

› eex group

EEX Group DataSource  
ExcelTool  
- User Guide

ExcelTool  
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Leipzig

Ref. 03

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# 1. Introduction

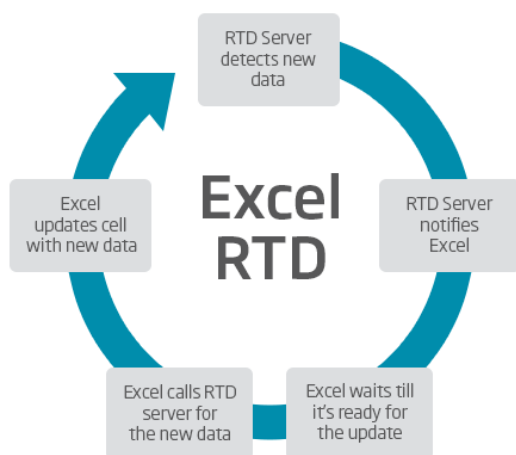
## 1.1 About DataSource ExcelTool

The DataSource ExcelTool (later ExcelTool) allows you to import real-time and historical EEX Group energy market and transparency/fundamental data into excel spreadsheets for further individual analysis and integration. The ExcelTool is a stand-alone product that runs as an add-on to Microsoft Excel, and appears in its own unique toolbar at the top of the Excel application.

The ExcelTool is designed to run in the Windows environment, and runs on the Microsoft .NET API platform. It was built to stream data utilizing Excel Real-time Data (RTD) components (vs. DDE), and provides a fast, reliable, and robust interface.

## 1.2 About RTD Connections

The Excel Real-time Data (RTD) components are part of the DataSource ExcelTool so that real-time data can stream into a Microsoft Excel spreadsheet. The RTD server communicates with Excel in a hybrid push-pull mechanism, greatly increasing the efficiency of the update.



## 1.3 Requirements

To run the ExcelTool, the following requirements are needed:

### 1.3.1 Operating system

- The ExcelTool supports Microsoft Windows XP and all later versions.

### 1.3.2 Excel version

- The ExcelTool supports Microsoft Excel 2003 and all later versions.

### 1.3.3 Data access

- To use the ExcelTool you need a valid/active subscription of an EEX Group DataSource product related to the use of the ExcelTool.
- The ExcelTool receives the data you request from the DataSource servers.
  - If you use a firewall which is restricting the internet access you have to make sure that the following IPs and ports are whitelisted/allowed to receive data via the ExcelTool.

IP address from	IP address to	Port/s
206.155.48.101	206.155.48.109	6487/443
206.155.48.95	206.155.48.98	80/443
206.155.48.10		80/443
216.52.81.38	216.52.81.41	6487/443
216.52.81.35		80/443
216.52.81.95	216.52.81.98	80/443
216.52.81.112		6487/443

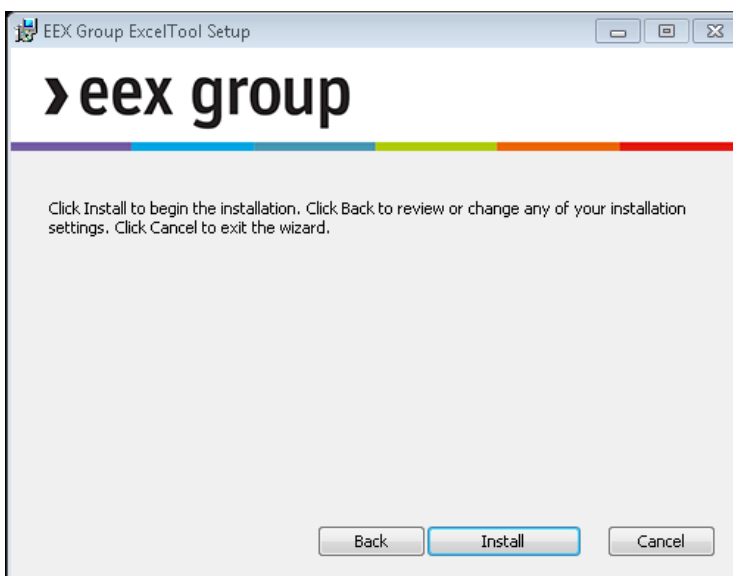
## 2. Getting Started

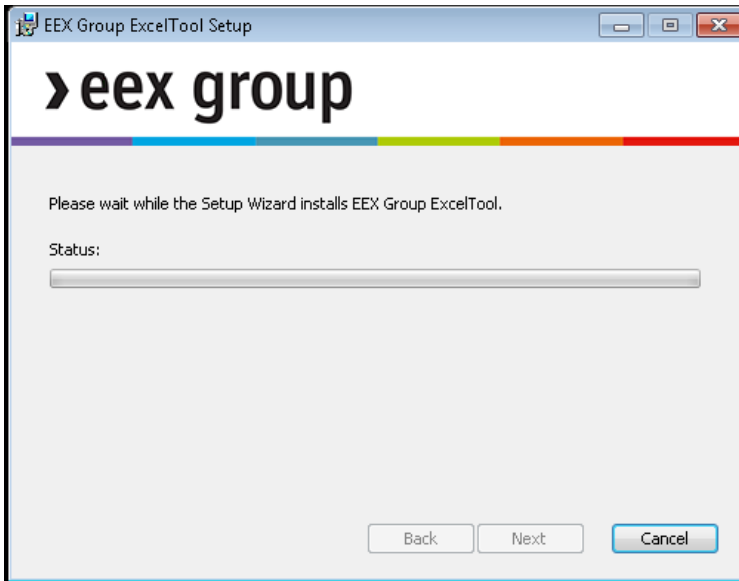
### 2.1 Download Instructions

Follow the steps below to download ExcelTool:

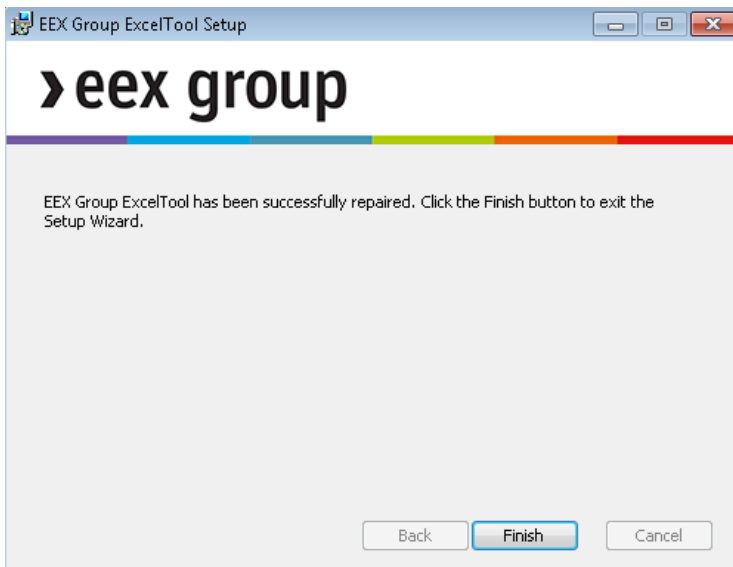
1. Go to the link for download you received from EEX and download the ExcelTool.
2. Once download is completed – select Run when prompted by a Security Warning pop-up.
3. Next, the ExcelTool Installer will guide you through the final steps.

Click Next through the following four screens:





4. Click Finish once ExcelTool has been successfully installed.





## 2.2 Login

When you first open Excel and click the Quote, History or Preferences icon from the ExcelTool toolbar, you will be asked to Login with your username and password. Your username and password are typically saved in your Preferences so you won't have to repeat this step each time.




### Notes:

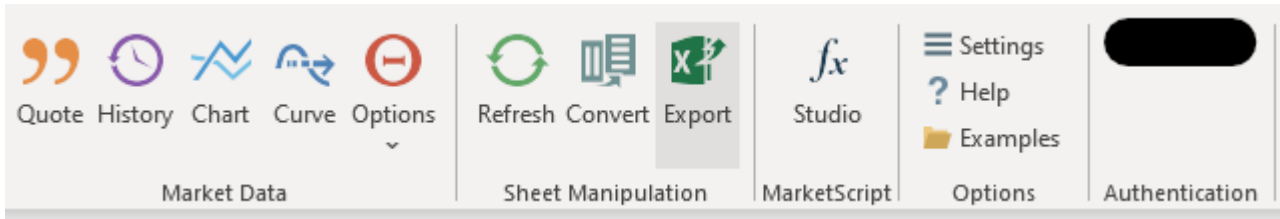
Save Password – Will store your credentials but you will still have to click login to connect to EEX Group DataSource

Automatically log me in – Will connect to the EEX Group DataSource automatically each time Excel is launched

Don't save password – EEX Group DataSource will not connect unless you enter your credentials and click login.

