYSTEM WEB PORTAL

Users have access to the web portal through the XMtrade® / PXS single sign-on system available at https://scmo.oree.com.ua/.

### 1.1. Orientation in the manual

This Manual is a comprehensive document. Therefore, certain conventions have been introduced that make it easier to navigate the text.

The following sections describe the conventions used:

- Documentation splitting <u>Documentation splitting</u>
- Styles used Styles used

### 1.1.1. Documentation splitting

This Manual has been designed for quick orientation and navigation through its individual sections. Sections are organized into logical units according to the user method and level of use of the system:

- <u>Basics for working with the system</u> the chapter contains basic tasks for working with the program.
- Working Methods using the information in this section, you can gain knowledge about the functionality of each system.

### 1.1.2. Styles used

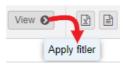
This Guide uses several styles of text and control elements to help you determine what the text is about or what the control element is about. Control elements are located on the right of the form. They are marked with a thematic button. These elements serve mainly to select from a defined segment of indicators, and also to review the historical indicators of such an item. The main button is an element for selecting a date.

### Conditionality in the document:

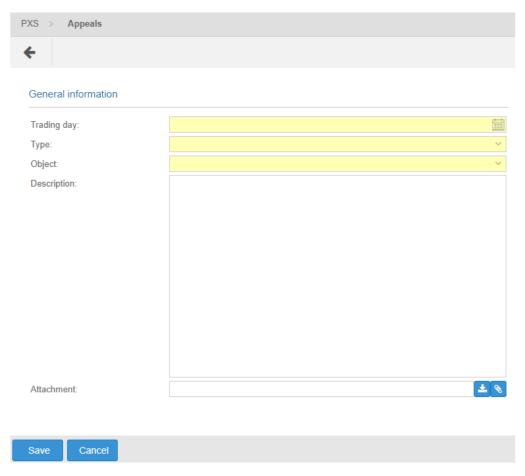
- > Text in italics (Italic) text written in italics means that it is about the names of fields (points), names of sections, descriptions of notes, warnings.
- **Bold text** the text written in bold means that it is about the control element of the system. The control element can be a button, the name of the web portal.
- <u>Documentation separation</u> switching to another part of the documentation. By clicking the mouse on such text, the corresponding part of the documentation will be displayed automatically. This text defines the beginning of the paragraph, which contains important information related to the use of the described function. In most cases, such a paragraph specifies the specifics of use.

### Conventions of control elements:

➤ Buttons - serve to perform the necessary functionality. When the mouse cursor is placed on the button, the color of the button will change from pale to dark, or an additional description of the functionality of the button will be displayed in the comment. Clicking on the button will start the corresponding process.

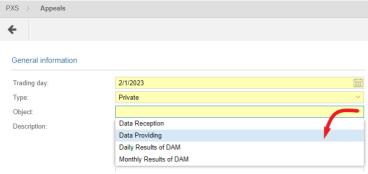


> Editing fields – are fields with a white or yellow background in which data can be entered.



You can fill in the fields with the help of numbers or by selecting existing data from the list, which significantly speeds up the selection of the correct or appropriate indicators.

Expandable fields (drop-down menu) – provide an opportunity to adjust the indicator of the point by expanding the list/suggestions and selecting the required option from it.



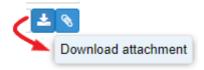
Check box – gives the opportunity to choose. Properties are turned on or off by clicking on the field.



➤ Mandatory fields of the form – all mandatory fields of the form have a yellow background. In case of incorrect filling of the form and subsequent submission, the incorrectly filled fields will

be marked with a red frame and a hint that will inform the user about the content of the error.

"Hint" or "Helper" – after hovering the mouse cursor over a field or item with data, an informative text or text with a note will be displayed.



# 2. BASICS OF WORKING WITH THE SYSTEM

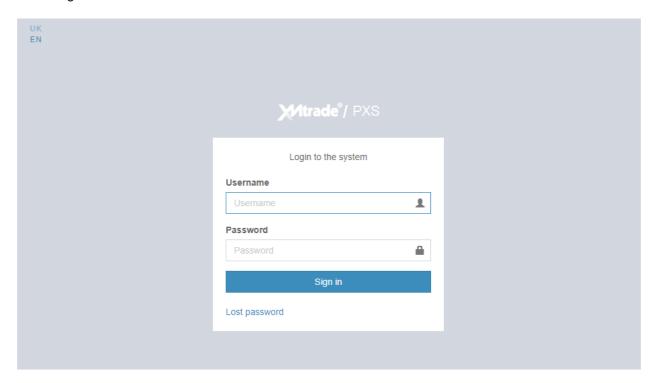
- Access to the system
- > XMtrade®/PXS system start window
- Data export to a file

# 2.1. Access order the XMtrade®/PXS system

The XMtrade®/PXS web portal is available on the <a href="https://scmo.oree.com.ua/">https://scmo.oree.com.ua/</a> page. The information and technical system of the participant must meet the following requirements:

| Display:           | Minimum resolution 1920 x 1080.  |  |
|--------------------|--|--|
| Internet           | It is necessary to connect to the Internet at a speed of at least 10 Mbit/s with     |  |
| connection:        | adequate connection quality (without packet loss).                                   |  |
| Web browser:       | The latest version of one of the following web browsers: Mozilla Firefox, Google     |  |
|                    | Chrome, Safari, Opera, Microsoft Edge.   |  |
| Digital signature: | Availability of qualified digital signature certificates from at least two different |  |
|                    | qualified digital trust service providers.   |  |

After a successful connection to the server, a page with a start window is displayed, with the "Log in" dialog box.

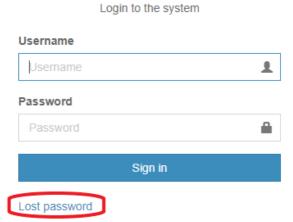


Description of dialog box items:

- Username the user name assigned by the system, taking into account the necessity to correctly enter small and uppercase letters.
- Password password must contain 8 to 16 characters, at least one number and one uppercase letter.

In case of incorrect filling of some login data and after pressing the button sign in , an error message will be displayed to the user:

Помилка перевірки: Invalid username or password If the user does not remember his password, he has the opportunity to send a password recovery request via e-mail through the system by clicking on the **"Lost password"** button.



Then the "Lost password" dialog box is displayed:



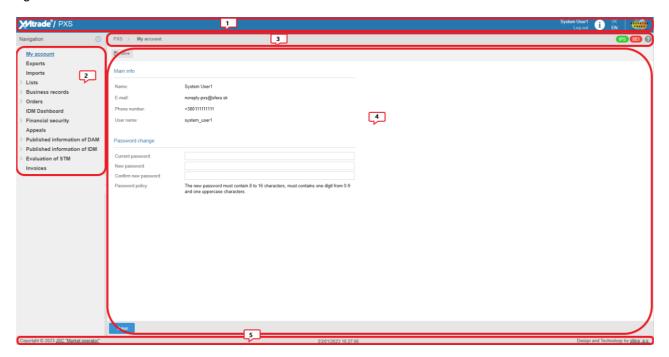
> Username – system assigned user name, lowercase and uppercase letters must be entered correctly.

After filling in these items, click the "Reset" button.

In the case of correctly filling in the login data and after clicking the button sign in the user will be presented with a dialog box to confirm authorization with the help of a qualified digital signature, where he must choose the key of the digital signature and enter the password to the key.

# 2.2. XMtrade<sup>®</sup>/PXS start window

The start window of the web portal is divided into logical parts, which are indicated in the following figure.

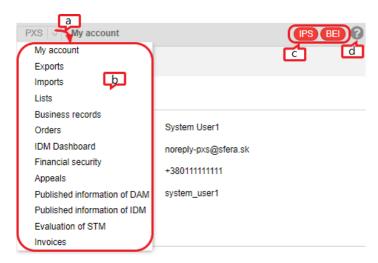


- 1) Title of the portal
- 2) Navigation panel
- 3) Navigation bar
- 4) Content part
- 5) Footer

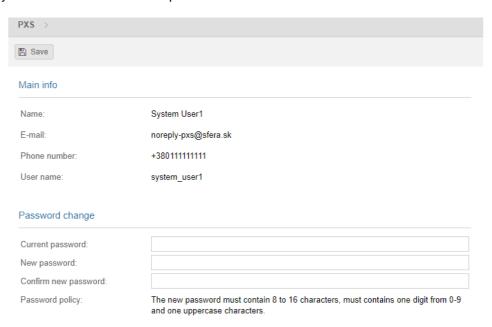
Description of individual parts of the portal:

- 1) *Title of the portal* the top bar of the launch window:
  - XMtrade®/PXS system logo provides an opportunity to display the start window from any page or other part of the web portal.
  - Display user account settings clicking on a logged in user name will display the user account settings.
  - Log out after pressing the button, the system displays a dialog box <u>«Login to the system»</u>, which allows you to log in again.
  - Selection of the language version through the hyperlink (UK Ukrainian, EN English) it is possible to change the language version of the web portal page. The standard default is the Ukrainian version (UK).
- 2) Navigation panel navigation is displayed in a tree-like structure form with pages in the left part of the window, and was made like the directory structure displayed in the Windows Explorer application. Any selection can be marked by clicking on it. Then the corresponding page of the web portal will become active. Bold letters indicate the name of a page that contains at least one subpage. The navigation panel can be hidden with a left arrow» icon or displayed with the right arrow» icon.

### 3) Navigation bar



- a) Xmtrade/PXS hyperlink returning to the start window from any page of the web portal or another part of the portal
- b) By expanding the offers of the drop-down menu, the system displays individual pages of the web portal.
- c) This setting indicates two trade zones (UA-IPS, UA-BEI Burshtyn energy island), which are separated without the possibility of mutual trade.
- d) «Help» if user want to display help page on the current page regarding the problem in the part of the web portal where it is located, then the user selects this button.
- 4) Content part the content part is located in the center of the web portal, where the necessary data of individual pages of the web portal are displayed. After user logs into the system, a dialog box designed for account management is placed in the content part of the start window. The system allows you to edit the user account password.



### Description of items:

### > «Main information» section:

- Name first and last name of the user.
- E-mail e-mail address.
- *Phone number* the user's phone number.
- User name login of the user authorized in the system.

### «Password change» section:

- Current password input for the current password.
- New password input for a new password.
- Confirm new password input to confirm the new password.
- Password policy informative field «The new password must contain 8 to 16 characters, must contains one digit from 0-9 and one uppercase characters.». The system will compare the entered data, and if they do not match, it will ask the user to enter the password again.

The "Save" button confirms the new password.

#### 5) Footer

- In the left part of the window, the current year, copyright owner and a hyperlink to the main page of JSC Market Operator https://www.oree.com.ua/ are indicated.
- > The current time and date are shown in the middle part of the window.
- In the right part of the window, clicking on the hyperlink «Design and Technology by sféra, a.s» the system will display the main page of JSC "Sfera".

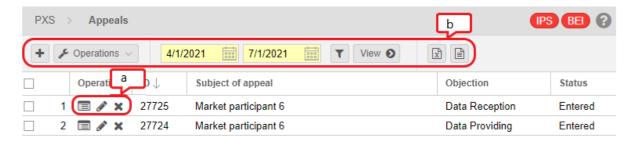
## 2.2.1. Tables type

The system displays in the table a list of records of the corresponding type always after opening the required page of the web portal or after returning from another action within the given page of the web portal. When displaying the list, the system always uses the current parameters for display. While viewing the contents of the table, the user has the opportunity to change the sequence and width of the columns, sort the list, change the number of lists on the page, and flip the pages of the list. If the system does not find any data based on the entered search parameters, then an empty list with the message "No data" is displayed.

- Operations
- Sorting
- Filtering
- Pagination
- Closing/opening columns

### 2.2.1.1. Operations

The user can access only those operations for which he has been granted the right to use.



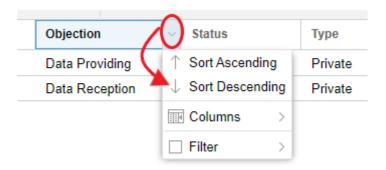
- a) Before starting the individual operation, the user must click on the appropriate button; for group initiation (if such an option exists), he must mark the list of required records. The selection will be passed to the triggered action as an input parameter.
- b) On each page of the web portal, all operations are located in the top panel. The list of available operations may change depending on the context of the page or user rights.

The operation panel is specific to each list of individual pages of the web portal and contains buttons for calling available actions divided thematically into:

- Adding a record, changing a record, saving a new record.
- Return back to the list of the page that being viewed or modified.
- > Standard operations with entries in the table setting the tracking period, version validity period.
- Specialized functions for working with specified records in the table.
- Options for basic and combined filtering of records in the table.
- Export records to a file in the selected format (XLSX, CSV).

### 2.2.1.2. Sorting

Sorting records in tables is done by clicking on the column name. An arrow will appear next to the column name, indicating whether to sort the records in ascending or descending order. An alternative option is to expand the menu that appears after clicking on the arrow to the right of the column header and choose from the options — "Sort Ascending", "Sort Descending". Sorting may not be available on all columns. When pagination is active, the user has a masked interface and is considered informed that filtering is being carried out.

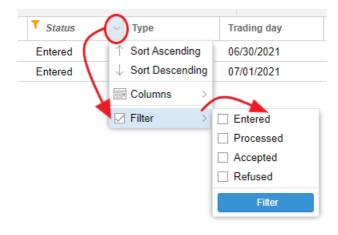


### 2.2.1.3. Filtration

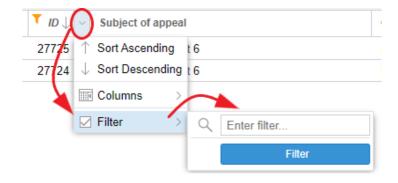
Filtering is performed by using a form above a table with lists. An alternative option is to expand the menu that appears after clicking to the right of the column header and selecting the "Filter" option, where the necessary condition for filtering is defined. Filtering may not be available on all list attributes displayed in the table.

### 1. Filtration by data in a given column

In the table list, after expanding the arrow icon next to the name of the column, the context menu "Filter" will be displayed. There are two ways to set the filter – or from the options offered,

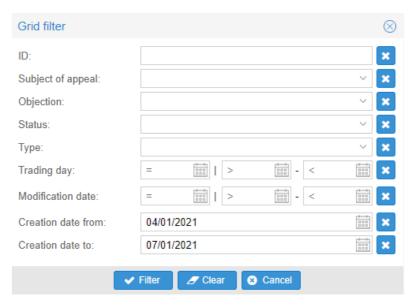


or the necessary text is entered in the field with the magnifying glass icon, which is confirmed by the "Apply filter" button.



### 2. Table filter

Using the button you can enter criteria for filtering in the "Filter table" window and, based on them, get a list of records with new content in the table.

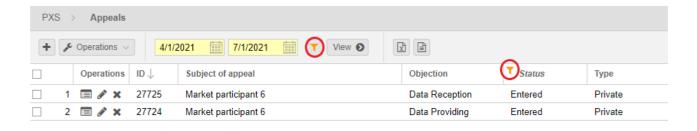


This example displays a window for entering filter criteria for a report list that contains items from a web portal page. Some items, mostly numerical, or data with dates can be filtered by entering a specific indicator, an interval of indicators, or a combination thereof. The corresponding fields for entering filtering criteria are marked with signs «=» (equal to), «|» (vertical line with the value "or"), «>» (greater than), «-» (a dash with the value of the upper limit of the interval), «<» (less than).

### Available operations:

- button to delete the indicator of the corresponding selected parameter.
- button to apply the selection of lists based on the specified criteria and returning to the list view.
- Z Clear button to delete indicators of all selected parameters.
- Cancel button to cancel the filter function and return to the list view.

After entering the filter criteria and after making a selection, the button turns orange that means that the displayed list is displayed as a result of filtering records.



If the system does not find any records based on the filter criteria input, then an empty table without records will be displayed with the message "No records found" in the lower right corner of the panel.

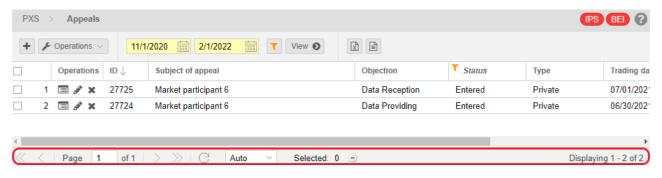


No records found



### 2.2.1.4. Pagination

Pagination is used for all tables displaying more than the configured number of records per page. Functional pagination buttons are located on the panel below the table.



- Record of the required page number Page 1 of 1. Setting up the required search page is possible when you manually enter a page number in a field that displays a current page. The system sorts records on the required page after the user is pressed on the "Enter" key.
- Move from one page forward, to the next page (to the end of the list) or back, to the previous page (to the beginning of the list).

- ➤ Go to the last page of the record →, or to the first page of the list ✓.
- button «*Refresh*» refreshes the content of the displayed window of the selected web portal page.
- ➤ Using the drop-down menu of the Auto button, you can adjust the number of lines displayed on one page ("Auto" is the standard system setting, also 100 or 200 included).



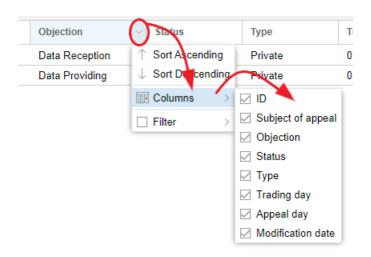
- button «Cancel the choice of selected lists» cancel the indicated selection of the list of this page of the web portal.
- At the end of the row of navigation buttons, the number of displayed lines on the page from the total number of records is shown

  Displaying 1 2 of 2.