## 2.3 The Toolbar

The ExcelTool Toolbar contains icons that give you access to all the ExcelTool functions and can be found under the EEX Group tab  (Excel 2007 or later):



### Excel 2003 or earlier

The toolbar will appear in the upper left corner of your Excel application.

#### 2.3.1 Toolbar Icons



Quote

**Quote:** Inserts live market data quotes into your spreadsheet. Clicking the Quote icon will open the Quote Dialog box.



History

**History:** Inserts historical quote data into your spreadsheet. Clicking the History icon will open the History Dialog box.



Chart

**Chart:** Inserts a chart with the supporting historical data into your spreadsheet. Clicking the Chart icon will open the Chart Dialog box.



Curve

**Curve:** Inserts a curve with the supporting historical data for the specific symbol root chosen and its selected forward months. Clicking the Curve icon will open the Curve Dialog box.



Options

**Options:** Inserts options quote data into your spreadsheet. Clicking the Options icon will open the Options Dialog box.



Convert

**Refresh:** When you have inserted static data in a Historical Query, the Refresh icon is used to update new data into the spreadsheet.

Note: The Refresh icon will only be visible if you select “Show refresh button in the toolbar” from your Preferences.

**Convert:** When clicked, Excel Tools will convert a spreadsheet created in a previous version of Excel Tools to the current version.

The conversion process automatically converts the syntax for the data calls in each cell for use in the current version of ExcelTool. Once the spreadsheet has been converted and saved, there is no need to run this process again.

Note: The Convert icon will only be visible if you select “Show convert button in the toolbar” from your Settings.



Export

**Export:** Allows you to break the formulas behind the cells that carry the data and exports selected ranges of data to a new workbook file in purely a values format.



Studio

**fx Studio:** Allows you to create user defined formulas with the market script language.

Note: fx Studio icon will only be visible if you select “Show MarketScript Studio button in the toolbar” from your Preferences.



Settings

**Settings:** Used to set or view your account settings, including your username and password. To access the Preferences dialog, click the pop-out arrow in the bottom right corner of the EEX Group toolbar.



Help

**Help:** Shows where you can find further information or get help using the ExcelTool.



Examples

**Examples:** Provides a range of preloaded, formatted excel files upon install with data provided via the ExcelTool.

Authentication: Shows your EEX Login Name

## 2.4 Preferences

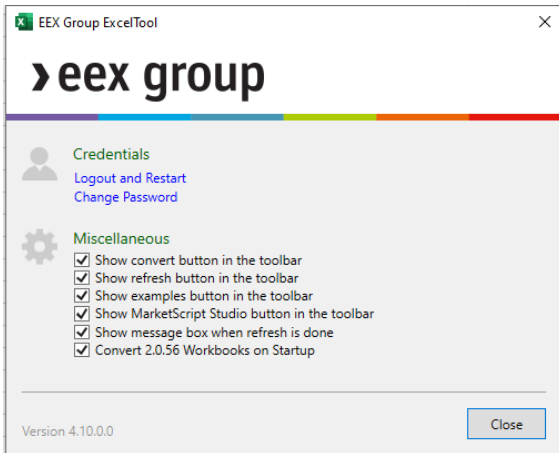
The Preferences dialog box is used to set or change your login credentials (username and password). It also contains Miscellaneous options used by ExcelTool.

To access the Preferences dialog, click the Settings icon in the ExcelTool toolbar:



Settings

## 2.4.1 The Dialog Box

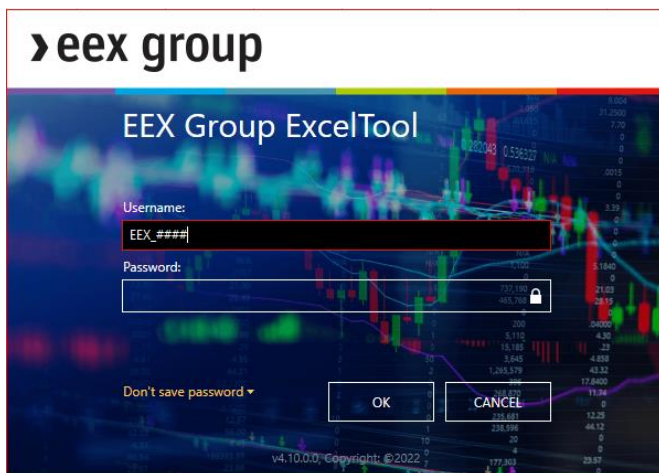


## 2.4.2 Credentials

Your credentials are the username and password that permit access. If you do not wish to enter your username and password every time you access ExcelTool, you can save them here for automatic retrieval.

### To Set Credentials

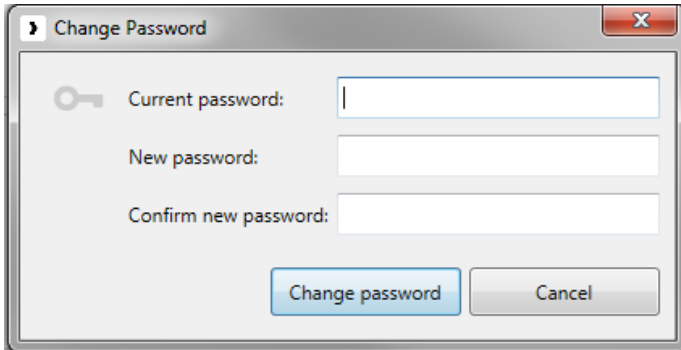
1. Click the Settings icon from the ExcelTool toolbar.
2. Click Set Credentials.
3. Enter your Username and Password.



4. If you want to save your password so you won't be prompted for it each time you access ExcelTool, make sure you select Save Password towards the left hand side of the Login icon. (If you leave this to Don't save password, you will be prompted to enter your password each time you access Excel Tools.)
5. Click Login to save your credentials, then click Close to exit the Preferences dialog box.

### 2.4.3 To Change Your Password

1. Click the Settings icon from the ExcelTool toolbar.
2. Click Change Credentials.



3. Enter your Current Password.
4. Enter your New Password, then enter it again to confirm.
5. Click Change password, then click Close to exit the Preferences dialog box.

### 2.4.4 Miscellaneous

Miscellaneous Preferences include:

Field	Description
<b>Show convert button in the toolbar</b>	(Default = unchecked)  If you were using a prior version of ExcelTool, the convert button is used ONCE to update older versions of spreadsheets to the new version of ExcelTool. Each spreadsheet you manage must be converted to the new ExcelTool format. Typically, you will only show and use the convert button ONCE after upgrading your software.  For more information on converting spreadsheets, please see the topic “Converting Spreadsheets”.
<b>Show refresh button in the toolbar</b>	(Default = unchecked)  The Refresh button is used only when you will be creating Static Historical queries. Static data queries will not poll new data from the DataSource servers unless you specifically request an update by clicking the Refresh icon.
<b>Show examples button in the toolbar</b>	(Default = unchecked)  The examples button gives you use to some examples which explain the use of the ExcelTool with VBA.
<b>Show message box when refresh is done</b>	(Default = unchecked)  If checked a message box informing about the successful refresh of data triggered by the refresh button will be shown.

<p><b>Automatically update to the latest version</b></p>	<p>(Default = checked)</p> <p>When checked, ExcelTool will automatically look for and update to the newest software version available when you first open Excel. It is recommended that you keep this field CHECKED so you are running on the most up-to-date version of software available.</p> <p>Updates to ExcelTool happen seamlessly. You can always determine your current version of the application by looking in the bottom left corner of the Preferences dialog box (see the image at the beginning of this topic.)</p>
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## 2.5 Converting Spreadsheets

Spreadsheets created in the older-versioned software of the ExcelTool version 3.0 are not compatible with ExcelTool version 4.0.

If you have spreadsheets that were created using ExcelTool version 3.0 or older, each spreadsheet must be converted to the new application before they will run properly. EEX Group has provided a one-click utility that will perform this conversion for you.

## 3. Symbols

### 3.1 Symbology

Symbology is the interpretation of how symbols are configured. Knowing the symbology, will assist you when creating a quote query or when configuring an historical table.

#### Formatting Futures contracts

EEX Group Market Data Symbols for Emission Spot and all Futures contracts are prefaced with a /E. followed by the root, month code, then year.

EEX Group Market Data Symbols for Options contracts are prefaced with a -E. followed by the root, month code, then year.