### 2.2.1.5. Close/open columns

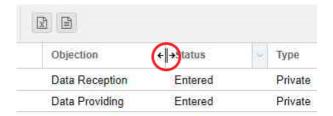
Table columns can be divided into three types:

- 1. Standard they cannot be closed:
  - Marking/unmarking record mark used for group operations, in place of the field name an empty square icon, which can be used to mark/unmark the required lists by placing a check mark in the corresponding field.
  - Serial number of the record generated automatically for each displayed table list, the column has no name.
  - Operations contains an icon for standard available operations («View record», «Change record») for non-standard operations.
- 2. Constantly displayed usually only one column is displayed, which does not appear in the menu of columns that can be hidden («Columns» menu), according to it, the list is sorted in ascending order by default.
- 3. Hidden they are located in the list of columns ("Columns") that can be hidden/shown in the table list. Columns can be hidden or redisplayed in list tables. This feature is available after expanding the menu that appears after selecting the option "Columns" where possible by checking the corresponding box before the name of individual columns of the list, select the columns that should be displayed or hidden.



### Change column width

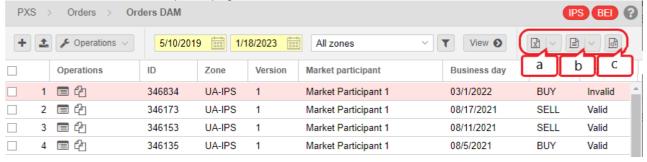
In case the full column name is not displayed in the list header, the user can display it by moving the vertical line , that separates the names of individual header columns. By holding the mouse pointer on the vertical column separator, a graphic symbol will appear, by moving which you can adjust the width of the column to the desired size.



# 2.3. Export data to a file

Export data to a file allows you to display a standard output menu that is supported on all screen types. It mainly concerns the export of data content in tables. Export solves the issue of transferring data from the system to external programs, its purpose is not to solve the formatting of the output data, etc. This means that the standard save format with subsequent editing in XLSX, CSV and XML formats is supported. Text information in CSV format is encoded in UTF-8.

If the user has the right to use this function, he enters the necessary values and confirms the export task. The system will export the selected data of the corresponding page of the web portal from the database to the corresponding file, which will be saved to the selected location on the local disk. With this method, data access rights are considered. The result (content) of the export depends on the place of selection within the web portal page.

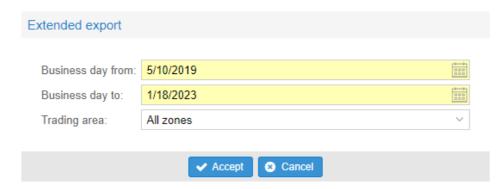


In the menu that expands with buttons on some pages of the web portal, the possibility of export is provided.

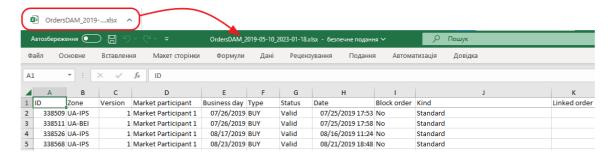
"Into import template" – export individual orders to a standard template, only in XLSX format.



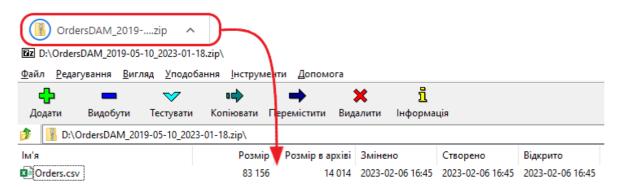
"Extended export" – the possibility of advanced export to the specified file types according to the specified criteria in the dialog box called "Advanced export".



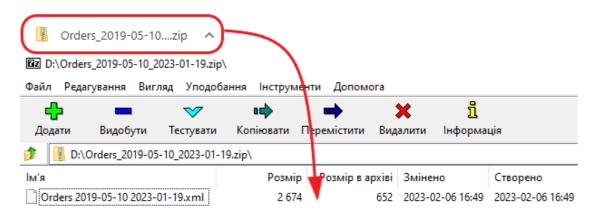
a) Export of lists to Excel - XLSX file.



**b)** Export lists to CSV – Zip file.



c) The XML file export contains a structure describing a list of records.



### Print data

The content of the pages can be printed using functions available directly in the web browser. This function may vary depending on the type of web browser. For standard printing, standard tools of the Internet web browser are used, and for specialized printing, it is printed in XLSX format, along with this, printing will be performed through the use of standard tools for this format, which at the same time allow saving the result in PDF and additional printing outside the system.

# 3 WORKING PROCEDURES ON THE WEB PORTAL

- ▶ <u>Lists</u>
- Business records
- Orders
- IDM Dashboard
- > Financial security
- Appeals
- Published information of DAM
- Published information of IDM
- > Evaluation of STM

### 3.1. **Lists**

Market participants

# 3.1.1. Market participants

The web portal page is designed to display market participants registered in the system.

### Navigation

The user selects from the navigation menu «*Lists*» -> subsection «*Market participants*» after which the system will display a window «**Market participants**».



In the window, the user has the opportunity to perform available operations with lists:

→ with the help of the button you can specify the filtering criteria in the dialog box **«Filter table»** and on their basis receive lists of records with new content in the table.



buttons allow you to export the list to a file in the <u>XLSX, CSV</u> formats.

Description of the window item «Market participants»:

- The first column serial number of the record.
- Name commercial market participant name.
- > EIC entity identifier (EIC).
- Validity starts date of commencement of the agreement.
- Validity ends the date of termination of the contract.

### 3.2. Business records

Agreements are managed on the page «Business records/Contracts». As part of the existing agreement registration operations, the PXS system supports the following functionalities:

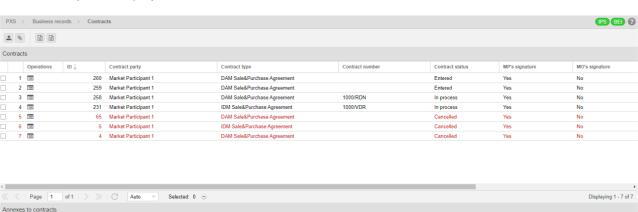
- Registration of a new sale agreement on the DAM/IDM.
- Termination of the DAM/IDM sales agreement. Termination of the DAM/IDM sales agreement will take place in accordance with the provisions of the DAM/IDM Rules. In this case, the market participant's orders, which were submitted to the system in the previous time period, will be rejected after system change processing.
- Registration of a new additional purchase and sale agreement on the DAM/IDM.

### Navigation

Operations ID \ Contract ID Contract number

the latest current status on DAM/IDM.

The user selects the "Contracts" subsection from the "Business records" navigation menu, after which the system displays the "Contracts" window.

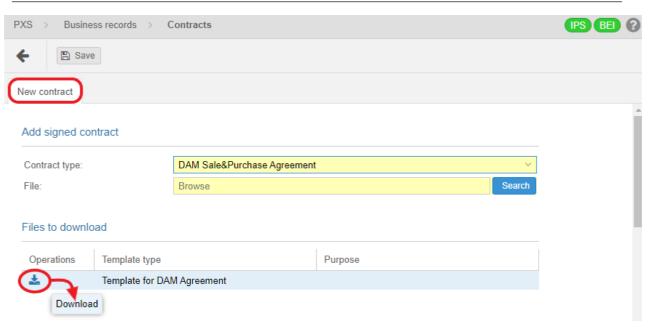


No records found



The page enables users to perform the following operations in the PXS system:

Agreement – the button is available only if the market participant has no active purchase and sale contracts on DAM/IDM or has one active purchase and sale contract on DAM or IDM in the "Confirmed" state. By clicking on the button, the "New contract" form will be displayed on the page in the adding a new contract mode.

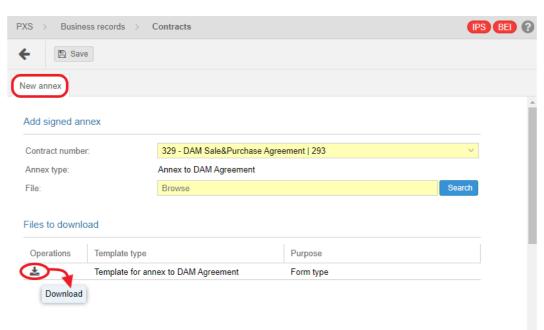


After uploading file, the market participant has the option to download the contract templates into an editable PDF document, in which the market participant fills in the required fields and signs them by digital signature. There are two types of templates, according to the types of contracts:

- DAM purchase-sale agreement.
- IDM purchase-sale agreement.

Then you need to press the button Save . After that, the system performs:

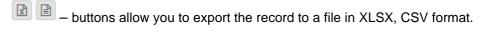
- 1. Verification of the correctness of the document:
  - performs a document format check the document must be in PDF format;
  - performs digital signature verification.
- 2. Creating a new entry in the contracts list.
- Add annex to the contract by clicking on the button, the user can sign a new additional agreement to the purchase and sale agreement on DAM/IDM with a market participant. Uploading the completed and signed document by the market participant is the only way to create the relevant records



After uploading the file, the market participant has the option to download additional agreement templates into an editable PDF document, in which he fills in the required fields and signs additional agreements to the contracts by signing with digital signature.

Then you need to press the button Save . After that, the system performs:

- 1. Verification of the document correctness:
  - document format check the document must be in PDF format;
  - digital signature verification.
- 2. Creating a new record in the list of additional agreements to contracts.



### "Contracts" tab description:

### Section «Agreements»:

- First column serial number of the record.
  - *«Operations»*: «View record» by clicking on the button, the system will display the form **«Contracts»** in view mode.
  - «Add additional agreement» by clicking on the button, the system will display the form «New additional agreement».
  - ID record identification number.
  - Agreement party agreement party (market participant).
  - Agreement type DAM purchase and sale agreement, IDM purchase and sale agreement.
  - Agreement number agreement number.
  - Agreement status Entered, In Process, Rejected, Confirmed, Canceled.
  - *MP signature* signed by the market participant (Yes, No).
  - MO signature signed by market operator (Yes, No).
  - Author user name.
  - Created date and time (hours:minutes:seconds) agreement creation.
  - Modified by user name who made the last changes.
  - Modification date and time (hours:minutes:seconds) performing of the last change.

### «Additional agreements» section:

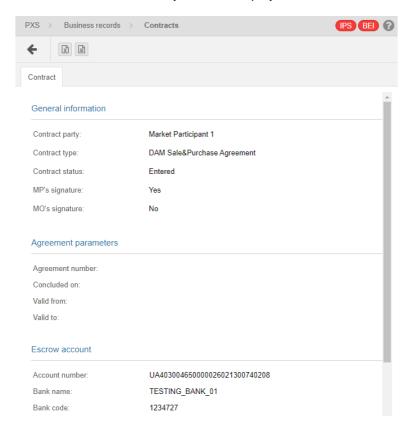
- > The first column serial number of the record.
  - «Operations»: «View record» by clicking on the button, the system will display the form «Additional agreements» in view mode.
  - ID record identification number.
  - Agreement ID unique agreement record code.
  - Agreement number agreement number.
  - Agreement party agreement party (market participant).
  - Additional agreement type DAM additional agreement, IDM additional agreement.
  - Additional agreement number additional agreement number.
  - Additional agreement status Entered, In Process, Rejected, Confirmed, Canceled.
  - Description of changes text box to describe the changes.
  - MP signature signed by the market participant (Yes, No).
  - MO signature signed by market operator (Yes, No).
  - Author user name.
  - Created date and time (hours:minutes:seconds) additional agreement creation.
  - Modified by user name who made the last changes.
  - Modification date and time (hours:minutes:seconds) performing of the last change.

### 3.2.1. Contract's view

The web portal page is used to view existing agreements in the system.

### Navigation

The user selects from the navigation menu «*Trade register»* > subsection «*Contracts»*, after which the system will display a window «**Contracts»** in column «*Operations»* of section «Agreements», by clicking on the button (\*View record\*) the system will display the form «**Contracts\***) in a view mode.



In the form, the user has the opportunity to perform available operations:

- > clicking on the button will return the user back to the list:
- buttons allow you to export the table list to a file in the <u>XLSX, CSV</u> format.

### «Agreement» tab description:

### «Main information» section:

- Agreement party market participant.
- Agreement type DAM purchase-sale agreement, IDM purchase-sale agreement.
- Agreement status Entered, In Process, Rejected, Confirmed, Canceled.
- Signed by market participant signed by the market participant (Yes, No).
- Signed by market operator signed by market operator (Yes, No).

### > «Agreement parameters» section:

- Agreement number agreement number.
- Concluded on agreement date.
- *Valid from* date of commencement of the contract.
- Valid until agreement termination date.

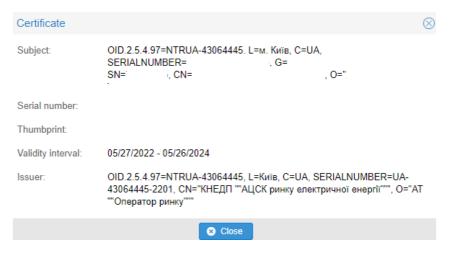
### > «Escrow account» section:

- Account number bank account number.
- Bank name bank name.
- Bank code bank code.

#### > **«Document»** section:

- «Attachment» by clicking on the button standard system file download dialog specific to the operating system and web browser type.
- «Digital signatures» digital signatures.

By clicking on the button Show certificate details» the system will display an information window:



#### «Comments» section:

Comments – the answer of the market operator.

### «General information» section:

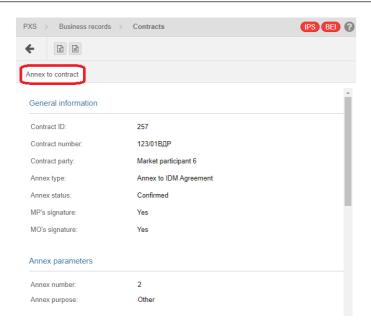
- Agreement ID individual agreement code.
- Creation date creation date.
- Author user name who created the agreement.
- Change date date and time (hours:minutes:seconds) of implementation of the last change in the contract.
- Modified by user name who made the last changes.

#### 3.2.2. Annexes to contracts view

The web portal page allows you to view relevant changes (additional agreements) to separate contracts.

# Navigation

The user selects the "Contracts" subsection from the "Trade register" navigation menu, after which the system will display a window **«Contracts»**. In the "Operations" column of the "Annexes to contracts" section by clicking on the button **(a)** *«View record»* the system will display the form **(Contracts)** in view mode.



In the form, the user has the opportunity to perform available operations:

- > \_\_\_ after clicking on the button, the system will return the user back to the list.
- buttons allow you to export the table list to a file in the XLSX, CSV format

### «Annex to contract» tab description:

### «General information» section:

- Contract ID contract identification number.
- Contract number contract number.
- Contract party market participant name.
- Annex type Annex to DAM Agreement, Annex to IDM Agreement.
- Annex status Entered, In Process, Rejected, Confirmed, Canceled.
- *MP's signature* signed by the market participant (Yes, No).
- MO's signature signed by market operator (Yes, No).

### «Annex parameters» section:

- Annex number annex agreement number.
- Annex purpose text box to describe the changes.
- Other purpose other purpose.
- Concluded on the date of conclusion of the annex agreement.
- Valid from the effective date of the annex agreement.
- Valid to the date of termination of the annex agreement.

#### «Document» section:

- «Attachment» file attachment. By clicking on the icon «Download file», the system will
  display a standard system file download dialog specific to the operating system and web
  browser type.
- «Digital signatures» digital signatures. By clicking on the icon details» the system will display an information window:



#### «Comments» section:

Comments – the answer of the market operator.

#### «Record information» section:

- Annex ID identification number of the annex agreement.
- Created date of creation.
- Created by user name.
- Modified user name who made the last change to the annex agreement.
- Modified by date and time (hours:minutes:seconds) of the last change of the annex agreement.

### 3.3 Orders

- > DAM orders
- > IDM orders

### 3.3.1. DAM orders

The web portal page provides market participants the opportunity to create and manage their orders. Orders mean offers for electricity sale or purchase.

Market participants submit orders to the XMtrade®/PXS system no later than the "gate close" for the registration of orders (12:00 in D-1). Orders can contain up to 25 steps, thanks to which a market participant can create different amount/price indicators for each trading hour.

Please note that from steps 2 to 25, the market participant must specify the additional amount he wishes to buy/sell.

If a market participant replaces already existing orders or deletes orders from the system, it will no longer be possible to return to the previous version of the order, even if the first orders were valid and the new orders are invalid. In case of an invalid order, the market participant must eliminate invalidity errors by modifying the order or replacing it with a new one. Invalid orders are deleted and not allowed for trading.

A market participant submits order by:

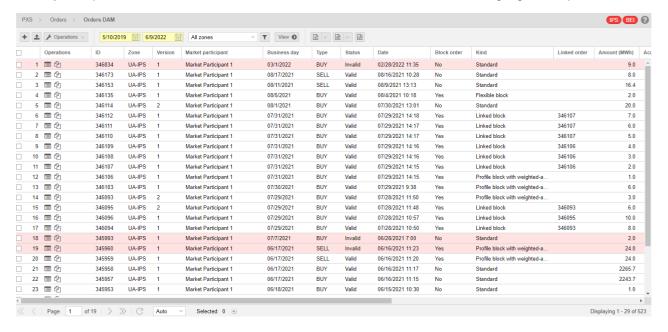
- automated web service data interface;
- file import through the web interface;
- entering the order data into the web form.

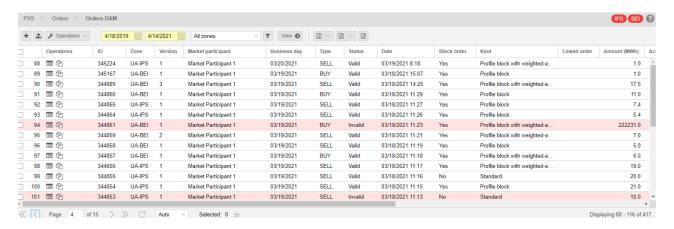
Market participant has the right to submit an unlimited number of buy orders and an unlimited number of sell orders for each delivery day. Changes in orders are reflected in the version of the order, and the latest version of each of them will be relevant for a given trading day, if it has been successfully checked by the system. An order can contain up to 25 steps, thanks to which a market participant can simulate different amount/price values for each trading hour.

A market participant can submit, modify and delete an order only until the moment of the "gates closing" for accepting orders. The principle of this operation comes from the "ENTSO-E" standards.

#### Navigation

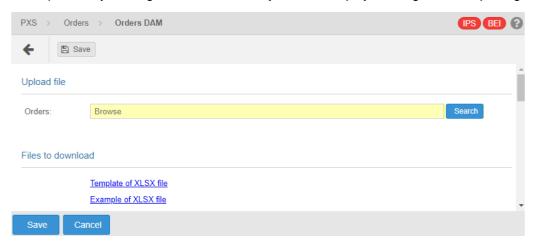
The user selects from the navigation menu «*Orders*» > subparagraph «*Orders DAM*», after which the system provides access to the form «**Orders DAM**». Invalid orders will be highlighted in pink.



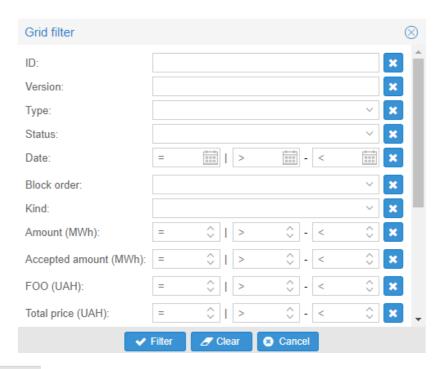


In the window, the user has the opportunity to choose the available operations located above the records:

- «Create new record» by clicking on the button, the system will display a window «Orders DAM» new order creation mode.
- «Import» by clicking on the button, the system will display a dialog box for importing orders.



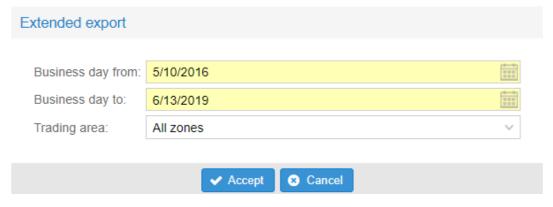
- Operations before selecting the operation, the user must mark the current record. After expanding the menu, an option «Delete» will be displayed, the system will ask the user to confirm his intention to delete the selected records.
- > Business day from the first day of the filtered interval for which the order was submitted. Option to choose from the calendar ...
- Business day to the last day of the filtered interval. Option to choose from the calendar ....
- > Trading area All zones, UA-IPS, UA-BEI.
- with the help of the button you can enter filtering criteria in the dialog box «Grid filter» table, and based on them, get a list of records with new content in the table.



- ➤ these buttons allow you to export the contents of the table to files in the XLSX, CSV, XML format.
  - *«Into import template»* export of individual orders to a standard template, only for XLSX type.



• *«Extended export»* – the possibility of extended export to the specified file types according to the entered criteria in the dialog window with the name **«Extended export»**.



Description of window items «Orders DAM»:

First column – serial number of the record.

- Operations:
  - Wiew record» by clicking on the icon, the system will display a window «DAM Order» in view mode.
    - «Copy record» by clicking on the icon, the system will display a window «**DAM Order**» in creating a new order mode.
- ➤ ID order id.
- Zone UA-IPS, UA-BEI.
- Version numerical value.
- Market participant market participant name.
- Business day date of delivery.
- Type Purchase, Sale.
- Status order status:
  - *Valid* a registered order that is included in the settlement process.
  - Invalid an unregistered order that was rejected and not included in the settlement process. Invalid orders are indicated by the pink shade of the entry in the table. When viewing orders, the reason for the invalidity of the order is always indicated.
- Date date of the order registration.
- ➤ Block order order is block or not.
- Kind simple order, profiled block order, profile block with weighted-average price order, flexible block order, linked block order.
- > Linked order the identifier of the block order to which the current order is linked.
- Full acceptance of 1 block determination of time distribution, or general acceptance of block 1.
- ➤ Amount (MWh) the total amount of the order in MWh.
- > Accepted amount (MWh) the total accepted order amount in MWh.
- FOO (UAH) required amount of financial support of the participant in UAH.
- Total price (UAH) the total price of the order in UAH.
- > Avg. price (UAH/MWh) average order price in UAH/MWh.
- Weighted Avg. Price (UAH/MWh) weighted average price in UAH/MWh.
- ➤ Min. price (UAH/MWh) minimum order price in UAH/MWh.
- > Max. price (UAH/MWh) maximum order price in UAH/MW\*h.

Orders can be block. The order is set to «<u>Yes</u>» when calculating, it will either be fully performed in each hour or not performed at all.

#### 3.3.1.1. DAM order creation

#### Method of orders submission

Participants submit purchase and sale orders by:

- web service;
- web page;
- web upload.

#### Orders rules

For each trading hour, there can be no more than 25 price/amount pairs, which means that market participant can set a curve for each trading hour with 25 points indicating the electricity amount and the price at which the market participant agrees to buy/sell this electricity.

Each order is checked on:

- > compliance with entering of electricity amount and price at least in one hour;
- compliance with the minimum and maximum electricity amount in MWh for each trading hour and order step with accuracy to one decimal place. The minimum possible amount of electricity is 0,1 MWh, and the maximum is 99 999 MWh;
- compliance with the minimum and maximum price in UAH/MWh for each trading hour and order step with accuracy up to two decimal places;
- following an upward trend in prices for a sell order and a downward trend in prices for a buy order.

#### Orders acceptance

«Gate close» for receiving orders for the delivery day is carried out at 12:00 on the day preceding the delivery day.

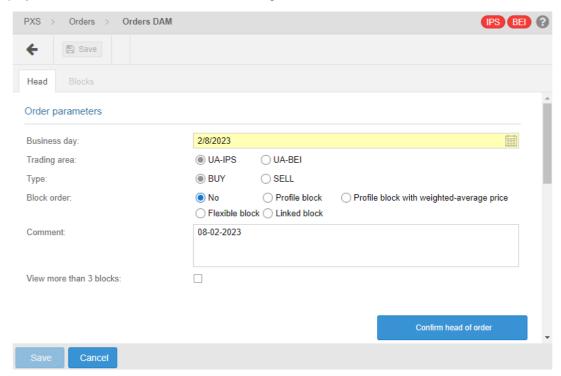
The market operator does not register order if:

- it was provided in the wrong format;
- > it was provided after the orders daily gates closing. The market operator informs the market participant about the result of order registration.

### Navigation

Info

The user selects in the navigation menu «*Order»* subparagraph «*Orders DAM»*, after which the system displays a window «**Orders DAM»**. By pressing the button "*Create new record»* the system will display a window «**Orders DAM»** in the creating a new order mode.



In the window, the user can choose the available operations located above the window:

«Back to list» – after clicking on the button, the system will warn the user about completing
of the order entry without saving data and returning to the previous page with the following
message



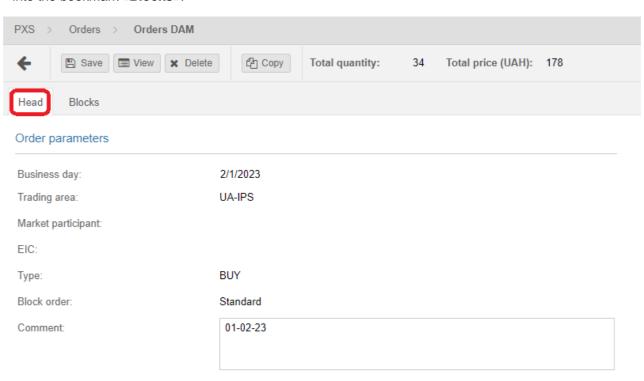
Save – by pressing button «Save record and go back to list» the system will display a message - «The record was successfully added», after which the system will return the user back to the list.

The button is active only when all mandatory order fields are filled. If the user wants to save the order when the order accepting is already closed, the message «Unable to save the order for the selected date» will be displayed.

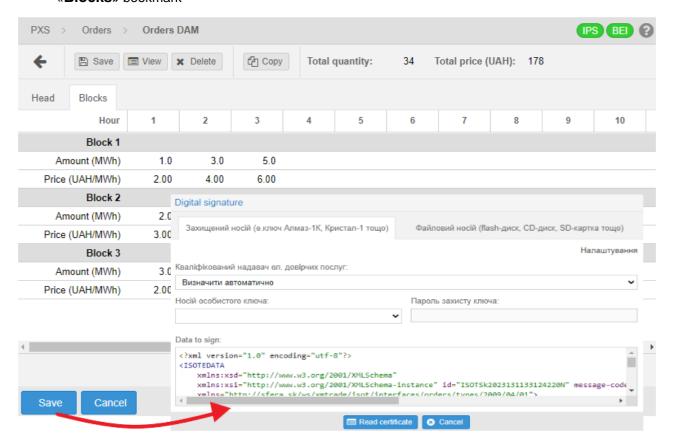
Description of the «Head» bookmark, section «Order parameters»:

- > Business day delivery date (by default, it is set to current day + 1 day), option to choose from the calendar ...
- > Trading area UA-IPS, UA-BEI.
- ➤ Market participant market participant's name.
- EIC EIC code of market participant.
- Type type of transaction (purchase, sale).
- ➤ Block order the indicator is indicated depending on the type of order:
  - Profile block.
  - Profile block with weighted-average price.
  - Flexible block.
  - Linked block.
  - No.
- Comment text field, a brief description of the order is indicated.
- View more than 3 blocks checkbox ☐ for the number of order steps, valid values are from 1 to 25.

By pressing the button the bookmark **«Blocks»**.



### «Blocks» bookmark



By pressing Save button the system will display a form for applying an electronic signature. The user fills in the necessary fields and signs the data with an electronic signature.

### Description of items:

- ➢ Hour indicators 1 24 (on the days of the transition from winter to summer time contains indicators 1 23, in the days of the transition from summer to winter time contains indicators 1 25).
  - Trading hour number 24 trading hours, except when changing from Central European Time to Central European Summer Time and vice versa. The delivery day begins with the first trading hour at 00:00:00 and ends at 24:00:00. When switching to Central European Summer Time, a trading day is 23 trading hours, and when switching to Central European Time, a trading day is 25 trading hours.
- Amount (MWh) amount for each hour in MWh.
- > Price (UAH/MWh) price for 1 MWh in UAH/MWh.
- Partially matched means the possibility of partial fulfillment of the amount for the given hour (only for "Sales" orders type).

The data that is currently being entered or changed is marked in the upper left corner of the item with a small red triangle. Invalid values are shown in red and an error message will be displayed if you try to save a step with invalid data.

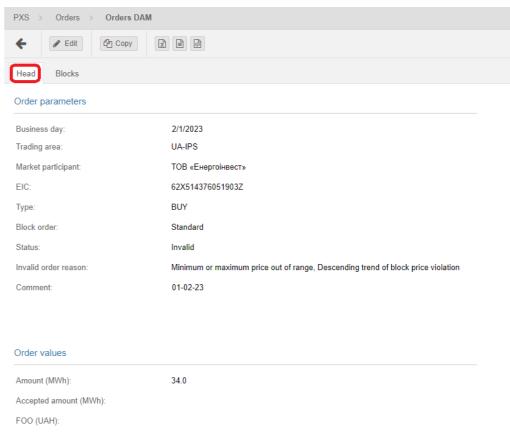
By pressing button Add blocks the system will add new steps (from 4 to 25) with the option of entering new order data for other steps, while three steps are offered by default.

#### 3.3.1.2. DAM orders review

The web portal page is used to view the data of existing DAM orders.

### Navigation

The user chooses from a menu «Orders» > subparagraph «Orders DAM», after which the system displays a window «Orders DAM». In the column «Operations» by pressing button (View record», the system will display the DAM order form in view mode.



In the window, the user has the opportunity to run the available operations located above the window data:

- → by pressing the button the system will return the user after <u>warning</u> to the list;
- → buttons allow you to export the list to files in the XLSX, CSV, XML format.

### Example file in XLSX format:



### «Head» tab description:

- > «Order parameters» section:
  - Business day delivery date is displayed.
  - Trading area UA-IPS, UA-BEI.
  - *Market participant* the name of the order owner.
  - EIC entity identifier (EIC code).
  - *Type* type of transaction (purchase, sale).
  - Block order profile block order, profile block order with weighted-average price, flexible block order. licked block order.
  - Status order status (Valid, Invalid).
  - *Invalid order reason* The reason for the invalidity of the order is specified.
  - Comment a brief order description.

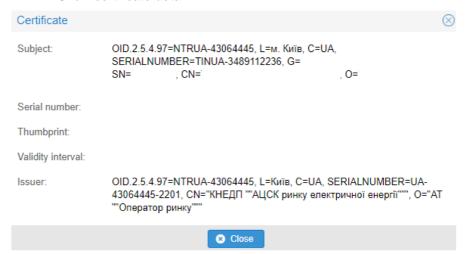
#### «Order value» section:

- Amount (MWh) order amount.
- Accepted amount (MWh) accepted order amount.
- FOO (UAH) the required amount of financial support for the order.
- Total price (UAH) the total order price.
- Average price (UAH/MWh) average order price.
- Weighted average price (UAH/MWh) weighted average price in UAH/MWh.
- *Minimum price (UAH/MWh)* minimum order price.
- Maximum price (UAH/MWh) maximum order price.

#### «Record info» section:

- *Identifier* order identifier is a unique number automatically entered by the system when creating order.
- ID an identifier that a market participant can enter after saving an order to an XML file.
- Version version number.
- Create by user name.
- Registration date date and time (hours:minutes:seconds) of creation of the order.
- Modified by the name of the user who made the last modification.
- Modification date date and time (hours:minutes:seconds) of the last order modification.
- Digital signature:
  - «Download difital signature» the system will display a standard file download dialog specific to the operating system and web browser type. After clicking the «Open» button, the system will display the electronic signature.
  - Show certificate detail»:

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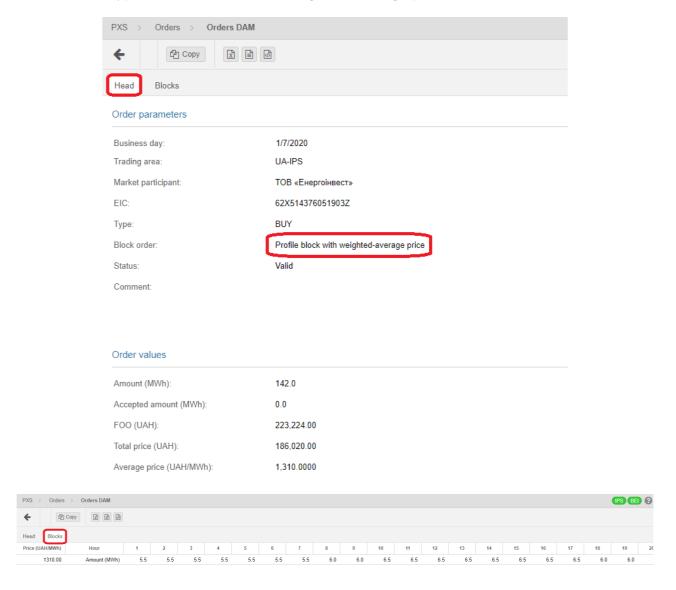
«Blocks» bookmark – becomes active as soon as the browsing function is started.



#### Description of tab items:

- ➤ Hour trading hour number.
- Amount (MWh) amount value for each hour in MWh.
- ➤ Price (UAH/MWh) price for 1 MWh for this trading hour in UAH/MWh.

# Block order type - Profile block with weighted-average price



«Production Divisibility» – means the possibility of partial fulfillment of the amount for this hour
(only for the «Sale» type of orders).

#### 3.3.2 IDM orders

Intraday electricity trading is based on the mechanism of continuous trading. IDM electricity purchase or sale orders are checked for market parameters (minimum and maximum price, minimum amount, etc.).

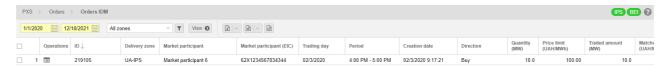
Successfully entered and verified orders go through instant processing based on established orders rules that are posted in the order register. Unfulfilled or partially fulfilled orders will be placed in the order register or will be canceled depending on the status of the order. Order cancellation can also be done manually by the market participant. The order period expires at the "gate close" for the orders acception for the relevant trading period. Orders can also be set to have a specific expiration time before their appropriate closure.

### **Continuous IDM trading**

Orders are placed in the interface in the «IDM Dashboard».

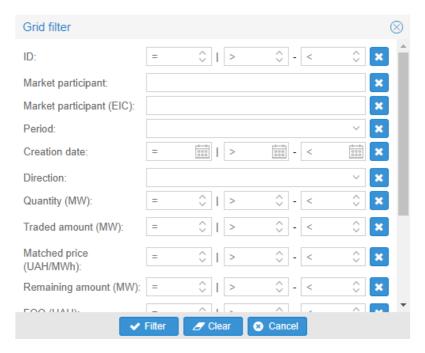
### Navigation

The user selects in the navigation menu «Orders» subparagraph «Orders IDM», after which the system will open a window «Orders IDM».