EEX Group Market Data Symbols for Emission and Gas Spot contracts are prefaced with a #E. followed by the root.

EEX Transparency Data are prefaced with a #EEXT. followed by the root for time series. Events will be available as News.

Example:

- /E.DEBMH19 where
  - DEBM = Phelix DE Base Load Month Futures
  - H = March
  - 19= 2019

NOTE: The /E. in front of the symbol root specifies the EEX Group trading session.

Rolling Futures: Rolling futures symbols automatically change the contract on contract expiration. A nearby for the EEX Group session is the root preceded by '/E.' and followed by <numeric month out>.

Examples:

- /E.DEBM<0> Phelix DE Base Load Month Futures – Current Month
- /E.DEBM<1> Phelix DE Base Load Month Futures – Front Month
- /E.DEBM<2> Phelix DE Base Load Month Futures – One Months Out

Rolling Futures – Alias: An alias represents the current contract and will change as the contracts roll. An alias is the root preceded by '/E.' and followed by [numeric month out].

Examples:

- /E.DEBM[0] Phelix DE Base Load Month Futures – Front Month. NOTE: On a QUOTE query, /E.DEBM<0> and /E.DEBM [0] will return the same data
- /E.DEBM[1] Phelix DE Base Load Month Futures – Front Month

Rolling Futures – Continuous Months: (HISTORICAL QUERY ONLY) Rolling futures symbology for a particular delivery month is the root <month>. (Note the month is entered by its first three letters and is not case sensitive.) This pulls the most current trading contract. To access a month beyond the most current month, use the root <month +number of years out>. Both symbologies follow similar formats for different symbols.

Examples:

- /E.DEBM<JAN> Phelix DE Base Load Month Futures January
- /E.DEBM<JAN+1> Phelix DE Base Load Month Futures 2nd January out continuous
- /E.DEBM<JAN+2> Phelix DE Base Load Month Futures 3rd January out continuous

### Futures Symbology - Examples

Description	Root	Symbol	Example
<b>EEX Group /E.</b>			
<b>Phelix DE Base Month Futures</b>	/E.DEBM	/E.DEBMmyy	/E.DEBMN19 July 2019
<b>Gaspool Natural Gas Month Futures</b>	/E.G2BM	/E.G2BMmyy	/E.G2BMN19 July 2019
<b>EEX Transparency #EEXT.</b>			
<b>EEX Available Capacity – Austria – Biomass</b>	#EEXT.AC.PMWD.AT-LGNT	-	-
<b>EEX Generation Quantity - Germany</b>	#EEXT.GQC.PMWH-DE	-	-

Please use the long name for selecting EEX Transparency Data.

### 3.2 Month Codes

The following month codes are used to configure commodity symbols

Example:

- /E.DEBMN19 July 2019

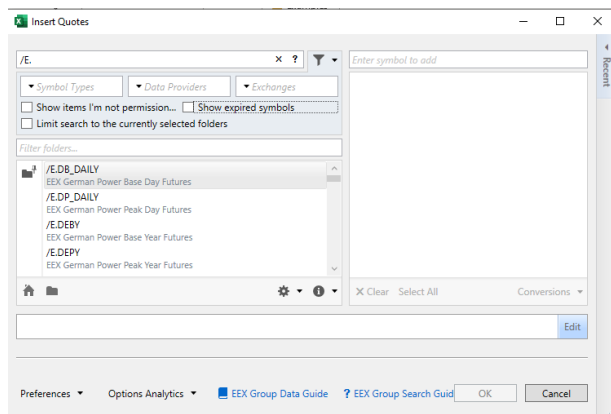


Month Codes	
January	F
February	G
March	H
April	J
May	K
June	M
July	N
August	Q
September	U
October	V
November	X
December	Z

### 3.3 Symbol Search

The Symbol box allows you to enter a word or phrase to assist you in finding the desired symbols. Enter the search word or phrase in the top left part of the dialog box. The results are displayed in the Symbol Tree.

1. To start, enter a part of the symbol's description in the Search box:



For example “/E.” for futures contracts.

As you continue to enter more letters in the Search box, the results are screened more finely. You can also use one of the checkboxes to specify your search.

2. To select ONE contract, double-click on the desired symbol, in the left box, to move it into the Selected Symbols box on the right.
3. To select MULTIPLE symbols, hold your CTRL key, and click on each symbol in the right hand selection box. When you have all of the desired symbols selected, press the ENTER key to move the range to the right side.

- To select a RANGE of symbols, hold your SHIFT key, and click the first symbol in the range you want. Then, click the last symbol in the range. (All of the symbols in the range will be highlighted). Press the ENTER key to move the range to the right side.

NOTES: The Symbol Tree remembers the last exchange/category you navigated and will display your most recent symbol choices next time you access the dialog box.

Symbols MAY be added to the right “selected symbols” box multiple times. This allows you to add the symbol to your spreadsheet using different units of measure or currencies. This is helpful if you wish to view the price data for one symbol using different currencies or units of measure.

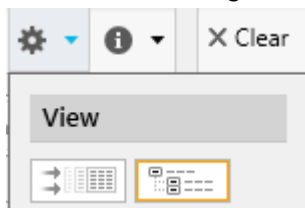
### 3.4 Symbol Tree/Slider

The Symbol Tree/Symbol Slider allows you to scroll through all the available data categories to find the symbols you want for your query. It will also display any User-Defined Formulas saved. The Symbol Tree is accessed on the left side of the dialog box, and has a number of settings available.

#### 3.4.1 Settings

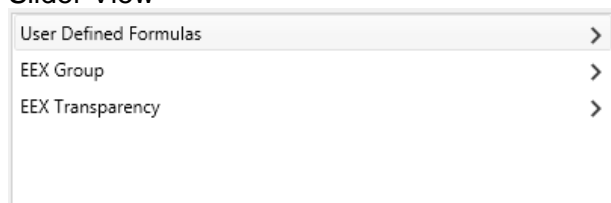
You have the option of changing the amount of data to display and the way in which the tree appears by accessing the settings.

- Click the Settings icon.

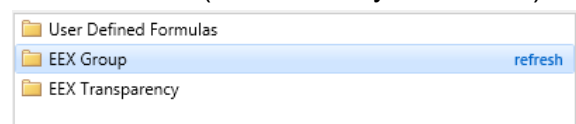


- Click on the desired View.

##### Slider View



##### Tree View – (“Windows-styled” folders)



## 4. Quotes

### 4.1 General Process

When you initiate a Quote query, Excel displays a tabular representation of the real-time streaming data for the contracts you've identified. Data is displayed in each column based on the field choices you make when you set up the query.

#### 4.1.1 The Process of Performing a Quotes Query

The process of adding Quotes to your Excel spreadsheet is simple: specify the desired symbols and select the data fields you want. Once the query is set, new data is automatically updated into your spreadsheet.

The general process is listed here:

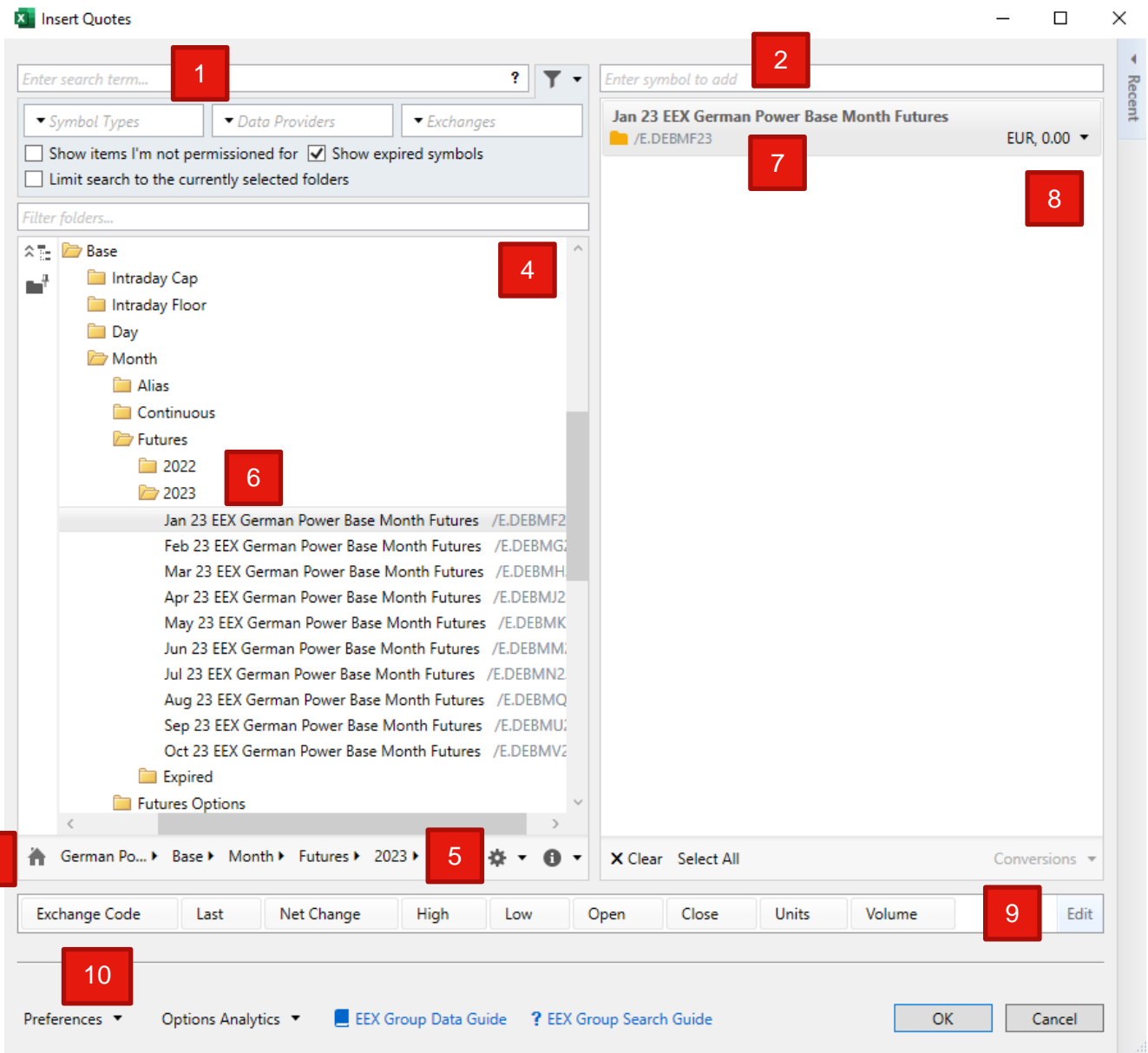
1. Initiate a Quotes query by clicking the Quotes icon.
2. Select symbols to display.
  - a. If you know the specific symbols, enter them directly.
  - b. If you don't know the specific symbols, use the Search or Symbol Tree to find them.
3. Identify the columns/data fields you wish to display using the field selector.
4. Optionally choose additional display settings (rows or columns, data header format).
5. Save the query to insert the quoteboard in your spreadsheet.
6. Data is automatically pulled into the spreadsheet as new information is received from the exchanges.


NOTE: Unit and currency conversions are only available in the Historical query.


### 4.2 The Quote Dialog box

Clicking the Quotes icon will cause the following dialog box to appear:

Part of the Quote Dialog Box



1	SEARCH: Enter one or more words that describe the symbol or category you want. The more information you enter, the finer the search results will be. View more information about Symbol Search.
2	When you know the specific symbols you want, enter the desired symbols here. Examples: <ul style="list-style-type: none"> <li>• Enter /E.G2BMN19 July 2019 for July 2019 Gaspool Natural Gas Month Futures</li> <li>• Enter #EEXT.AC.PMWD.AT-LGNTE for EEX Available Capacity – Austria – Biomass</li> </ul>
3	Click the  HOME icon to go back to the start of the Symbol Tree. View more information about Symbol Tree.
4	Click the X to Clear all the selected symbols.
5	Displays any Filters saved in the Symbol Tree Settings.

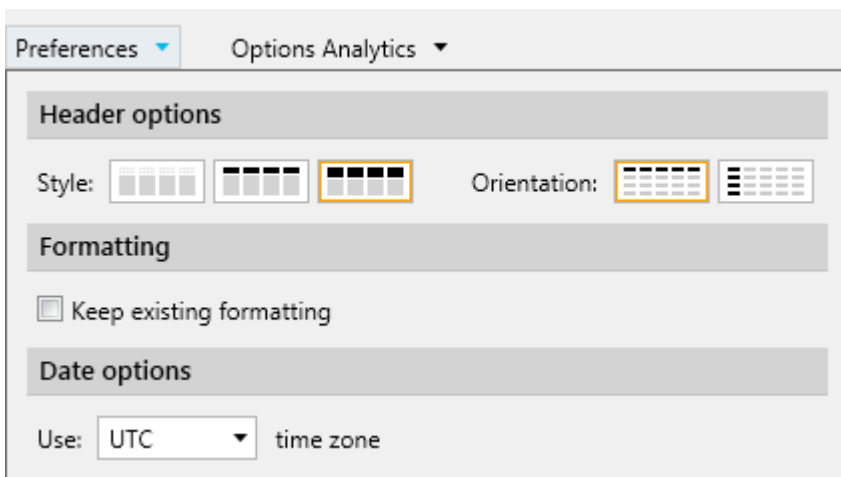
	Click the Settings icon  to change the View (Tree or Slider) or Filters.
6	The left side displays the results of a SEARCH, or the symbols found by moving through the Symbol Tree.
7	Symbols selected to appear on your spreadsheet are listed in the right side of the dialog box. The Unit of Measurement, Currency and Decimal Precision are displayed for each symbol, and can be changed by clicking on the drop down arrow to the right hand side of them.
8	Remove a symbol by clicking on it once, then clicking the “X” that displays.
9	Add or delete data fields to display in the spreadsheet. You can also change the order in which they are displayed by dragging and dropping them.
10	Additional display settings (rows or columns, data header format) are chosen in the Preferences area of the dialog box.

Related Topics

- Quotes Query
- Symbology
- Symbol Search
- Symbol Tree


### 4.3 Quote Query Preferences



When creating a Quote Query, you may choose display options by clicking the Preferences link found in the lower left corner of the dialog box.



#### 4.3.1 STYLE



The default setting for a quoteboard will Bold the headers in each column. You may change this by clicking on a Style icon:

-  No Headers – no column headings will display

-  Plain Headers – normal font weight is used for column headers
-  Bold Headers – bolded font weight is used for column headers (default)

### 4.3.2 ORIENTATION

The default setting for a quoteboard will place each symbol in a row, with each selected data field as a column. You may change this by clicking on an Orientation icons:

-  Symbols in Rows – each symbol is placed in a row, with each selected data field in a column (default)
-  Symbols in Columns – each data field is placed in a row, and each symbol in a column.

### 4.3.3 Time zone

You can choose between different time zones (e.g. UTC, Local (your local time), Publisher) in which the time stamps included in the data will be displayed.

## 4.4 Create a Quotes Query

### 4.4.1 Insert Quotes

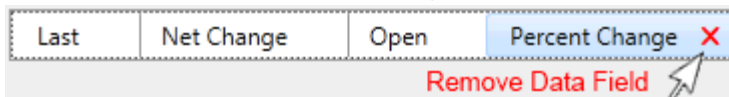
1. Open an Excel spreadsheet.
2. Click the Quote icon from the ExcelTool toolbar.  
(If you have not saved your credentials, you will be asked to log in.)  
Result: The Insert Quotes dialog box appears.
3. Select symbols to appear on the quoteboard. There are three ways to do this:
  - Enter specific symbols.
  - Search for symbols.
  - Use the Symbol Tree.

1. When you know the specific symbology, type directly into the symbol field at the top right of the dialog box, pressing ENTER when done. View detailed information on symbology

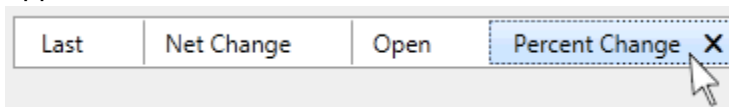
Examples:

- Enter /E.G2BMN19 July 2019 for July 2019 Gaspool Natural Gas Month Futures

- Enter #EEXT.AC.PMWD.AT-LGNTE for EEX Available Capacity – Austria – Biomass
2. SEARCH: Enter a phrase to search for in the field marked “Search” at the top left of the dialog box. View detailed instructions for using Search.
  3. Use the Symbol Tree to navigate through the categories to find the desired symbol. View detailed instructions for using the Symbol Tree.
  4. Select the data fields you wish to include on the quoteboard.
    - To select more fields, click “Add”, then click on the data field(s) you want from the Field Selector (sorted alphabetically).
    - To remove a selected field, hover over the field and then click the “X”. (This places the field back into the Field Selector.)



- By default, the symbols will be displayed in the spreadsheet from left to right in the order in which they are entered into the symbol field grid. You can drag/drop the symbols along with the data fields (see below) to change the order in which they appear:



NOTE: The Data Fields area “remembers” the last set of fields you selected for a quote and will display those fields by default.