In the window, the user has the opportunity to choose available operations from the lists:

- ➤ Business day from the beginning of the current reporting interval (standard current day), the possibility of choosing from the calendar ...
- ➤ Business day to the end of the reporting interval (standard current day), the possibility of choosing from the calendar ...
- Trading area All zones, UA-IPS, UA-BEI.
- with the help of this button, you can enter filtering criteria in the «Grid filter» dialog box and, based on them, get a list of records with new content in the table. In the case of filtering according to the calculation period, such order will also be selected in the search results, if at least one selected period falls within the order interval. For example, if the 11th period is selected, all peak block and base block orders will be displayed.



- ➤ View - the selection of the specified filter criteria is confirmed by this button, after which the list is updated.
- > □ □ □ -buttons allow you to export the list of tables to files in the XLSX, CSV XML format.

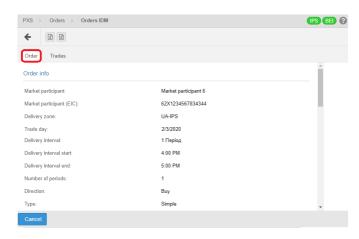
# Description of «Orders IDM» window items:

- > First column serial number of the record.
- > Operations by pressing the button «View record» the system will display a window «Orders IDM» in view mode
- ➤ ID Order identifier.
- > Delivery zone trading area (UA-IPS, UA-BEI).
- ➤ Market participant the name of the market participant.
- ➤ Market participant (EIC) EIC code of the market participant.
- > Trading day delivery date.
- Period estimated delivery period.
- Creation date date and time of order registration.
- Direction Purchase or Sell.
- Quantity (MW) amount in MW.
- > Price limit (UAH/MWh) limit order price in UAH/MWh.
- > Traded amount (MW) accepted amount in MW.
- > Matched price (UAH/MWh) acceptance price in UAH/MWh.
- > Remaining amount (MW) unaccepted amount in MW.
- > FOO (UAH) the required amount of financial support for the order.
- > Status order status (active, inactive, cancelled, partially matched, matched, expired, expired inactive).
- > Order type simple, block.

## 3.3.2.1. IDM Orders review

The web portal page provides a view of the existing IDM orders data

## Navigation



In the window, the user has the opportunity to perform available operations located above the window data:

- → by clicking on the button, after warning, the system will return the user back to the list.
- → buttons allow you to export the table list to files in the XLSX, CSV format.

# Description of bookmarks «Order»:

# «Order info» section:

- *Market participant* the name of the order owner.
- Market participant (EIC) EIC code of the market participant of the order owner.
- Delivery zone trading area (UA-IPS, UA-BEI).
- Trade day date of delivery.
- *Delivery interval* period type (quantity or group).
- Delivery interval start the beginning of period.
- Delivery interval end end of period.
- Number of periods the number of settlement periods.
- *Direction* buy/sell, supply/demand.
- Type order type (simple, block).
- Indication indication of the order for immediate execution and/or indivisibility of the scope:
  - Immediate or Cancel (IOC) the order must be executed immediately, in addition, it can be executed partially, otherwise it is automatically canceled.
  - Fill or Kill (FOK) the order must be completed immediately, and must be completed in full, otherwise it is automatically canceled.
  - o All or None (AON) the order must be completed in full.
  - o No limit.
- Kind order type.
- Duration until the validity period of the order, specified to the nearest second.
- Duration the validity period of the order (Session the order period expires at the close of the relevant trading period, Good till Date the order expires at the time specified by the user, during its registration).
- Status order status (active, inactive, cancelled, partially matched, matched, expired, expired inactive).
- Justification final order status justification of the status of the order, which is given in the previous line.
- Note comment to the order.

#### > «Order values» section

- Price (UAH/MWh) values up to two decimal places.
- Price unit the unit of measurement of the marginal price.
- Quantity (MW) amount up to one decimal place.
- Quantity unit amount unit.
- Matched quantity (MW) value up to one decimal place in MW.
- Matched quantity unit the unit of measurement of the accepted amount.
- Matched price weighted (UAH/MWh) values up to two decimal places.
- Matched price weighted unit the unit of measurement of the acceptance price.
- Remaining quantity (MW) value up to one decimal place.
- Remaining quantity unit unit of measurement of unaccepted amount.
- FOO (UAH) the required amount of financial support for the order in UAH up to 2 (two) decimal places.

#### «Record info» section:

- ID the order identifier is a unique number that is automatically allocated by the system
  when the order is created.
- Created by user name.
- Created date date and time (hours:minutes:seconds) of order creation.
- Modified by identification of the user who made the last change.
- *Modification date* date and time (hours:minutes:seconds) of the last order change.
- Digital signature:
  - «Download digital signature» the system will display a standard file download dialog specific to the operating system and web browser type. After pressing the button **«Open»**, the system will display the electronic signature.
  - Show certificate detail»:

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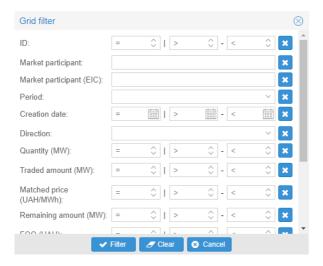
# «Trades» tab





In the tab, the user has the opportunity to run available operations on records:

- → by clicking on the button, after <u>warning</u>, the system will return the user back to the list.
- ➤ II buttons allow you to export the table list to files in the XLSX, CSV format.
- ➤ T this button allows you to enter filter criteria in a dialog box **«Grid filter»** and get a list with the new content of the table.



## Description of bookmarks «Trades»:

- ➤ ID order acceptance identifier.
- Delivery zone trading area (UA-IPS, UA-BEI).
- > Realization date date and time of order submission.
- Direction purchase/sale.
- Period.
- Realized quantity (MW).
- Realized price (UAH/MWh).

# 3.4. IDM Dashboard

#### The logic of the IDM trading screen

The order process begins with **uploading** data. Next, orders are **classified** by type (simple/block), type of operation (buying/selling), settlement period (1 - 24).

The processes for buy and sell orders are almost identical, the only difference being price controls (different for transaction types).

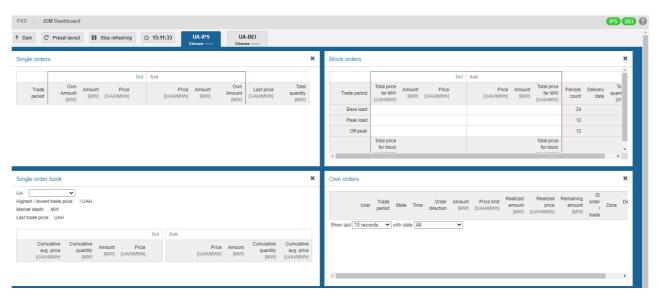
The algorithm loads the relevant register of orders and controls whether the orders stored in the register meet the requirements for the execution of new orders, namely:

- > First of all, it checks whether there is a counter order for a given price against which the order can be executed instantly.
  - If so, it stores all counter orders with an acceptable price and controls whether they can fill
    the entire amount of the entered order.
  - If so, the order is processed in order until the entire scope of the order is filled. At the same time, the status of the order will change to «*Completely done*» and the acceptance record is written to other systems. The register of orders is updated, where all completed orders will be deleted.
  - If not, they are checked with an indication for immediate execution.
- ➤ If the order has an FOK indication and cannot be fully executed, it is canceled, and the funds blocked for trading are renewed.
- ➤ If the order has an IOC indication and cannot be fully fulfilled, then the amount that can be fulfilled is accepted, and the rest of the order is canceled, and the funds for the unfulfilled amount are released, the register of orders is updated.

- ➤ If the order does not have any indication for immediate execution, then the amount that can be executed is accepted, and the rest of the order is recorded in the order book. After that, the register of orders will be updated.
- > If there is no counterparty at a given price, additional Indications are checked:
  - If the order has an indication for immediate execution (IOC or FOK), it is canceled.
  - If the order does not have an indication for immediate execution, it will be recorded in the order book. After that, the register of orders is updated.

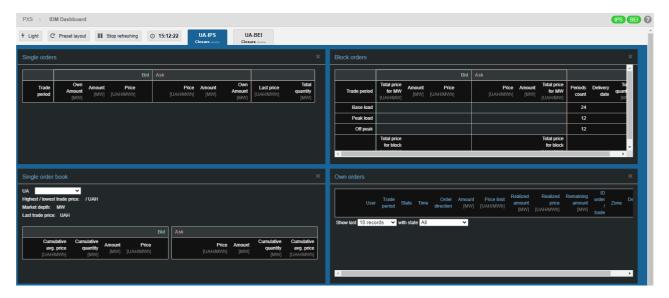
# Navigation

The user selects from the navigation bar «IDM Dashboard», after which the system will open access to the page «IDM Dashboard» divided into windows with a default location.

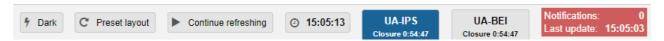


Functional support is available on the operation panel page for the user:

- > Options for setting the background of the window:
  - Dark setting the inverse image of colors on a dark background.



- † Light choosing the standard view of the trading screen on a light background.
- Preset layout returning from the native arrangement of windows to the appearance of the IDM screen with default windows.
- ➤ Stop refreshing suspend the updating of the IDM trading screen, block the window. Stopping the update of the information that is at the time of clicking the button on the trading screen. For example, it can serve to document non-standard system states or help the trader to compare the situation in independent markets displayed in other windows of the screen.



A red bar will appear on the right side next to the current blue bar with the current time, indicating an update pause, during which no notifications are active except for the closing of the period and the opening of a new trading day. Contains information about the number of notifications and about the start of the operation of the window closing in tabs *«Notifications»*, *«Last update»*.

- ➤ Continue refreshing when the window stops working, there is a button on the operations panel that allows you to start updating the window and restore the active IDM trading screen.
- ➤ 10:33:55 display of the current system time and the time remaining until the end of the nearest period (in the format of hours:minutes:seconds). The countdown of the remaining time starts after the first minute of the new period.
- UA-IPS UA-BEI Closure 0:54:27 display of the current system time and the time remaining until the end of the nearest period (in the format of hours:minutes:seconds). The countdown of the remaining time starts after the first minute of the new period.
- When you point the mouse over an area of one of the IDM trading screen windows, the light gray line under the name of that window is highlighted in blue, and the window is highlighted with a light backlight. This is used to indicate which window the user is currently in.
- X button in the upper right corner of each window, where the user has the opportunity, if necessary, to close any window and get more space on the selected page «IDM Dashboard».
   The action bar displays the corresponding window button to reopen it to its original position, for example:

Block orders Chart

The record of a newly submitted or accepted order is colored yellow for a short time

The page is divided into 5 windows:

- > Single orders view
- Single order book
- Block orders view
- Own orders view
- Chart

# 3.4.1. Single orders view

The web portal page serves to display the market, to review the most financially profitable hourly orders, currently available for trading in the register of simple orders. For each settlement period, the price and amount of the most expensive order to buy, as well as the price and amount of the cheapest order to sell, available in the current view, are displayed.

#### Navigation

The user selects "IDM Dashboard" in the navigation menu, after which the system will display a window in the first panel of the screen **«Single orders»**.

| gle orders   |                    |                 |                    |     |                    |                 |                    |                         |                         |
|--------------|--------------------|-----------------|--------------------|-----|--------------------|-----------------|--------------------|-------------------------|-------------------------|
|              |                    |                 |                    | Bid | Ask                |                 |                    |                         |                         |
| Trade period | Own Amount<br>[MW] | Amount<br>[MVV] | Price<br>[UAH/MWh] |     | Price<br>[UAH/MWh] | Amount<br>[MVV] | Own Amount<br>[MW] | Last price<br>[UAH/MWh] | Total quantity<br>[MVV] |
| 17-18        |                    | 0.0             |                    |     | 3,672.00           | 239.3           |                    | 3,672.00                | 269.3                   |
| 18-19        |                    | 0.0             |                    |     | 3,672.00           | 586.4           |                    | 3,672.00                | 616.4                   |
| 19-20        |                    | 0.0             |                    |     | 3,570.00           | 706.8           |                    | 3,570.00                | 736.8                   |
| 20-21        |                    | 0.0             |                    |     | 3,570.00           | 737.6           |                    | 3,570.00                | 767.6                   |
| 21-22        |                    | 0.0             |                    |     | 3,570.00           | 781.5           |                    | 3,570.00                | 811.5                   |
| 22-23        |                    | 0.0             |                    |     | 3,468.00           | 809.8           |                    | 3,468.00 ▶              | 839.8                   |
| 23-24        |                    | 452.5           | 2,000.00           |     |                    | 0.0             |                    | 2,000.00                | 452.5                   |
| T00-01       |                    | 0.0             |                    |     | 2,000.00           | 226.2           |                    | 2,000.00 🔺              | 226.2                   |
| T01-02       |                    | 0.0             |                    |     | 2,000.00           | 332.5           |                    | 2,000.00 🔺              | 332.5                   |
| T02-03       |                    | 0.0             |                    |     | 2,000.00           | 536.7           |                    | 2,000.00 📥              | 536.7                   |
| T03-04       |                    | 0.0             |                    |     | 2,000.00           | 606.7           |                    | 2,000.00 📤              | 606.7                   |
| T04-05       |                    | 0.0             |                    |     | 2,000.00           | 531.5           |                    | 2,000.00 📤              | 531.5                   |
| T05.06       |                    | 0.0             |                    |     | 2 000 00           | 315.9           |                    | 2 000 00 🔺              | 315.9                   |

#### Description of window items:

➤ Trade period – the period in which this order will be physically fulfilled. The trading period for orders is valid from 17:00 to 18:00 and is given in the format «17 – 18». Trading periods for the next day are distinguished by a letter T (eng. tomorrow) at first, for example, T17 – 18, to minimize the risk of errors by users when submitting orders.

#### Bid.

- Own Amount (MW) shows your own purchase amount. If a purchase order is executed at
  the price specified in the corresponding row of the table, this column displays the amount
  that was sold to the user at that price. The record of the just completed order is colored
  yellow for some time.
- Amount (MW) the amount that corresponds to the highest purchase price that is currently available in the register of simple orders for the given settlement period. After execution of orders at this price, it will be removed from the register of simple orders, and in the column "Amount" another amount will be displayed that corresponds to the current highest purchase price (in the column "Amount" the amount is updated). If there are two purchase orders at the same (highest) price in the register of simple orders, the column "Amount" will reflect the amount of these orders for the current settlement period.
- Price (UAH/MWh) for each settlement period, the price of the most expensive purchase, which is available for this settlement period in the register of simple orders, is displayed. After execution of orders at this price, it will be removed from the register of simple orders, and in the column «Price» another, currently most expensive purchase price will be displayed in the order register (in column «Amount» for the purchase, the amount will be updated). For each settlement period, the amount and price of the most expensive purchase order currently available in the Order Registers is displayed.
- Button for creation a simple sale order.

#### > Ask:

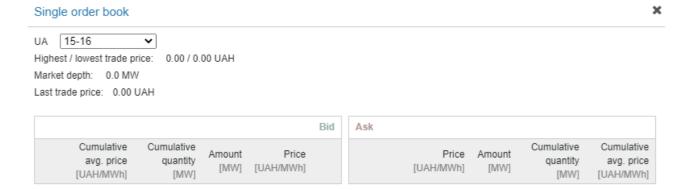
- Button for creation a simple purchase order.
- Price (UAH/MWh) for each settlement period, the price of the cheapest sale order, which
  is available for this settlement period in the register of simple orders, is displayed. After
  execution of orders at this price, it will be removed from the register of simple orders, and
  in the column «Price» another, currently cheapest purchase price will be displayed in the
  order register (the amount for purchase is updated in column «Amount»).
- Amount (MW) the amount that corresponds to the lowest purchase price that is currently available in the register of simple orders for this settlement period. After orders are executed at this price, it will be removed from the register of simple orders, and another amount will be displayed in the «Amount» column, which now corresponds to the lowest selling price (the amount is updated in the «Amount» column). If there are two orders for sale at the same (lowest) price in the register of simple orders, the «Amount» column displays the sum of these orders for the given settlement period.
- Own Amount (MW) shows your own sales amount. If the order to sell is executed at the
  price specified in the corresponding row of the table, this column displays the amount that
  was sold to the user at that price. The record of the just completed order is colored yellow
  for some time.
- Last price (UAH/MWh) the price at which the last acceptance of the order was made. The last price is compared with the penultimate price, the price trend is indicated by color and graphically
  - if these prices were the same or nearly the same, the price is shown in **blue color**, and next to it is a blue horizontal arrow.
  - if the last price is higher than the penultimate one, the market is in an uptrend, this is reflected in **green color** and to the left with the green arrow up ...
  - if the last trade price is lower than the penultimate, the market is in a downtrend, it is reflected in red color and the red arrow down.
- Total quantity (MW) the total amount of all orders entered in the register of simple orders for a given trading period is the so-called <u>market depth</u>.

# 3.4.2. Single order book view

The web portal page displays simple orders in the register of hourly orders for one selected period. By default, the next open order period will be opened, where the 10 best orders in terms of selling and buying prices will be displayed. A viewing function is available, so the user can view all the orders that are currently available in the register of hourly orders for a certain period. The page is regularly updated with the possibility of customization.

#### Navigation

The user selects in the navigation menu «IDM Dashboard» the second screen window «Single order book».