5. Optionally choose additional display settings by clicking the Preferences link. View detailed information about the Quote Preferences.
6. When done, click OK to insert the Quote query on your spreadsheet.

## 4.5 Modify Quote

### 4.5.1 New Data Fields

Once a quote has been added to a spreadsheet, it is easy to add additional data fields for the symbols you’ve selected, as long as you know the Field ID that represents the data. When using a header to identify the data, you simply need to add a new column and change the header using one of the valid Field ID names for the data you want.

When using “No Headers” on the quote, you need to insert the Field ID name in the cell function.

	A	B	C	D
1		Last	Open	Close
2	/CLF12	93.12	93.68	94.3

Use the header to identify the data.

	A	B	C	D	E
1	/CLF12	93.12	93.68	94.3	

No Headers: insert the Field ID in the cell function.

## 4.5.2 Add a New Data Field

### WHEN USING HEADERS

- Copy and paste any of the data columns on your spreadsheet into a new column.  
NOTE: When the symbols were placed in columns (vs. in rows), copy and paste any of the data rows into a new row.
- Place your cursor in the heading of the new column, and enter a valid Field ID as the new heading.  
RESULT: The underlying data in each symbol row will automatically change to show you the data for the new Field ID.

### WHEN USING NO HEADERS

- Copy and paste any ONE of the data cells on your spreadsheet into an empty cell in a new column.  
NOTE: When the symbols were placed in columns (vs. in rows), copy and paste any ONE of the data cells into an empty cell in a new row.
- Click on the cell you just created (with the copied function). You will see the function exposed for the cell at the top of your spreadsheet.
- Replace the Field ID in the function with a valid Field ID that represents the data you want. This changes the underlying data in ONLY that cell.
- Copy the cell with the new function, then paste it into every cell for all the other symbols on your spreadsheet.

## 4.6 Delete Quote

- Highlight the entire area on your spreadsheet that contains the quote query (including all headers and symbols).



2. Press your DELETE key.

### 4.7 Quote Data Fields

When a quote query is placed on an Excel spreadsheet, ExcelTool uses a “field ID” to identify the data to place in the cell. When using Plain or Bold Headers, the header identifies the data field:

	A	B	C	D
1		Last	Open	Close
2	/CLF12	93.12	93.68	94.3

When using Hidden Headers, the Field ID is embedded in the function. In this example, “Last” is the Field ID:

	A	B	C	D	E
1	/CLF12	93.12	93.68	94.3	

- Fields have a number of alias names. “Last”, “Last Price”, “p”, “price”, “lastprice” all reference the same data.
- Field IDs can be entered with capitalization or lowercase. “Open Interest”, “open interest”, “Open interest”, and “OPEN INTEREST” are all used to reference the same data.
- Use of a space between words is optional. “PERCENT CHANGE” and “PERCENT CHANGE” reference the same data.

Display Field	Description	Field IDs (FIDs)
<b>Ask</b>	The price at which the contract is offered for sale.	Ask, a
<b>Ask Date</b>	The date on which the contracts are offered for sale.	AskDate
<b>Ask Size</b>	The number of contracts being offered for sale at the Ask price.	AskSize
<b>Ask Time</b>	The time the ask price was issued.	AskTime
<b>Bid</b>	The price at which the contract is wanted for purchase.	Bid, b
<b>Bid Date</b>	The date on which the the contracts are requested for purchase.	BidDate
<b>Bid Size</b>	The number of contracts wanted for purchase at the Bid price.	BidSize
<b>Bid Time</b>	The time the bid price was issued.	BidTime
<b>Close</b>	The closing (settlement) price for the previous session.	Close, pc, prevclose, previoussettle, prevsettle

<b>Close Date</b>	The closing date for the selected trading session.	CloseDate, pcd, prevclosedate, prevsettledate, previoussettledate
<b>Contract Date</b>	The first day on which a contract is offered.	ContractDate, cd, cdate, contract
<b>Currency</b>	The currency in which the contract is traded.	Currency
<b>Description</b>	The description of the contract.	Description, desc, d
<b>Expiration Date</b>	The expiration date of the contract.	ExpirationDate, expiration, ed, expdate
<b>High</b>	The high price for the session.	High, h
<b>Last</b>	The last traded price (typically the same as Most Recent Value).	Last, p, price, lastprice
<b>Lot Unit</b>	The unit of measure in which the contract trades.	LotUnit
<b>Low</b>	The low price for the session.	Low, l
<b>Mid Point</b>	The Average Price for the session (High + Low / 2)	MidPoint, mp, mpoint
<b>Most Recent Value</b>	The most recent price as reported from the exchange (typically the same as Last).	MostRecentValue, mrv, recentvalue, lastvalue, recent
<b>Most Recent Value Date</b>	The date on which the Most Recent Value was reported.	MostRecentValuedate, mrvdate, recentvaluedate, lastvaluedate, recentdate
<b>Net Change</b>	The difference between the Most Recent Value and the Close.	NetChange, change, nc, netchg
<b>Open</b>	The open price for the session.	Open, o
<b>Open Interest</b>	The number of open positions for the contract.	OpenInterest, oi, opint
<b>Percent Change</b>	The Most Recent Value minus the Close, divided by the Close.	PercentChange, cp, changeperc, percchg
<b>Prev High</b>	The high price from the previous trading session.	PrevHigh, lasthigh, previoushigh
<b>Prev Low</b>	The low price from the previous trading session.	PrevLow, lastlow, previouslow
<b>Prev Open</b>	The opening price from the previous trading session.	PrevOpen, lastopen, previousopen
<b>Prev Price</b>	The price prior to the Last price.	PrevPrice, pp, previousprice
<b>Prev Vol</b>	The volume price from the previous trading session.	PrevVol, lastvol, prevvolume, previousvolume
<b>Put/Call</b>	Displays one of the following symbols: P = Put C = Call U = Underlier	PutCall, put/call, call/put
<b>Settle</b>	The official price at the end of the trading session.	Settle, s
<b>Settle Date</b>	The date for the end of the trading session.	SettleDate, sdate
<b>Strike</b>	The price of the underlying contract.	Strike, strikeprice
<b>Tick Count</b>	Shows the number of trades for the contract.	TickCount, tick, tc, tickct

<b>Trade Date</b>	The date of the trade.	TradeData, date, td
<b>Trade Size</b>	The number of contracts that were traded at the Last price.	TradeSize, ts, tvol, tradevol, tradevolume
<b>Trade Time</b>	The time the trade was executed	TradeTime, time, tt
<b>Underlier</b>	The commodity subject to delivery in the event the option is exercised.	Underlier
<b>Volume</b>	The number of contracts traded for the session.	Volume, tc, totalvol, tvol, vol

## 5. Historical Data

### 5.1 General Process

When creating a Historical Query, you have the option of setting multiple display settings by clicking the Preferences link found in the lower left corner of the dialog box.




The screenshot shows a dialog box with several sections:

- Header options:**
  - Style: Three icons representing different header styles. The third icon (bolded) is selected.
  - Orientation: Two icons representing different orientations. The first icon (horizontal) is selected.
  - Show symbol name in the header
  - Show description in the header
  - Show empty line below header
- Footer options:**
  - Include average
  - Include standard deviation
  - Include minimum
  - Include maximum
- Formatting:**
  - Keep existing formatting
- Data options:**
  - Missing data:  (dropdown)
  - Settle as close
  - Always show currency and unit
  - Skip weekends when aggregating
- Date options:**
  - Use:  (dropdown) time zone
  - Direction:  (dropdown)
  - Holiday calendar:  (dropdown)
  - Show dates

#### 5.1.1 Header options



##### 5.1.1.1 Style

The default setting for a historical query will Bold the headers in each column. You may change this by clicking on a Style icon:

-  No Headers – no column headings will display
-  Plain Headers – normal font weight is used for column headers
-  Bold Headers – bolded font weight is used for column headers (default)

### 5.1.1.2 Orientation

The default setting for a historical query will place each symbol in a row, with each selected data field as a column. You may change this by clicking on an Orientation icons:

- 
 Symbols in Rows – each symbol is placed in a row, with each selected data field in a column (default)
- 
 Symbols in Columns – each data field is placed in a row, and each symbol in a column.

### 5.1.2 Footer options

- Include Average – When checked, the average for each data column is calculated and inserted at the end of the table.
- Include Standard Deviation –When checked, the standard deviation for each data column is calculated and inserted at the end of the table.
- Include Minimum – When checked, the the minimum (lowest) value from the historical range queried is calculated and inserted at the end of the table.
- Include Maximum –When checked, the maximum (highest) value from the historical range queried is calculated and inserted at the end of the table.

### 5.1.3 Data options



Missing Data – The Missing Data setting determines what data (if any) should be inserted in the spreadsheet when there is no reported data from the exchange for a specific time period. Missing data typically occurs when a holiday falls mid-week.

- Leave blank – Cells will be left blank when no data is present for the time series. (Default option)
- Fill Forward – Cells with missing data will be populated with the previous session's closing values until the next value is posted on the exchange.
- Fill Forward Projected – Cells with missing data will be populated with the previous day's data. This differs from Fill Forward because it will also fill data into the future for date ranges going beyond the current day.
- Fill Backward – Cells with missing data will be populated with the next session's opening values.
- Interpolate – Cells with missing data will be populated with the average of the previous and next values in the series. This option will not fill blanks at the beginning or end of the data series.
- Show #N/A – Cells with missing data will be populated with #N/A.

Always show currency and unit – When checked the currency and unit will always be shown, if available.

### 5.1.4 Date options

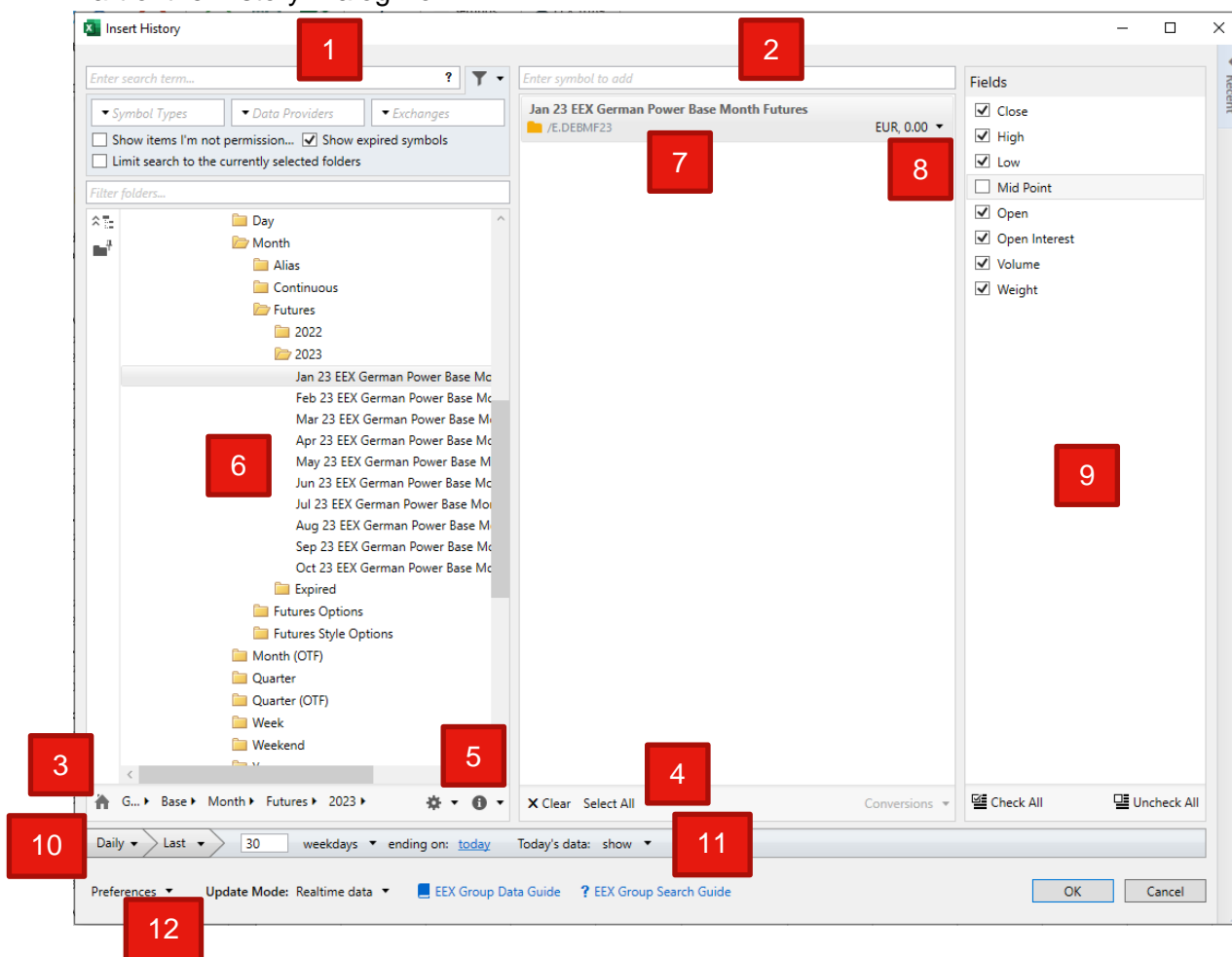
Direction – The Direction setting identifies how data is sorted on the spreadsheet. The default Direction setting presents the data from Older to Newer.



-  Older to newer – shows the Oldest data at the beginning, with Newer data at the end (default)
-  Newer to older – shows the Newest data at the beginning, with Older data at the end.

## 5.2 The Insert History Dialog Box

Clicking the History icon will cause the following dialog box to appear:

Part of the History Dialog Box



1	SEARCH: Enter one or more words that describe the symbol or category you want. The more information you enter, the finer the search results will be. View more information about Symbol Search.
2	When you know the specific symbols you want, enter the desired symbols here. Examples: <ul style="list-style-type: none"> <li>• Enter /E.G2BMN19 July 2019 for July 2019 Gaspool Natural Gas Month Futures</li> <li>• Enter #EEXT.AC.PMWD.AT-LGNTTE for EEX Available Capacity – Austria – Biomass</li> </ul>
3	Click the  HOME icon to go back to the start of the Symbol Tree. View more information about Symbol Tree.
4	Click the <b>X</b> to Clear all the selected symbols.
5	Displays any Filters saved in the Symbol Tree Settings Click the Settings icon  to change the View (Tree or Slider) or Filters.
6	The left side displays the results of a SEARCH, or the symbols found by moving through the Symbol Tree.
7	Symbols selected to appear on your spreadsheet are listed in the right side of the dialog box. The arrow to the right hand side of the symbol provides the folder path to that given symbol.
8	Remove a specific symbol by clicking on it once, then clicking the “ <b>X</b> ” that displays. The Unit of Measurement, Currency, Decimal Precision and Data Fields selected are displayed for each symbol, and can be changed by clicking on the drop down arrow to the right hand side of them.
9	Check or uncheck data fields to display in the spreadsheet. You can also change the order in which they are displayed by dragging and dropping them.
10	Select the time series (Daily, Weekly, Monthly, Quarterly, Yearly, Intraday, Seasonal) and either the number of records back or date range.
11	Show or Hide today’s data.
12	Additional display settings (Header, Footer, Formatting and Data Options) are chosen from the Preferences area of the dialog box.

#### Related Topics

- History Query
- Symbology
- Symbol Search
- Symbol Tree

## 5.3 Create a Historical Query

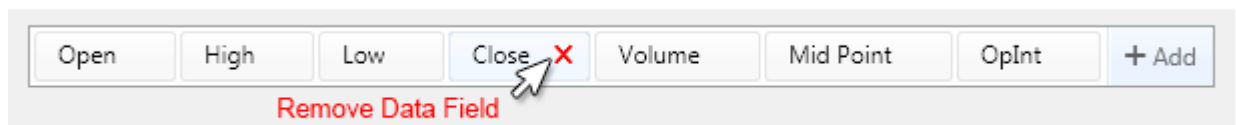
### 5.3.1 Insert Historical Quotes

1. Open an Excel spreadsheet.
2. Click the History icon from the ExcelTool toolbar. (If you have not saved your credentials, you will be asked to log in.)  
Result: The Insert History dialog box appears.

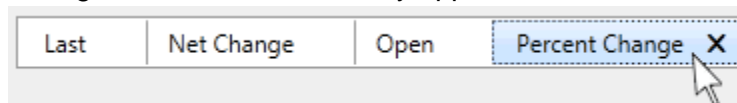
3. Select symbols to appear on the query. There are three ways to do this:
  - Enter specific symbols.
  - Search for symbols.
  - Use the Symbol Tree.
- a. When you know the specific symbology, type directly into the symbol field at the top right of the dialog box, pressing ENTER when done. View detailed information on symbology

Examples:

- Enter /E.G2BMN19 July 2019 for July 2019 Gaspool Natural Gas Month Futures
  - Enter #EEXT.AC.PMWD.AT-LGNT for EEX Available Capacity – Austria – Biomass
- b. SEARCH: Enter a phrase to search for in the field marked “Search” at the top left of the dialog box. View detailed instructions for using Search.
  - c. Use the Symbol Tree to navigate through the categories to find the desired symbol. View detailed instructions for using the Symbol Tree.
4. For any symbol, you may change the Unit of Measurement, Currency or Decimal Precision. View detailed instructions for performing unit and currency conversions.
  5. Select the data fields you wish to include on the query.
    - To select more fields, click “Add”, then click on the data field(s) you want from the Field Selector (sorted alphabetically).
    - To remove a selected field, hover over the field and then click the “X”. (This places the field back into the Field Selector.)