#### Window description:

- ➤ UA the time for which the order was submitted (index from 00 01 to 23 24). Settlement periods for the next day are marked as T at the beginning of the period, for example, T00 01.
- Highest/lowest trade price statistics of the highest and lowest prices, indicators in UAH with two decimal places.
- Market depth indicator in MW with one decimal place.
- <u>Bid</u>:
  - Cumulative avg. price (UAH/MWh) weighted average price of orders in the register of hourly orders in this row and in all previous rows.
  - Cumulative quantity (MW) amount available for acceptance (sum of amounts at the specified price and above).
  - Amount (MW) amount available for acceptance at the specified price.
  - Price (UAH/MWh) the price at which market participants are willing to buy (purchase price).

# > Ask:

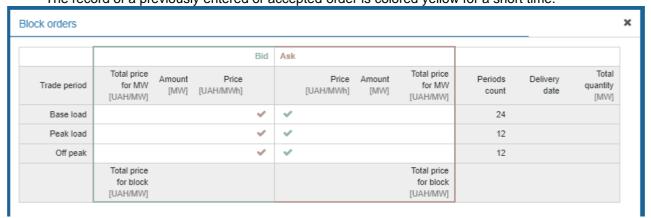
- button for <u>creation</u> hourly sales order.
- Price (UAH/MWh) the price at which market participants are willing to sell (sale price).
- Amount (MW) amount available for acceptance at the specified price.
- Cumulative quantity (MW) amount available for acceptance (sum of amounts at the specified price and below).
- Cumulative avg. price (UAH/MWh) weighted average price of orders in the hourly orders register in this row and in all previous rows.

#### 3.4.3. Block orders view

The web portal page serves to display current block orders. The first part displays standard block orders (Base, Peak, Off peak) and the second part shows non-standard ones. The display is updated every 5 seconds (configuration change).

#### Navigation

The user selects in the navigation menu «*IDM dashboard*» the third window **«Block orders»**. The record of a previously entered or accepted order is colored yellow for a short time.



Description of the window for the standard type of block orders – settlement periods *Base, Peak, Off peak:* 

- Trade period:
  - The standard order has the specified type (Base load, Peak load, Off peak).

• For non-standard block orders, the time range of the block order (number of settlement periods) is indicated.

#### ➢ Bid:

- Total price for MW (UAH/MW) the total purchase price of a block order at auctions for 1 MW. Used only for standard block orders. This price is calculated based on the number of trading periods of a given block, such as Price (UAH/MWh) multiplied by the number of hours of the block, where:
  - o Base load proceed 24 hours.
  - Peak load proceed 12 hours.
  - Offpeak load proceed 12 hours.
- Amount (MW):
  - For standard and non-standard block orders that contain several different block orders for the same time range.
  - For non-standard block orders that are unique to their trading period, this means that there is no other block order with the same time period, in the *«Amount»* the amount corresponding to this order is displayed.
- Price (UAH/MWh):
  - For standard and non-standard block orders that contain several different block orders for the same time range, the item «Price» displays the most expensive purchase price of a block order (in UAH/MW), which is current in the current orders register.
  - For non-standard block orders that are unique to their time range, if there is no other block order with the same time range, in item *«Price»* the price corresponding to this order is displayed.
- block order for sale <u>creation</u> button.

#### > Ask:

- block purchase order creation button.
- Price (UAH/MWh):
  - For standard and non-standard block orders that contain several different block orders for the same time range, the item «Price» displays the cheapest selling price of a block order (in UAH/MW), which is current in the current order register.
  - For non-standard block orders that are unique to their time range, if there is no other block order with the same time range, the «Price» item displays the price corresponding to that order.
- Amount (MW):
  - For standard and non-standard block orders that contain several different block orders for the same time range.
  - For non-standard block orders that are unique for their time period, meaning that there is no other block order with the same time period, the amount corresponding to this order is displayed in the *«Amount»* item.
- Total price for MW (UAH/MW) the total sell price of trading a block order for 1 MW. Used only for standard block orders. This price is calculated based on the number of trading periods of this block, such as Price (UAH/MWh) multiplied by the Number of hours of the block, where:
  - Base load proceed 24 hours.
  - Peak load proceed 12 hours.
  - Offpeak load proceed 12 hours.
- Total price for block is calculated as sale price (UAH/MWh) multiplied by number of sales (MW) multiplied by the number of hours of the block.
- > Periods count the number of settlement periods.
- Delivery date дата і час.
- > Total quantity (MW) the sum of all block orders pending in the registry for a given trading block.

# 3.4.4. Own orders view

The web portal page is intended for viewing your own orders. Contains a list of own orders that have not yet been fulfilled – both hourly and block.

Viewing own orders contains data on partially executed orders and orders that have not yet been executed or whose validity has not yet expired. The view also includes block orders; they differ from hourly orders in that they are shown **in bold** (and usually cover several time blocks). By default, own orders are displayed for the settlement entity viewing this report.

#### Navigation

The user selects the fourth window of the **«Own orders»** screen in the *«IDM Dashboard»* menu. The record of a previously created or executed order is colored yellow for a short time.

#### Trade Order User State Time period direction 8.2.2023 +II × 1752243924 11-12 Active Sell 09:46:38 8.2.2023 1752243924 11-12 Matched Buy 09:45:31 8.2.2023 +1752243924 11-12 Matched Sell 09:42:24 Show last 10 records ✓ with state All v

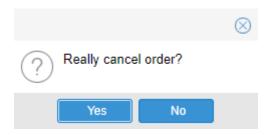
#### Description of window items:

- → □ clicking on this button will expand the list of trades.
- ➤ = button to return to the previous image.

Own orders

#### Operations:

- *«Activate»* button to activate an inactive Buy/Sell order. After the order is activated, it falls to the end of the list, that is, it is taken into account by the software complex when comparing orders by time, as submitted at the time of its activation.
- «Cancel» button to cancel the Buy/Sell order after confirmation in the dialog box:



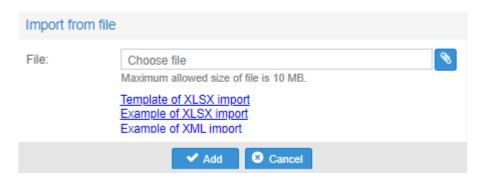
- ➤ User user code.
- Trade period estimated time for which the order was submitted (indicators from 00 01 to 23 24, respectively T00 T01, ...). for example, 19 20 for an hourly order, or 19 22 for a block order.
- State order status (active, inactive, canceled, partially matched, matched, expired).
- ➤ Time the time when the order passed control regarding financial support (hours:minutes:seconds).

- Order direction buy/sale.
- > Amount (MW) indicator with one decimal place.
- > Price limit (UAH/MWh) price limit, indicator with two decimal places.
- ➤ Realized amount (MW) the amount accepted for today within the order, indicator with one decimal place.
- Realized price (UAH/MWh) the weighted average price of the accepted order amount for today, indicator with two decimal places. The indicator is specified only when at least one order has been fulfilled.
- > Remaining amount (MW) amount not accepted for today within the order, indicator with one decimal place.
- > ID order/trade the record ID is assigned by the system.
- Zone trade zone (UA-IPS, UA-BEI).
- Delivery date delivery date.

#### Functionality to maintain:

- Create order button for order creation.
- Import from file button to display a dialog box for importing orders.

# Import from file:



By clicking on the button a standard system dialog box will appear for searching for a file according to the user's operating system. The user selects the file type from which to import.

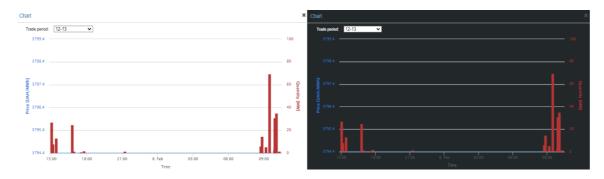
At the same time, in the case of submission of applications using an xlsx file, each individual line of the xlsx file is processed as a separate order for the IDM. IDM orders are checked by the XMtrade®/PXS software complex and are loaded sequentially in ascending order of line numbers in the xlsx file.

# 3.4.5. Chart

The page displays a graph of the history of the price and amounts of electricity bought/sold in the selected time period, for example, the calculation period 17 - 18 hours.

## Navigation

The user selects the fifth window of the screen in the «*IDM Dashboard»* menu, which displays the **«Chart»** (depending on the <u>configuration</u> on a light or dark background).



The diagram has two vertical axes, where the time is displayed on the horizontal axis, the price (UAH/MWh) on the left vertical axis, and the accepted amount (MW) on the right vertical axis. The price is shown on the line, the amount is shown in columns. When you click on a node of a line or column, an information icon will appear with data about the price, amount and trading time.

In the upper part of the chart there is a menu in which it is possible to choose the settlement period for which the chart displays the trading history. The chart displays the trading history for the last 15 minutes. If there are no trades in the selected settlement period, the chart displays the history of trades for the last 15 minutes before the close of trades in the given settlement period.

By default, the chart image is very small so as not to take up space when viewing block orders and custom orders, the user can adjust its size after closing these views.

#### 3.4.6. Order creation

This paragraph describes how to create an hourly, block or custom IDM order. A market participant can submit orders only for the open period for today or tomorrow.

In the case of importing an order from an xlsx file in the «Own orders view» window, each individual line of the file is processed as a separate IDM order in the order of increasing line numbers in the file. At the same time, if, after importing the xlsx file, the processing of the order begins before the time of «opening of the gates of the IDM», such an order is rejected, and if after the time of «opening of the gates of the VDR», it is admitted to the register of orders for bidding on the VDR.

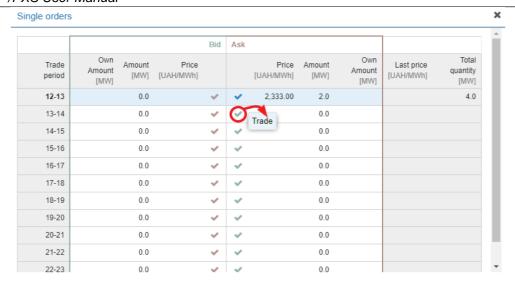
Methods of submitting orders (hourly and block):

- using the window for submitting separate orders described in this point;
- importing from files of the XLSX, CSV, XML type in the **«Own orders»** window.

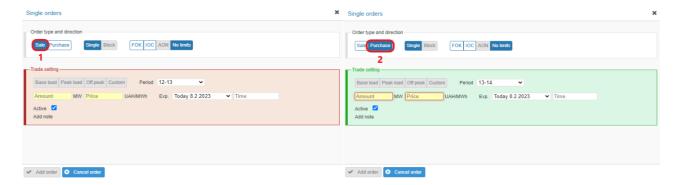
# Navigation

The user selects the *«Single orders»* page in the *«IDM Dashboard»* menu and has 4 (four) options for placing orders from separate order windows.

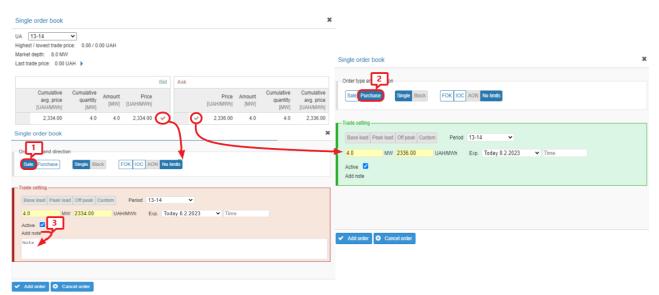
# 1. Single orders



By clicking on the button in the *«Bid»* part, you can enter single order to sell (1), by clicking on the button in the *«Ask»* part, you can enter single order to buy (2). The default window for entering single order will be displayed with pre-filled data from an existing order:



# 2. Single order book



By clicking on the button in the *«Bid»*, you can enter single order to sell (1), by clicking on the button in the *«Ask»* part, you can enter single order to buy (2). The default window for entering single order will be displayed with pre-filled data from an existing order:

Description of the items in the input single order window:

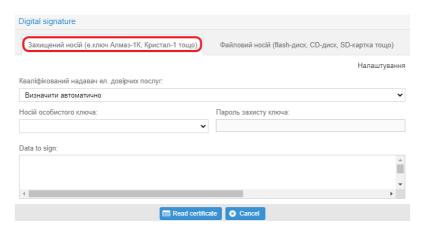
- «Order type and direction» section contains order parameters configured by default:
  - Sale Purchase type of operation Sell/Buy.
  - Single Block order type Single (Hourly).
  - Tok IOC AON No limits attribute (indication) of the order for immediate execution and/or amount indivisibility:
    - o *Immediate or Cancel (IOC)* the order must be executed immediately, in addition, it can be executed partially, otherwise it is automatically canceled.
    - o Fill or Kill (FOK) the order must be completed immediately, and must be completed in full, otherwise it is automatically canceled.
    - All or None (AON) the order must be fully completed.
    - No limits.

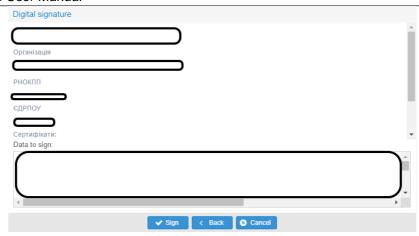
# «Trade setting» section – contains order data:

- Base load Peak load Off peak Custom inactive trading intervals of the block order are not used for single orders.
- Period trade hour, option to choose from the drop-down menu.
- Amount indicator in MW with accuracy to 1 decimal place (mandatory data).
- Price the price for 1 MW in UAH/MW\*h with accuracy up to 2 (two) decimal places (mandatory data).
- Exp. the validity period of the order:
  - Automatically, the validity period of the order is configured by default in accordance with Good for Session
  - The validity period of the order can be changed to *Good till Date* order that is not yet fully completed, inactive or canceled expires in the period set by the user when submitting the order. The user can configure the automatic cancellation of the order for a specific hour in the format of hours:minutes:seconds.
  - o The expiration date can be entered with an accuracy of one second.
- Active— a check box for the status of the order with the value active/inactive (default setting is *«Active»*). If the user makes the status *«Inactive»*, when submitting the order, the order will be considered inactive until the user manually activates it again.
- Add note (3) clicking on the name of the item will open a window for entering text with a comment, for example, entering the reason for canceling the order.

# Buttons:

• Read certificate and ✓ Sign — confirmation of entered data of a new order. In the lower right corner of the screen, information about the successful submission of an order to the system will be displayed for a short time. The user fills in the fields and signs the data with an electronic signature.



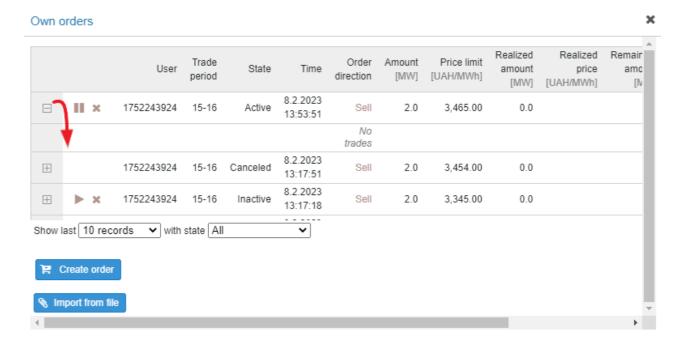


Cancel – closing a new order without saving data.

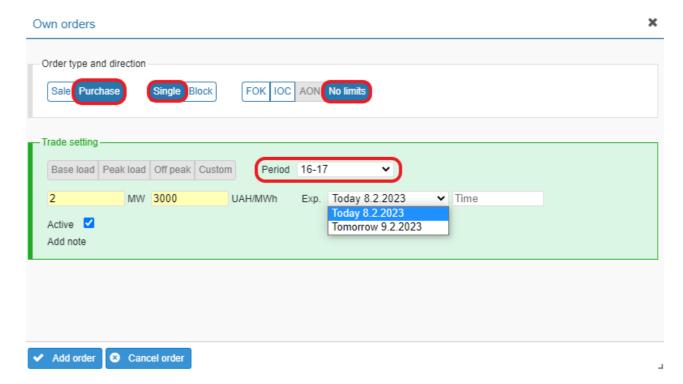
Cancel order
 completing a new order without saving data.



3. Перегляд власних заявок



Clicking on the button Create order will open a window for submitting order. Button Import from file allows you to import orders from a file (the import result will be displayed in the «import» tab). In the window, you can enter any type of order (simple, own, block) with the appropriate data.



The previous figure shows an example of creating a **single order**. Description of points:

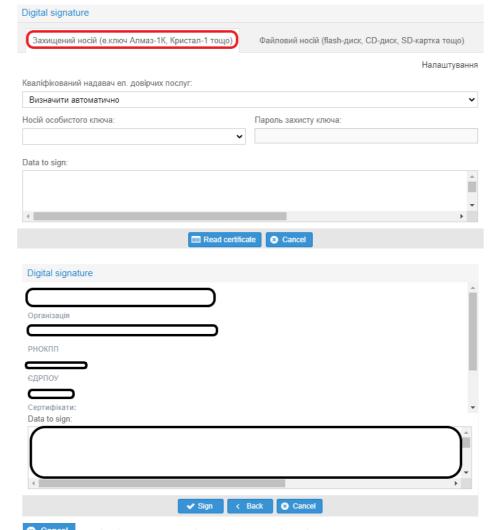
- «Order type and direction» section:
  - operation type Sell/Buy.
  - Single Block Single type of order.
  - FOK IOC AON No limits order attribute.
- «Trade setting» section contains order data:

  - Period settlement period.
  - Amount indicator in MW with accuracy to 1 (one) decimal place (mandatory data).
  - Price the price for 1 MW in UAH/MW\*h to 2 (two) decimal places (mandatory data).
  - Exp. the validity period of the order. The expiration date can be entered with an accuracy of one second.
    - Own orders are implemented only when the interested user chooses them.
    - Active a check box for the status of the order with the value active/inactive (the default 53

- setting is *«Active»*). If the user makes the status *«Inactive»*, when submitting the order, the order will be considered inactive until the user manually activates it again.
- Add note clicking on the name of the point will open a window for entering text with a comment, for example, entering the reason for canceling the order.