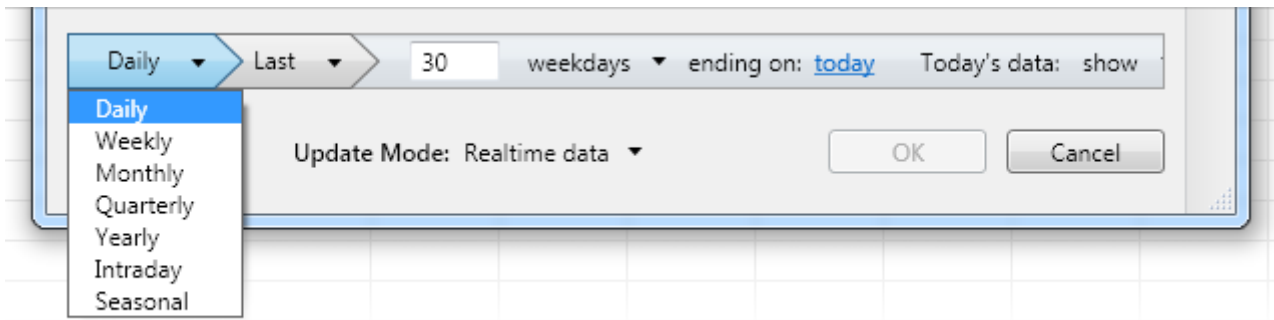
By default, the symbols will be displayed in the spreadsheet from left to right in the order in which they are entered into the symbol field grid. You can drag/drop the symbols along with the data fields (see below) to change the order in which they appear:



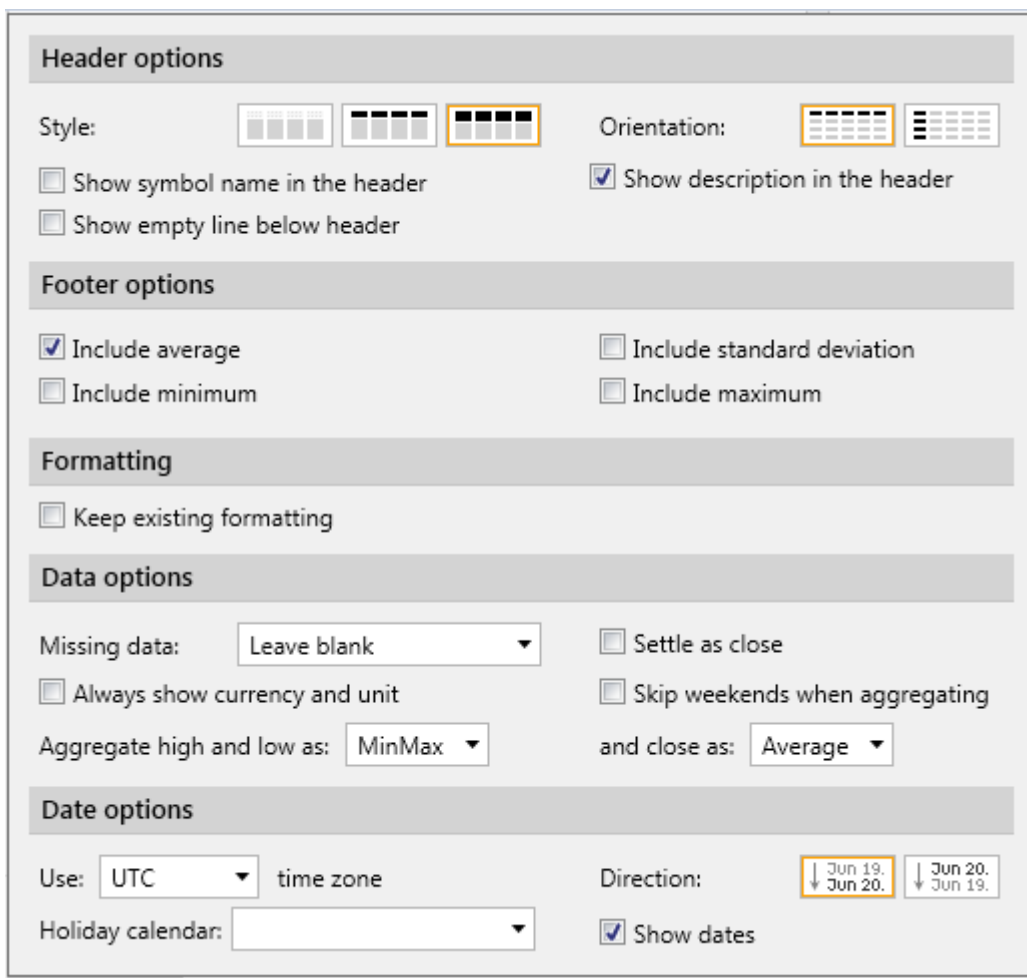
NOTE: The Data Fields area “remembers” the last set of fields you selected for a query and will display those fields by default.

6. The combo box at the bottom of the dialog is used to set the time frequency and amount of the historical data to extract. It also allows you to show or hide today’s data (typically used in a Static query). View detailed instructions for setting the time series





- Optionally choose additional display settings by clicking the Preferences link. View detailed information about the Historical Preferences.



When done, click OK.

## 5.4 Static Versus Real-time Data

When creating a Historical Query, you have the option of pulling static or real-time data by choosing a setting in the Historical Query Preferences.

### 5.4.1 Static Data

“Static Data” refers to a snapshot of a symbol’s prices at a specific point in time. Static data queries will not poll new data from the DataSource servers unless you specifically request an update by clicking the Refresh icon. The Refresh icon will only be visible if you select “Show refresh button in the toolbar” from your Preferences.

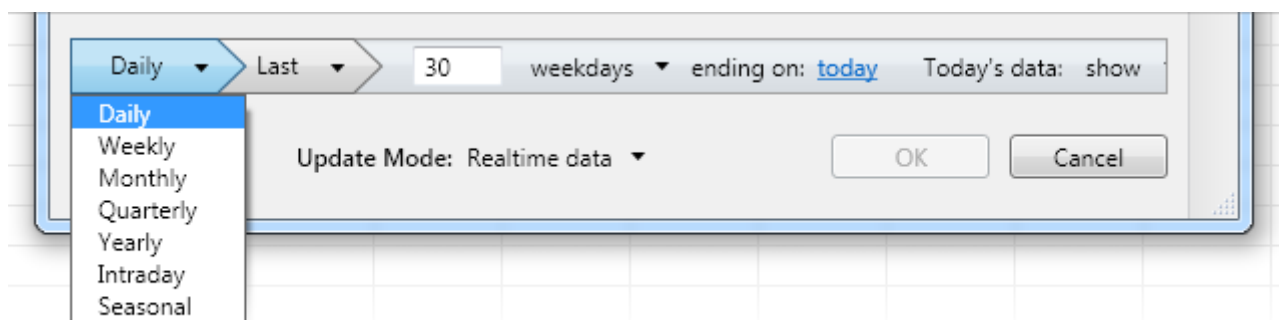


### 5.4.2 Real-time Data

A “real-time” query will use the Excel RTD Connection to detect when new data is available on the DataSource servers and will automatically pull the new information into your query.

## 5.5 The Historical Query Time Series

The combo box at the bottom of the dialog is used to set the time frequency and amount of the historical data to extract.



### 5.5.1 For Daily/Weekly/Monthly/Quarterly/Yearly Queries

Select either Last or Date Range from the drop-down list. When selecting “Daily” and “Last”, you can choose from a number of traded days, weekdays, or calendar days.