#### Buttons:

Read certificate and Sign — confirmation of entered data of a new order. In the lower right corner of the screen, information about the successful submission of the order to the system will be displayed for a short time. The user fills in the fields and signs the data with an electronic signature.



Cancel – closing a new order without saving data.

#### **Order status**

- Active order that can be accepted.
- Inactive order that has been deactivated by the user.
- Canceled order that was canceled by the user or the system.
- Partially matched order which validity period has expired and the scope of which has been partially fulfilled.
- Matched the order, the scope of which was fully fulfilled.
- Expired order which validity period has expired.

Expired inactive – the status of the inactive order has expired.

# 3.5. Financial security

The page serves to display the current state of the market participant's financial support for the current trading day. Verification of DAM orders for financial security is carried out from 10:30 to 12:00 in D-1, verification of IDM orders for financial security is carried out immediately after submitting the order to the system.

Control of financial security in the PXS system will be carried out as follows:

# Available financial security = funds in the ESCROW account – unpaid receivables – financial volume of orders

Validation of the maximum amount of electricity for sale (orders for sale).

- 1. Every day, by 11:30, the TSO must provide data on the maximum amount for sale for the next day of supply.
- 2. After 11:30, a process is launched that cancels the DAM orders of those market participants who submit orders with an amount greater than that determined by the TSO (all orders are canceled at the same time, regardless of how much the amount is exceeded).
- 3. After that, the market participant must edit an existing order or submit a new order to the system.
- 4. From the time when the system received information from the TSO, validation is carried out until the time of orders closing gates (12:00).
- 5. Data about the maximum amount on the DAM are used for IDM.
- 6. The sum of the total amount of electricity for sale in active (valid and uncoordinated) orders and in the traded amount in active and coordinated orders for DAM/IDM, as well as the amount of only specified orders, must not exceed the maximum amount for sale established by the TSO.

# 3.5.1. Financial security status

# Navigation

The user selects from the navigation menu «*Financial security*» subparagraph «Financial security status», after which the system will display a window **«Financial security status»**.

# XMtrade®/PXS User Manual

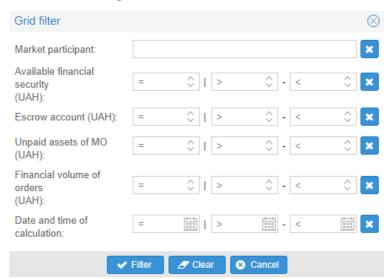


In the window, the user has the opportunity to perform available operations with lists:

∨ Selected: 0 ⊜

— with the help of the button you can specify the filtering criteria in the dialog box «Grid filter» and based on them, get a list of records with new content in the table.

Displaying 1 - 1 of 1



buttons allow you to export the list to a file in the XLSX, CSV format.

# Description of **«Financial security status»** formulary items:

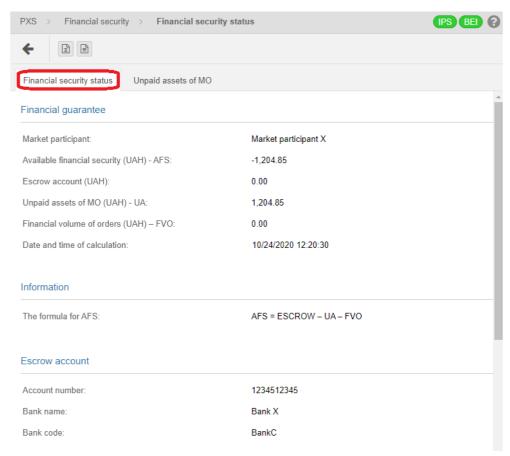
- > First column serial number of the record.
- ➤ Operations by clicking on the icon 🖃 « View record» the system will display the form «Financial security status» in view mode.
- ➤ Market participant the name of the market participant.
- > Available financial security (UAH) the amount of available financial support of the market participant in UAH.
- ➤ Escrow account (UAH) the balance of the account of the market participant in the authorized bank for the accumulation of funds, which the beneficiary uses to calculate the purchased electric energy (UAH).
- ➤ Unpaid assets of MO (UAH) the value of the accepted bids of the Market Participant, including VAT.
- Financial volume of orders (UAH) the cost of orders submitted by a market participant, but not yet accepted, including VAT.

➤ Date and time of calculation – date and time (hours:minutes:seconds) of the last change in the financial security of the market participant.

# 3.5.1.1. Financial security status view

# Navigation

The user selects from the navigation menu «Financial security» subparagraph «Financial security status», after which the system will display a window «Financial security status» in column «Operations», by pressing button «View record» the system will display a window «Financial security status» in view mode.



In the window, the user has the opportunity to perform available operations with lists:

+

– by clicking on the system button after warning will return back to the list.

buttons allow you to export the list to a file in the XLSX, CSV format.

# Description of formulary «Financial security status» items:

- Financial guarantee section:
  - *Market participant* the name of the market participant.
  - Available financial security (UAH) AFS the amount of available financial security of the market participant in UAH.
  - Escrow account (UAH) the account balance of the market participant in the authorized bank for the accumulation of funds, which the beneficiary uses to calculate the purchased electric energy (UAH).
  - Unpaid assets of MO (UAH) UA the price of the accepted orders of the market participant, including VAT.
  - Financial volume of orders (UAH) FVO the price of orders submitted by a market participant, but not yet accepted, including VAT.
  - Date and time of calculation date and time (hours:minutes:seconds) of the last change in the financial security of the Market Participant.

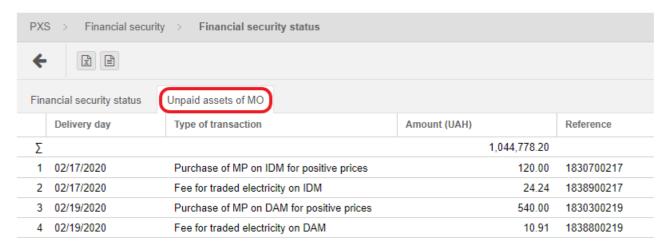
#### «Information» section:

Available financial security is determined by the formula:

# Available financial security = funds in the ESCROW account – unpaid receivables – financial volume of orders

- «Escrow account» section:
  - Account number escrow account.
  - Bank name name of bank.
  - Bank code MFO bank code.

In **«Unpaid assets of MO»** tab displays a review of outstanding receivables that are received by the Financial Services Department and for which an invoice has not yet been issued.



# Description of the points of the form:

- First column serial number of the record.
- Summary line row indicates the summary data for the listed columns.
- Delivery date date of delivery.
- Type of transaction transaction type.
- > Amount (UAH) total amount in UAH.
- Reference variable character.

## 3.5.2. Available sales volume

The web portal page is designed to display the available sales volume for a given day of supply (D+1).

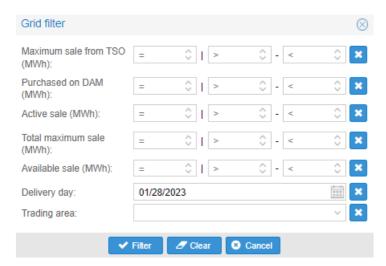
## Navigation

The user selects from the navigation menu «Financial security» subparagraph «Available sales volume», after which the system will display a window «Available sales volume».



In the window, the user has the opportunity to choose the available operations located above the window data

- ➤ Delivery date date of the delivery day, set by default to D+1 (when D=today). Option to choose from the calendar ...
- Trading area all zones, UA-IPS, UA-BEI.
- with the help of the button you can enter filtering criteria in the dialog «Grid filter» and based on them, get a list of records with new content in the table.



- buttons allow you to export the table list to a file in the <u>XLSX, CSV</u> format.

Description of form «Available sales volume» items:

- First column serial number of the record.
- Operations by clicking on the icon (a) «View record» the system will display the form (Available sales volume) in view mode.
- Market participant the name of the current market participant.
- Delivery day day of delivery.
- > Trading zone UA-IPS, UA-BEI.
- Maximum sale from TSO (MWh) numerical value of the maximum sale amount in MWh.

- > Purchased on DAM (MWh) the amount of purchased electrical energy on the DAM.
- Active sale (MWh) numerical value of the maximum sale amount in MWh.
- > Total maximum sale (MWh) the numerical value of the maximum available amount, considering the amount of purchased electric energy on the DAM.
- Available sale (MWh) numerical value of the maximum available sale amount in MWh.

## 3.5.2.1. Available sales volume view

The user selects **«Available sales volume»** from the navigation menu **«Financial security»**, after which the system will open the **«Available sales volume»** window. In the **«Operations»**, column, by clicking on the **(a) (a) (a) (b) (a) (a) (b) (c) (c)**



In the window, the user has the opportunity to choose the available operations located above the window data:

**+** 

– by clicking the button system after warning will return back to the list.

buttons allow you to export the table list to a file in the XLSX, CSV format.

#### «General information» item description:

- Market participant the name of the market participant.
- Market participant (EIC) market participant code.
- Delivery day day of delivery.
- Trading zone UA-IPS, UA-BEI.
- Maximum sale from TSO (MWh) numerical value of the maximum amount for sale in MWh.
- Purchased on DAM (MWh) the amount of electrical energy purchased on the DAM.
- Active sale (MWh) numerical value of the maximum amount for sale in MWh.
- > Total maximum sale (MWh) total maximum sales.
- Available sale (MWh) numerical value of the maximum amount for sale in MWh.

#### «Record information» section:

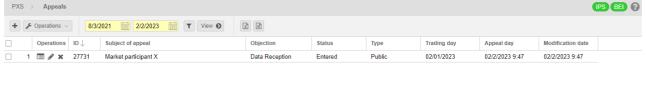
- Record identifier of data from TSO numeric data from TSO (data record identifier from TSO).
- Version of received data from TSO numerical data from TSO.
- Date of data reception from TSO date and time of receiving data from TSO.

# 3.6. Appeals

The web portal page is designed to display the registered appeals data list.

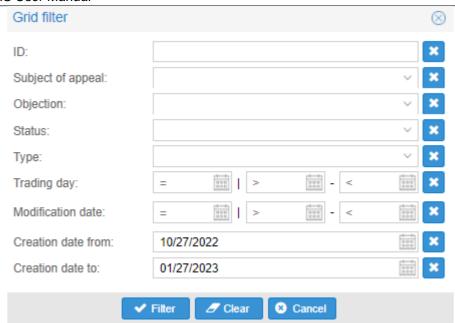
# Navigation

The user selects a function from the navigation menu «Appeals», system open windows «Appeals».



In the window, the user has the opportunity to choose the available operations located above the records:

- «Create new record» by clicking on the button, the system will display the form «Appeals» in <u>submission</u> new Appeal mode.
- Operations there is an active offer in the drop-down menu for the marked Appeal entry:
   Delete removal of Appeal.
- Creation date from start of period filtering interval. Option to choose from the calendar ...
- > Creation date to end of period filter interval, date defaults to current day. Option to choose from the calendar ...
- > with the help of the button you can enter filtering criteria in the dialog box **«Grid filter»** and based on them, get a list of records with new content in the table.



- ➤ View - the selection of the given filtering criteria is confirmed by this button, after which the list will be updated.
- buttons allow you to export the table list to a file in XLSX, CSV format.

## Description of formulary items «Appeals»:

- First column serial number of the record.
- Operations:
  - Wiew record» by clicking on the icon, the system will display the form **Appeals** in view mode.
  - *«Modify record»* by clicking on the icon, the system will display the form **Appeals** in edit mode.
  - \*\* "Delete record" by clicking on the icon, the system will ask the user to confirm his intention to delete the record. You can delete only the appeal that is in status "Entered".
- ➤ ID appeal identifier.
- Subject of appeal participant of the DAM/IDM who submits an appeal.
- Objection receiving data, providing data, daily results, monthly results.
- > Status entered, processed.
- > Type public, private.
- Trading day the day of delivery to which the appeal relates.
- > Appeal day date of appeal submission.
- ➤ Modification date date of appeal modification.

# 3.6.1. Submission of Appeal

The web portal page is intended for registering of a new Appeal data.

Appeals are submitted in the following cases:

- ➤ Data Reception XMtrade®/PXS system problem messages when submitting order, disagreement with the reason for which the order was declared invalid.
- Data Providing XMtrade®/PXS system problem messages when displaying orders, the status of financial security or when exporting data to a file.
- > Daily results on DAM disagreement with the data provided in the daily calculation.
- Monthly results on DAM disagreement with the data provided in the monthly calculation.

# Format of the Contested Period

When submitting an Appeal, the "Disputed period" to which the appeal refers must be filled. Appeals can be sorted according to the disputed period and Appeals can be found (filtered) according to it.

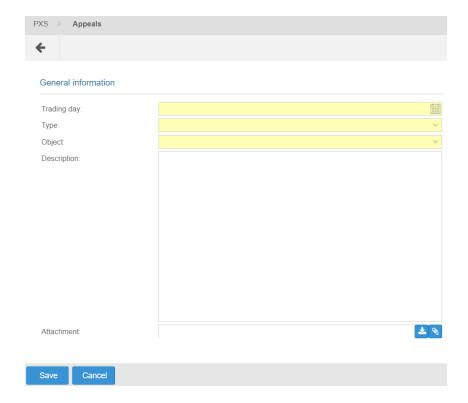
In case of appeals for *receiving data, provision of data and daily results*, the contested period is the day of supply to which the Appeal relates.

In appeals regarding *monthly results*, the contested period is the calendar month to which the appeal relates. Appeals for monthly results are also made in the format day, month and year (day.month.year).

# Navigation



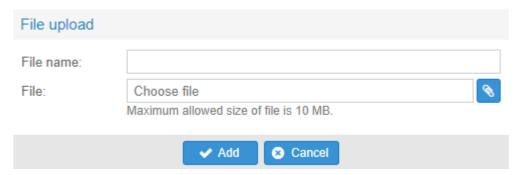
The user goes to the navigation menu «Appeals», after which the system will open a window «Appeals», by pressing the button \* "Create new record" the system will display a window «Appeals» in the adding a new appeal mode.



- ➤ for a positive problem > by clicking on the system button after warning will return the user back to the list.
- by clicking on the button, a new record will be saved (the system will warn with a message «The record was successfully saved») after which the system will return the user to the list again.

Description of the «General information» section:

- Trading day the day of delivery to which the appeal relates. Option to choose from the calendar
- > Type private, public. With the help of the "public" attribute, the market operator is given an offer to publish an appeal for other participants of the DAM/IDM.
- > Object data reception, data providing, daily results of DAM, monthly results of DAM.
- Description the field contains a free text indicating the reason for submitting the appeal.
- ➤ Attachment the attachment provides an opportunity to provide additional information related to the Appeal (for example, own logs, extracts from the database, own calculations and others).
  - By clicking on the button Download attachment, the system will display a standard system file download dialog specific to the operating system and web browser type. You can download only one file, in case of downloading several files, you must first archive them into one file in ZIP format.

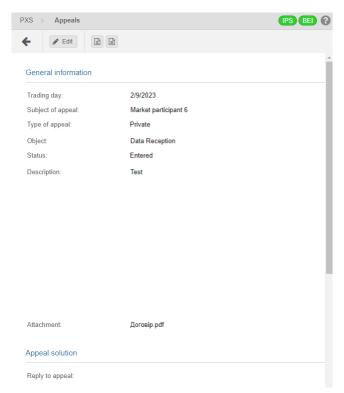


# 3.6.2. Appeal view

The web portal page is intended for viewing data in the existing list of Appeals that can be changed.

## Navigation

The user goes to the navigation menu «Appeals», after which the system will open a window «Appeals». In the «Operations» after prssing button (View record» the system will display a window «General information» «Appeals» in view mode.



In the window, the user has the opportunity to choose the available operations located above the window data:

- > \_\_\_\_ by clicking on the system button after <u>warning</u> will return the user back to the list.
- ▶ <sup>м Редагувати</sup> by clicking on the button, the system will display a window «Appeals» in edit mode.
- buttons allow you to export the list to a file in <u>XLSX, CSV</u> format.

# Description of the points:

- > «General information» section:
  - Trading day the day of delivery to which the Appeal relates.

- Subject of appeal DAM/IDM participant who submits the Appeal.
- Type of appeal private, public.
- Object data reception, data providing, daily results of DAM, monthly results of DAM.
- Status Entered, Processed.
- Description free text that describes in detail the reason for submitting the Appeal.
- Attachment the attachment provides an opportunity to provide additional information related to the Appeal (for example, own logs, extracts from the database, own calculations and others). By clicking on the icon «Download attachment» the system will display a standard system file download dialog specific to the operating system and web browser type.

# «Appeal solution» section:

• Reply to appeal – the paragraph contains a free text that describes the response to the Appeal as accurately as possible.

# 3.6.3. Appeal modification

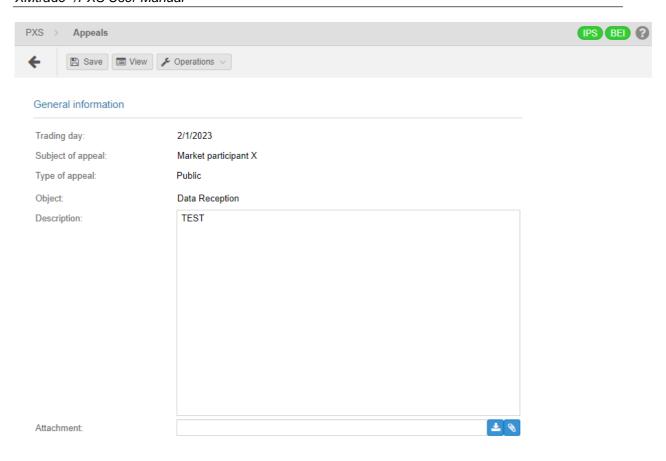
The web portal page is intended for editing the data of an existing Appeal in the system. In the modification in the *«Entered» state* – only the *«Description»* field of the Appeal can be changed, and only the author of the Appeal can change it. After submitting an Appeal, the system sends information with data about the Appeal to the users responsible for filing the appeal, therefore, after submitting the Appeal, it is impossible to change the field *«Trading day»*, *«Type of appeal»* (individual or collective), *«Subject of appeal»* (receiving data, providing data, daily results or monthly results). If the Petitioner made a mistake and submitted a petition, for example, regarding *«Data Reception»* instead of *«Daily Results of DAM»*, he has the option to delete the petition that is in the *«Entered»* state and submit a new appeal.

#### Appeals statuses

- ➤ Entered the appeal was entered into the XMtrade®/PXS system and has not yet been processed by the market operator.
- Processed the market operator responded to the appeal.

#### Navigation

The user selects from the navigation menu «Appeals», after which the system will open a window «Appeals» in column «Operations». By pressing the button «Modify record» the system will display a window «Appeals» in edit mode.





In the window, the user has the opportunity to choose the available operations located above this window:

- by clicking on the system button after warning will return the user to the list.
  - B Save the button will save the changed record, the system will display a message «Record was successfully updated», the system will return the user to the list again.
- > leaview by clicking on the button, the system will display a window **«Appeals»** in view mode.

#### «Modify record» points description:

# > «General information» section:

- Trading day the day of delivery to which the Appeal relates.
- Subject of appeal IDM/DAM member who submits the Appeal.
- Type of appeal individual, collective.
- Object data reception, data providing, daily results of DAM, monthly results of DAM.
- Description free text that describes in detail the reason for submitting the Appeal.
- Attachment the attachment provides additional information about the Appeal (for example, own logs, extracts from the database, own calculations, etc.). By clicking on the "Ownload attachment" button, the system will display a standard dialogue for downloading a file specific to the operating system and type of web browser. You can add only one file to the Appeal by clicking on the "Add attachment" button the system will display the "Upload file" dialog box.

# 3.7. Published information of DAM

- > Total results (all markets)
- > Total results
- Daily results

# 3.7.1. Total results (all markets)

The web portal page is designed to display the DAM statistical data in a graphic image and in the form of a table. The market operator publishes the DAM general results of the following day no later than 14:00 on the page: <a href="https://scmo.oree.com.ua/">https://scmo.oree.com.ua/</a>.

#### Navigation

The user selects the *«Published information of DAM»* subparagraph in the *«Total results (all markets)»* navigation menu, after which the system will open the **«Total results (all markets)»** window.



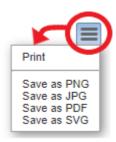
In the window, the user has the opportunity to choose the available operations located above the records:

- Date delivery day for which statistics are indicated. The date is set by default to the current day
   + 1 day. Option to choose from the calendar
- ➤ View – the selection of the given filtering criteria is confirmed by this button, after which the list will be updated.
- → buttons allow you to export the table list to a file in XLSX, CSV, XML format.

Description of the window item «Total results (all markets)», «Chart» section:

In the right part of the chart, by ticking/unchecking the corresponding field of individual zones (BEI, IPS) and price indices for the base, peak and off-peak, the display of the selected curves will be enabled/disabled.

There is a button «Chart options» in the upper right corner, which makes it possible to save the graph in PNG, JPG, PDF and SVG formats and, if necessary, print it.

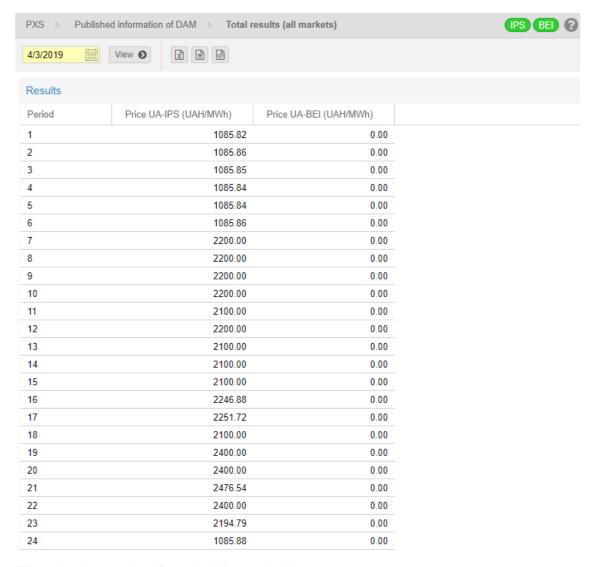


#### «Indexes» section:

# Point description:

- ➤ Base (UAH/MWh) the price index for the base in UAH/MWh, which is set for all calculation periods of the DAM as an arithmetic average price.
- ➤ Peak (UAH/MWh) the price index for the peak range in UAH/MWh, which is set for the calculation periods 09.00 20.00 DAM as an arithmetic average price.
- OffPeak (UAH/MWh) the price index for the non-peak range in UAH/MWh, which is set for the calculation periods 01.00 - 08.00 and 21.00 - 24.00 DAM as an arithmetic average price.
  - UAH/MWh price for each calculation period in UAH/MWh.
  - Change (%) percentage change from the previous day.

#### «Results» section:

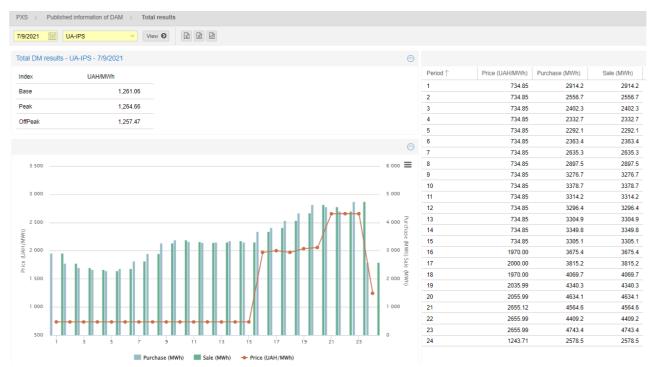


The table shows prices for each billing period in separate zones.

#### 3.7.2. Total results

#### Navigation

The user selects from the menu *«Published information of DAM»* subparagraph *«Total results», after what* the system will open a window **«Total results»**.

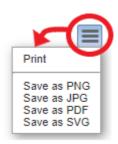


Description of the window item «Total results», «Indexes» section:

- ▶ Base (UAH/MWh) price index for the base in UAH/MWh, which is set for all calculation periods of DAM as an arithmetic average price.
- ▶ Peak (UAH/MWh) price index for peak range in UAH/MWh, which is set for billing periods 09.00 – 20.00 DAM as an arithmetic average price.
- Offpeak (UAH/MWh) price index for offpeak range in UAH/MWh, which is set for billing periods 01.00 – 8.00 and 21.00 – 24.00 DAM as an arithmetic average price.
- ➤ UAH/MWh price for each settlement period in UAH.



There is a button *« Chart options»* in the middle part of the window **«Total results»**, which makes it possible to save the diagram in PNG, JPG, PDF and SVG formats and if necessary, print it.



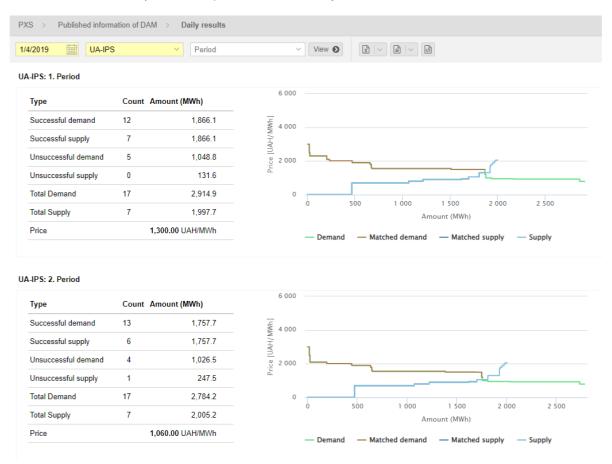
There is a tabular representation of the results of the DAM in the right part of the window **«Total results».** 

- > Period the sequence of the calculation period of the corresponding day of supply.
- > Price (UAH/MWh) for each calculation period in UAH.
- > Purchase (MWh) amount of electricity purchase in each billing period in MWh.
- > Sale (MWh) amount of electricity sales in each calculation period in MWh.

# 3.7.3. Daily results

#### Navigation

The user selects in the navigation menu «Published information of DAM» subparagraph «Daily results» after which the system will open a window **«Daily results»**.



In the window, the user has the opportunity to choose the available operations located above the window data:

- ➤ Date date of delivery. The date is set by default to the current day + 1 day. Option to choose from the calendar ...
- Trading area UA-IPS, UA-BEI.
- > Period the sequence of the calculation period of the corresponding day of supply.
- ➤ View — the selection of the specified filtering criteria will be confirmed with this button, after which the list will be updated.
- buttons allow you to export the table list to a file in XLSX, CSV, XML format.

Description of the window «Daily results» item, «Period» section:

#### Type:

- > Successful demand the number of orders and the total amount (MWhh) of electricity purchase in each calculation period in MWh.
- > Successful supply the number of orders and the total amount (MWh) of electricity sales in each calculation period in MWh.
- Unsuccessful demand number of orders and total unaccepted amount (MWh) of purchase in each Settlement Period.

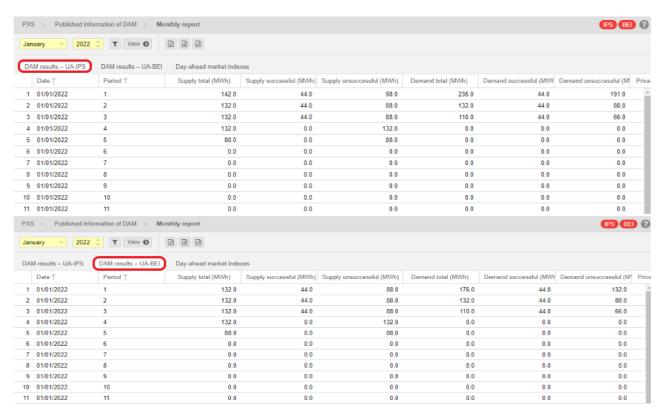
- Unsuccessful supply the number of orders and the total unaccepted amount (MWh) of sales in each Settlement Period.
- ➤ Total Demand the number of orders and the total proposed amount (MWh) of purchase in each Settlement Period.
- Total Supply the number of orders and the total proposed amount (MWh) of sales in each Settlement Period.
- Price DAM price (UAH/MWh) in each Settlement Period.

In the right part of the window there is a graph of the aggregated supply and demand curves, where x = Amount (MWh); y = Price (UAH/MWh).

# 3.7.4. Monthly report

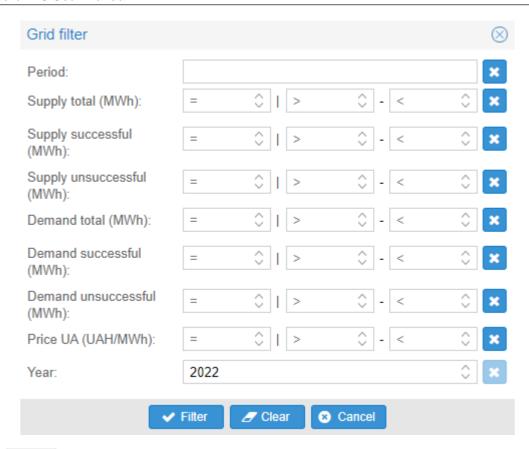
### Navigation

The user selects in the navigation menu «Published information of DAM» subparagraph «Monthly report», after which the system will open a window **«Monthly report»**.



In the form, the user has the opportunity to choose the available operations located above the records:

- Month the default month that corresponds to the most recently published general monthly report.
- ➤ Year the default year, which corresponds to the last day the general monthly report was published.
- ➤ with the help of the button you can enter filtering criteria in the form **«Grid filter»** and based on them, get a list of records with new content in the table.



- ➤ View — the selection of the specified filtering criteria will be confirmed with this button, after which the list will be updated.
- → Image: Description of the property of t

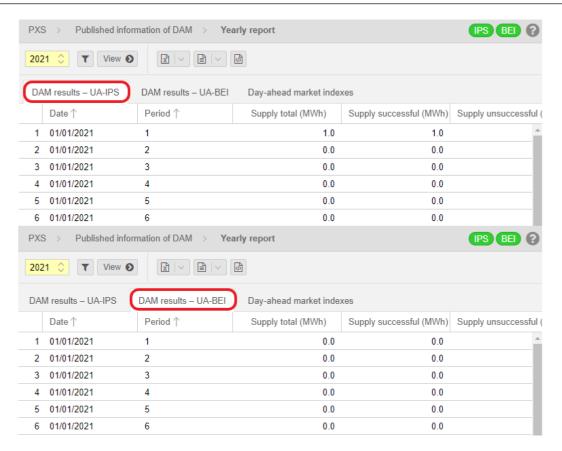
## Description of items:

- Period the corresponding estimated period of the delivery day.
- Supply total declared sales amount in MWh.
- > Supply successful sales amount in MWh.
- > Supply unsuccessful unaccepted sales amount in MWh.
- > Demand total declared purchase amount in MWh.
- > Demand successful purchase amount in MWh.
- > Demand unsuccessful unaccepted purchase amount in MWh.
- ➤ Price UA price in UAH/MWh.
- > Year year.

# 3.7.5. Yearly report

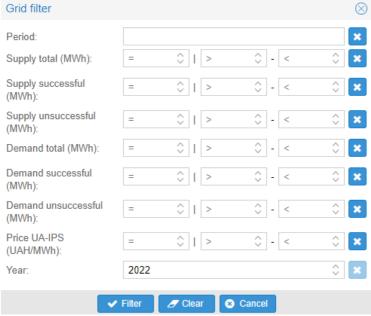
## Navigation

The user selects in the navigation menu « *Published information of DAM* » subparagraph « *Yearly report*» *after which* the system will open a window **«Yearly report»**.



In the form, the user has the opportunity to choose the available operations located above the records:

- ➤ Year the default year, which corresponds to the last day the general monthly report was published.
- with the help of the button, you can enter filtering criteria in the «Grid filter» form and based on them, get a list of records with new content in the table.



- ➤ View the selection of the given filtering criteria is confirmed by this button, after which the list will be updated.
- ▶ Image: Description of the property of t

## Description of items:

- > Period the corresponding estimated period of the delivery day.
- ➤ Supply total declared sale amount in MWh.
- Supply successful sales amount in MWh.
- Supply unsuccessful unaccepted sales amount in MWh.
   Demand total declared purchase amount in MWh.
- > Demand successful purchase amount in MWh.
- > Demand unsuccessful unaccepted purchase amount in MWh.
- ➤ Price price in UAH/MWh.
- ➤ Year year.

# 3.8. Published information of IDM

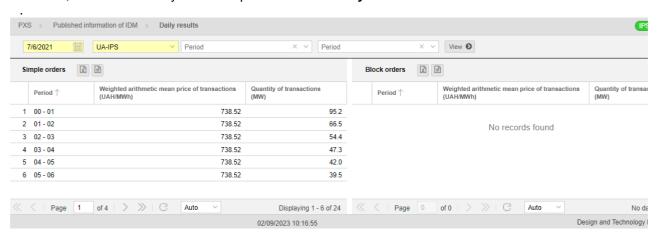
- Daily results
- Summary daily results

# 3.8.1. Daily results

The web portal page displays the results of the IDM after the close of each calculation period of the supply day.

### Navigation

The user selects in the navigation menu «Published information of IDM» subparagraph «Daily results», after which the system will open a window **«Daily results»**.



In the window, the user has the opportunity to choose the available operations located above the window data:

- ➤ Date the date of the day of delivery, set by default to the current day. Option to choose from the calendar ...
- Trading area UA-IPS, UA-BEI.
- ➤ Simple orders period the possibility of choosing a specific period from the drop-down menu offer (0 1 to 23 24).
- *Block orders period* the ability to select a specific block from the offer of a drop-down menu (Base, Peak, Offpeak).
- buttons allow you to export the list of the table to a file in <u>XLSX, CSV</u> format. They are located on the panel of the section of individual types of orders.

Description of the window item «Daily results»:

### «Simple orders» section:

- First column period sequence.
- Period calculation period (00 01, 23 24).
- > Weighted arithmetic mean price of transactions (UAH/MWh) weighted average price for each settlement period.
- Quantity of transactions (MW) purchase/sale amount for each calculation period in MW.

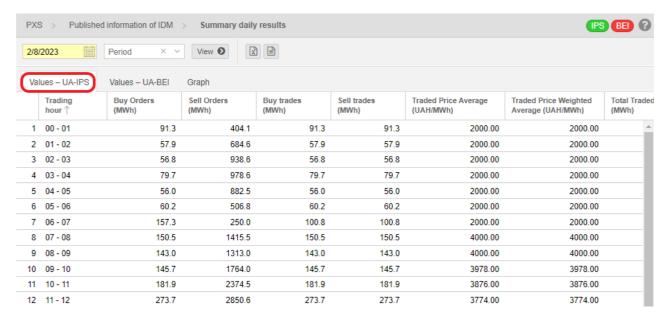
#### «Block orders» section:

- First column period sequence.
- Period settlement period (Base, Peak, Offpeak).
- > Weighted arithmetic mean price of transactions (UAH/MWh) weighted average price for each settlement period.
- Quantity of transactions (MW) purchase/sale amount for each calculation period in MW.

# 3.8.2. Summary daily results

## Navigation

The user selects a function from the navigation menu «*Published information of IDM*» subparagraph «*Summary daily results*», after which the system will open the appropriate form.



In the window, the user can choose the available operations located above the form data:

- > Date day of delivery, set by default to the current day. Option to choose from the calendar
- Period the possibility of choosing a specific calculation period from the drop-down menu offer (0 - 1 to 23 - 24).
- ➤ View – the selection of the specified filtering criteria will be confirmed with this button, after which the list will be updated.
- buttons allow you to export the table list to a file in XLSX, CSV format.

### Description of the «Values» bookmark item:

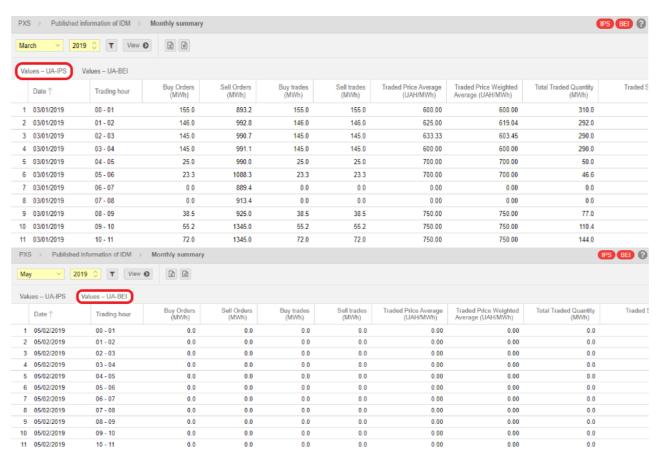
- > First column period sequence.
- ➤ Trading hour settlement period (00 01, 23 24).
- > Buy Orders (MWh) the total proposed purchase amount on IDM.
- > Sell Orders (MWh) the total proposed sales amount on IDM.
- Buy trades (MWh) the total purchase amount on IDM.
- Sell trades (MWh) the total sales amount on IDM.
- > Traded Price Average (UAH/MWh) arithmetic average price for each calculation period.

- Traded Price Weighted Average (UAH/MWh) weighted average price for each settlement period.
- Total Traded Quantity (MWh) the total purchase/sale amount for each calculation period in MW.
- > Traded Simple Orders Weighted Average (UAH/MWh) weighted average price of hourly orders for each calculation period.
- > Traded Simple Orders Quantity (MWh) the total amount of accepted hourly orders for each billing period.

# 3.8.3. Monthly summary

## Navigation

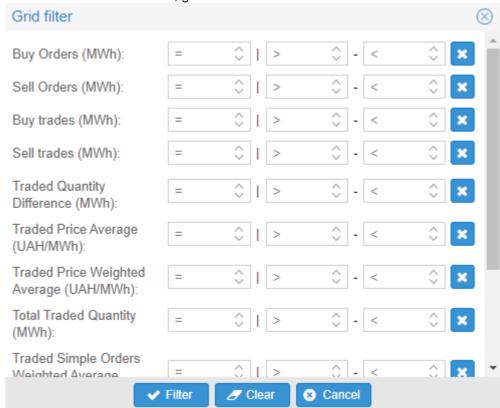
The user selects a function from the navigation menu « *Published information of IDM*» subparagraph «*Monthly summary*», *after which* the system will open a window **«Monthly summary»**.



In the window, the user has the opportunity to choose the available operations located above the records:

- Month the default month that corresponds to the most recently published general monthly report.
- Year the default year, which corresponds to the month of the last publication of the general monthly report.

with the help of the button you can enter filtering criteria in the dialog box «Grid filter» and based on them, get a list of records with new content in the table.



- ➤ View the selection of the specified filtering criteria will be confirmed with this button, after which the list will be updated.
- ▶ – buttons allow you to export the table list to a file in XLSX, CSV format.

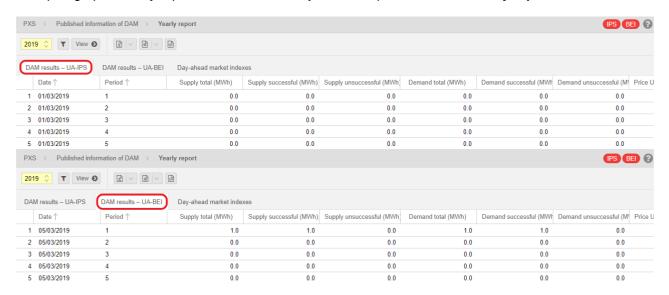
## Description of the form item «Values – UA-IPS», «Values – UA-BEI»:

- > First column period sequence.
- ➤ Date date.
- $\triangleright$  Trading hour settlement period (00 01, 23 24).
- ➤ Buy Orders (MWh) the total proposed purchase amount on IDM.
- > Sell Orders (MWh) the total proposed sales amount on IDM.
- ➤ Buy trades (MWh) the total purchase amount on IDM.
- > Sell Trades (MWh) the total sales amount on IDM.
- > Traded Price Average (UAH/MWh) arithmetic average price for each calculation period.
- > Traded Price Weighted Average (UAH/MWh) weighted average price for each settlement period.
- Total Traded Quantity (MW) the total purchase/sale amount for each calculation period in MW.
- ➤ Traded Simple Orders Weighted Average (UAH/MWh) weighted average price of hourly orders for each billing period.
- > Traded Simple Orders Quantity (MWh) the total amount of accepted hourly orders for each billing period.

# 3.8.4. Yearly report

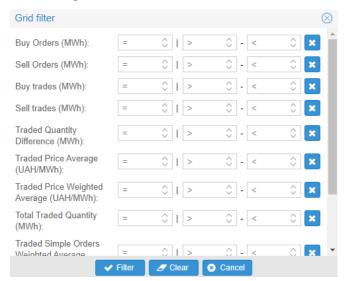
## Navigation

The user selects a function from the navigation menu « *Published information of IDM*» subparagraph « *Yearly report*», *after which* the system will open a window **«Yearly report»**.



In the window, the user has the opportunity to choose the available operations located above the records:

- > Year year, which by default corresponds to the year of the last published general monthly report for December.
- with the help of the button, you can enter filtering criteria in the form «Grid filter» and based on them, get a list of records with new content in the table.



- ➤ View O the selection of the given filtering criteria is confirmed by this button, after which the list will be updated.
- buttons allow you to export the list of the table to a file in XLSX, CSV format.

Description of the form item « Values – UA-IPS», « Values – UA-BEI»:

- > First column period sequence.
- Date date.
- > Trading hour calculation period (00 01, 23 24).
- Buy Orders (MWh) the total proposed purchase amount on IDM.
- Sell Orders (MWh) the total proposed sales amount on IDM.
- > Buy trades (MWh) the total purchase amount on IDM.
- > Sell trades (MWh) the total sales amount on IDM.
- > Traded Price Average (UAH/MWh) arithmetic average price for each calculation period.
- > Traded Price Weighted Average (UAH/MWh) weighted average price for each settlement period.
- Total Traded Quantity (MWh) the total purchase/sale amount for each calculation period in MW.
- Traded Simple Orders Weighted Average (UAH/MWh) weighted average price of hourly orders for each calculation period.
- ➤ Traded Simple Orders Quantity (MWh) the total amount of accepted hourly orders for each calculation period.

# 3.9. Evaluation of STM

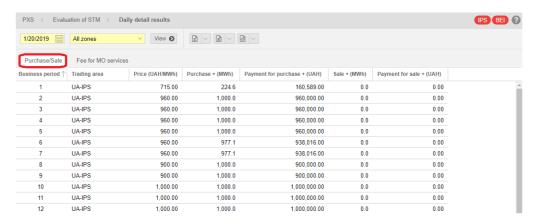
The following functionality is described on the webpage:

- 3.9.1. <u>Daily detail DAM</u>
- 3.9.2. Daily detail IDM
- 3.9.3. Daily summary
- 3.9.4. Invoices

# 3.9.1. Daily detail DAM

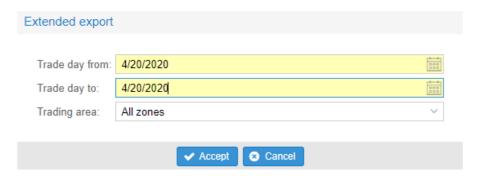
## Navigation

The user selects a function from the navigation menu *«Evaluation of STM»* subparagraph *«Daily detail DAM»*, after which the system will open a window **«Daily detail DAM»**.



In the window, the user has the opportunity to choose the available operations located above the records:

- > Business day the delivery day for which the data is indicated. The date is set by default to the current day + 1 day. Option to choose from the calendar ...
- > Trade area All zones, UA-IPS, UA-BEI.
- ➤ View – the selection of the given filtering criteria is confirmed by this button, after which the list will be updated.
- buttons allow you to export the table list to a file in <u>XLSX, CSV XML</u> format. From the drop-down menu, there is the option of advanced export to the specified file types according to the entered criteria in the dialog box with the name **«Extended export»**.

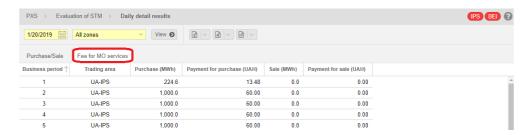


Description of «Purchase/sale» bookmark:

- Business period the estimated period of the corresponding day of delivery.
- Trading area UA-IPS, UA-BEI.
- ➤ Price (UAH/MWh) purchase/sale price on DAM.
- > Purchase + (MWh) the amount of electricity purchased by a market participant.
- Payment for purchase + (UAH) price of purchased electricity.

- Sale + (MWh) the amount of electricity sales by a market participant.
- > Payment for sale + (UAH) price of sold electricity.

**«Fee for MO services»** bookmark – it displays the hourly cost of the MO service in accordance with the purchase/sale amount on the DAM.



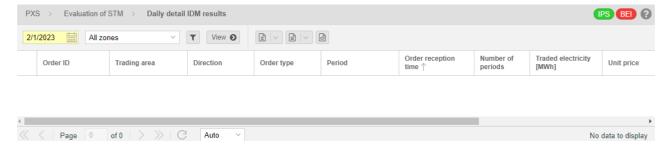
## Item description:

- > Business period the estimated period of the corresponding day of delivery.
- Trading area UA-IPS, UA-BEI.
- ➤ Purchase (MWh) the amount of purchased electricity by a market participant.
- Payment for purchase (UAH) MO commission in accordance with the amount of electricity purchased by a market participant.
- Sale (MWh) the amount of electricity sales by a market participant.
- > Payment for sale (UAH) MO commission in accordance with the amount of electricity sales by the market participant.

# 3.9.2. Daily detail IDM

## Navigation

The user selects a function from the navigation menu «Evaluation of STM» subparagraph «Daily detail IDM», after which the system will open a window **«Daily detail IDM»**.



In the window, the user has the opportunity to choose the available operations located above the records:

- > Trade day the day of delivery for which the data is indicated. The date is set to the current day by default. Option to choose from the calendar.
- > Trading area All zones, UA-IPS, UA-BEI.
- with the help of the button, you can enter filtering criteria in the dialog box «Grid filter» and based on them, get a list of records with new content in the table.
- Filter the selection of the given filtering criteria is confirmed by this button, after which the list will be updated.
- buttons allow you to export the table list to a file in <u>XLSX, CSV, XML</u> format.

### Description of window items:

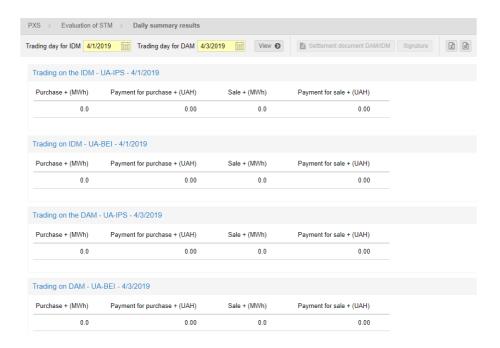
- Order ID (Order ID) the order identifier is assigned by the system.
- Trading area UA-IPS, UA-BEI.
- Direction Sale/Purchase.

- Order type Simple/Block.
- > Period the period for which the order was submitted.
- Order reception type date and time of order submission.
- Number of periods the number of settlement periods.
- Traded electricity (MWh) sold/purchased amount of electric energy.
- Unit price the price of sold/purchased electric energy.
- Payment (UAH) cost of sold/purchased electric energy.
- Fee for traded electricity (UAH) fee for support services (maintenance) and granting the right to use the MO software.
- > Trade time the date of acceptance of the order for the sale/purchase of electric energy.

# 3.9.3. Daily summary results

## Navigation

The user selects a function from the navigation menu *«Evaluation of STM»*, subparagraph *«Daily summary»*, after which the system will open a window **«Daily summary results»**.



In the window, the user has the opportunity to choose the available operations located above the window data:

- > Trading day for IDM the day of delivery on the IDM for which the data is specified. The date is set by default to the current day (-1) day. Option to choose from the calendar ...
- > Trading day for DAM the day of delivery on the DAM, for which the data is specified. The date is set by default to the current day (+ 1) day. Option to choose from the calendar ...
- ➤ View the selection of the given filtering criteria is confirmed by this button, after which the list will be updated.
- Settlement document DAM/IDM saving daily information.
- > Signature saving a qualified electronic signature of daily information.
- buttons allow you to export the content of the form to a file in <u>XLSX, CSV, XML</u> format.

## Description of the window item «Daily summary results»:

### «Trading on the IDM» section:

- > Purchase + (MWh) the total amount of electricity purchased by a market participant.
- Payment for purchase + (UAH) the cost of electricity purchased by a market participant.
- ➤ Sale + (MWh) the total amount of electricity sold by the market participant.
- Payment for sale + (UAH) the cost of electricity sold by a market participant.

### «Trading on the DAM» section:

- > Purchase + (MWh) the total amount of electricity purchased by a market participant.
- > Payment for purchase + (UAH) the cost of electricity purchased by a market participant.
- ➤ Sale + (MWh) the total amount of electricity sold by the market participant.
- Payment for sale + (UAH) the cost of electricity sold by a market participant.

### «Daily payments» section:

#### The Payment type can be:

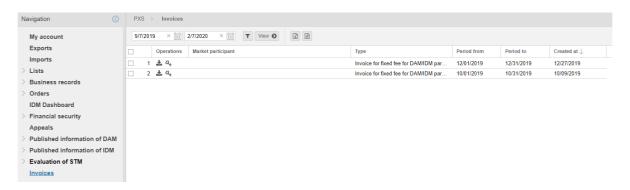
- ➤ Purchase for positive prices on the IDM payment for purchased electricity paid by a market participant in UAH.
  - Trade day relevant delivery day.
  - Payment without tax (UAH) the cost of purchased electricity without VAT.
  - VAT (UAH) value added tax in UAH
  - Total (UAH) total payment for purchased electricity.
  - Reference document number.
- ➤ Sale for positive prices on the IDM payment for the sold electricity, which is paid by the market operator in UAH in a given time period.
  - *Trade day* relevant delivery day.
  - Payment without tax (UAH) the cost of purchased electricity without VAT.
  - VAT (UAH) value added tax in UAH.
  - Total (UAH) total payment for purchased electricity.
  - Reference document number.
- Payment for traded electricity payment for the purchased electricity, which is paid by the market participant in UAH.
  - Trade day relevant delivery time.
  - Payment without tax (UAH) the cost of purchased electricity without VAT.
  - VAT (UAH) value added tax in UAH
  - Total (UAH) total payment for purchased electricity.
  - Reference document number.
- > Sale for positive prices on the DAM payment for the sold electricity, which is paid by the market operator in UAH in each time period.
  - Trade day relevant delivery day.
  - Payment without tax (UAH) the cost of purchased electricity without VAT.
  - VAT (UAH) value added tax in UAH
  - Total (UAH) total payment for purchased electricity.
  - Reference document number.

### 3.9.4. Invoices

The page of the portal «Invoices» is available only to an authorized user who has been assigned the role of a market participant and serves to display basic information about invoices for the sale and purchase of electric energy on the DAM. The user can download the invoice in PDF format.

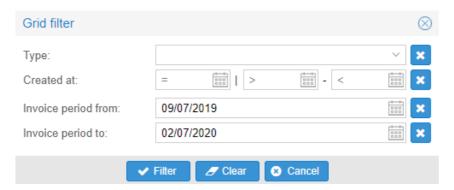
## Navigation

The user selects «Invoices» in the navigation menu, after which the system will open a list of invoices.



In the window, the user has the opportunity to choose the available operations located above the records:

- > Invoice period from the beginning of the accounting period. Option to choose from the calendar
- Invoice period to the end of the accounting period. Option to choose from the calendar
- with the help of the button you can enter filtering criteria in the dialog box «Grid filter» and based on them, get a list of records with new content in the table.



- ➤ View — the selection of the given filtering criteria is confirmed by this button, after which the list will be updated.
- buttons allow you to export the content of the form to a file in XLSX, CSV, XML format.

## Description of items:

- First column serial number of the item.
- Operations:
- *«Download file»* the system will display a standard system file download dialog specific to the operating system and web browser type. After the participant selects an option **«Open»**, the system will display the invoice in PDF format.

- «Download digital signature» the system will display a standard system file download dialog specific to the operating system and web browser type. After the participant selects an option «Open», the system will display the electronic signature.
- ➤ Market participant the name of the market participant.
- > Type DAM/IDM settlement statement, DAM/IDM invoice for traded amount fee, Invoice for fixed fee for DAM/IDM participation.
- > Period from the start of the invoice period.
- > Period to the end of the invoice period.
- > Created at the invoice date is specified in the format day.month.year.