- Examples for Last:  
Daily data for the last 60 traded days ending on today



Weekly data for the last 12 weeks ending on 6/30/2014

Weekly ▾ Records Back ▾ 12 weeks ending on: [6/30/2014](#) Week start: Monday ▾

Yearly data for 6 years ending on current year

Yearly ▾ Records Back ▾ 6 years ending on: [current year](#) Current year's data: show

- Examples for Date Range:  
Monthly data from 7/2008 to current month

Monthly ▾ Date Range ▾ From: [07/2008](#) to: [current month](#)

Quarterly data for the current quarter only

Quarterly ▾ Date Range ▾ From: [current quarter](#) to: [current quarter](#)

### 5.5.2 For Intraday Queries

Select either Records Back or Date Range from the drop-down list. Then either enter the number of bars and the minute aggregation or choose the Date Range and the minute aggregation.

- Examples:  
50 bars with 15 minute aggregation  
120 bars with 30 minute aggregation

Intraday ▾ Records Back ▾ Last 50 intraday bars with 15 minute(s) aggregation

5 minute aggregation for a specific date range – 03/02/2014 to 04/02/2014

Intraday ▾ Date Range ▾ From: [3/2/2014](#) to: [4/2/2014](#) with 5 minute(s) aggregation

### 5.5.3 For Seasonal Queries

- Enter the time frame (Daily/Weekly/Monthly), a date range, and the year or years. When setting the date range, click on the date to display a calendar (select the day/month from the calendar).
- When entering the year, one, two and four-digit years are acceptable. Enter multiple years separated either by commas, spaces, or semi-colons. (7,08,2009,10 = 2007, 2008, 2009, 2010)

- Examples:  
Daily from 08/01 to 12/31 for years 05 06 07 (extracts 2005, 2006, 2007)

Seasonal ▾ Daily ▾ From: [08/01](#) to: [12/31](#) years: 2005, 2006, 2007

Weekly from April to June for years 2008; 2009

Seasonal > Weekly From: Apr to Jun years: 2008, 2009

Monthly from June to September for years 0,1,2,3,4,5 (extracts from 2000 – 2005)

Seasonal > Monthly From: Jun to Sep years: 2000, 2001, 2002, 2003, 2004, 2005

## 5.6 Historical Query Preferences

When creating a Historical Query, you have the option of setting multiple display settings by clicking the Preferences link found in the lower left corner of the dialog box.

**Header options**

Style: [Grid] [Grid] [Grid] Orientation: [Grid] [Grid]

Show symbol name in the header  Show description in the header

Show empty line below header

**Footer options**

Include average  Include standard deviation

Include minimum  Include maximum

**Formatting**

Keep existing formatting

**Data options**

Missing data: Leave blank  Settle as close

Always show currency and unit  Skip weekends when aggregating

Aggregate high and low as: MinMax and close as: Average

**Date options**




Use: UTC time zone Direction: Jun 19.  
Jun 20. Jun 20.  
Jun 19.

Holiday calendar: [Dropdown]  Show dates

### 5.6.1 Header Options


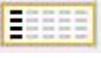
#### 5.6.1.1 Style

The default setting for a historical query will Bold the headers in each column. You may change this by clicking on a Style icon:

-  No Headers – no column headings will display
-  Plain Headers – normal font weight is used for column headers
-  Bold Headers – bolded font weight is used for column headers (default)

### 5.6.1.2 Orientation

The default setting for a historical query will place each symbol in a row, with each selected data field as a column. You may change this by clicking on an Orientation icons:

-  Symbols in Rows – each symbol is placed in a row, with each selected data field in a column (default)
-  Symbols in Columns – each data field is placed in a row, and each symbol in a column.

### 5.6.2 Footer options

- Include Average – When checked, the average for each data column is calculated and inserted at the end of the table.
- Include Standard Deviation –When checked, the standard deviation for each data column is calculated and inserted at the end of the table.
- Include Minimum – When checked, the the minimum (lowest) value from the historical range queried is calculated and inserted at the end of the table.
- Include Maximum –When checked, the maximum (highest) value from the historical range queried is calculated and inserted at the end of the table.

### 5.6.3 Data options

Missing Data – The Missing Data setting determines what data (if any) should be inserted in the spreadsheet when there is no reported data from the exchange for a specific time period. Missing data typically occurs when a holiday falls mid-week.

- Leave blank – Cells will be left blank when no data is present for the time series. (Default option)
- Fill Forward – Cells with missing data will be populated with the previous session’s closing values until the next value is posted on the exchange.
- Fill Forward Projected – Cells with missing data will be populated with the previous day’s data. This differs from Fill Forward because it will also fill data into the future for date ranges going beyond the current day.
- Fill Backward – Cells with missing data will be populated with the next session’s opening values.

- Interpolate – Cells with missing data will be populated with the average of the previous and next values in the series. This option will not fill blanks at the beginning or end of the data series.
- Show #N/A – Cells with missing data will be populated with #N/A.



Insert Static Data – When checked, the data that is returned on the spreadsheet is static data (a snapshot of the prices at the time the query was generated.) New data will NOT be pulled into the spreadsheet unless you click the Refresh icon (found on the ExcelTool toolbar.) Learn more about Static vs. Real-Time data.

Note: The Refresh icon for Statics Data queries will only be visible if you select “Show refresh button in the toolbar” from your Preferences.



### 5.6.4 Date options

Direction – The Direction setting identifies how data is sorted on the spreadsheet. The default Direction setting presents the data from Older to Newer.

-  Older to newer – shows the Oldest data at the beginning, with Newer data at the end (default)
-  Newer to older – shows the Newest data at the beginning, with Older data at the end.

## 5.7 Modify Historical Query

### 5.7.1 New Data Fields

Once an historical query has been added to a spreadsheet, it is easy to add additional data fields for the symbols you’ve selected, as long as you know the Field ID that represents the data. When using a header to identify the data, you simply need to add a new column and change the header using one of the valid Field ID names for the data you want.

When using “No Headers” on the query, you need to insert the Field ID name in the cell function.

<i>fx</i>	Low		
	C	D	E
	Crude Light (3rd Month)		
	High	Low	Close
	114.5	109.94	111.17
	114.26	111.12	113.86

Use the header to identify the data.

<i>fx</i>	Get External Data				
=GvDaily("/GCL<3>", "Low", \$A2,,,,, "", )					
	D	E	F	G	H
8	109.48	111.2	2519		
7	110.34	111.55	23248		

No Headers: insert the Field ID in the cell function

Sample Syntax

=GvIntraday(\$A\$12, \$B12, 10, C\$11, , , , , )

=GvDaily(\$A\$26, \$B26, C\$25, , , , , "p")

=GvWeekly(\$A\$33, \$B33, C\$32, , , , , "p")

=GvMonthly(\$A\$2, \$B2, C\$1, , , , "THM", , "p")

=GvQuarterly(\$A\$33, \$B33, C\$32, , , , , "p")

=GvYearly(\$A\$2, \$B2, C\$1, , , , , "p")

=GvMonthly("/GCL", "Close", GvCombineDate(C\$19, \$C\$19, \$B20),,,,,, "p")

=GvWeekly("/CL<1>", "Close", GvCombineDate(C\$23, \$C\$23, \$B24),0,"SGD","GAL",,"p")

## 5.8 Delete Historical Query

1. Highlight the entire area on your spreadsheet that contains the historical data (including all headers and symbols).
2. Press your DELETE key.

## 5.9 Unit Conversions

Unit conversions are available in the History dialog. However, they are not supported for intraday history. Unit conversions are available on a per-symbol basis. Change the unit by clicking on the drop-down arrow that appears in the selected symbols area of the dialog box

### 5.9.1 Unit Conversion Controls

Once a symbol is selected for display, the unit of measure in which it trades is shown. Unit conversions may be applied to symbols that have a base unit of measurement stored on the price server. For symbols that do not have a base unit of measurement, the unit of measure will not display.

The drop-down list allows you to select the target unit of measure to be used in the historical display for the symbol. The default value in the list reflects the original unit of measure assigned to the symbol. Once placed on the spreadsheet, the cell syntax also shows you what currency is being used:

C2		=GvMonthly(\$A\$2, \$B2, C\$1, , "THM", , p)					
	A	B	C	D	E	F	G
1		Date	2/1/2010	3/1/2010	4/1/2010	5/1/2010	6/1/2010
2	/NG<2>	Open	0.5307	0.4483	0.4308	0.4307	0.4883
3	rd Month)	High	0.5371	0.4527	0.4401	0.4398	0.4985
4		Low	0.5196	0.4398	0.4207	0.4248	0.4782

Valid display units are as follows:

BBL – Barrels	KLTR – Kiloliters	MT – Metric Tons
CM – Cubic Meters	KWH – Kilowatt Hours	MWH – Megawatt Hours
GAL – Gallons	LB – Pounds	THM – Therms
GJ – Gigajoules	LTR – Liters	TOZ – Troy Ounce
GWH – Gigawatt Hours	MSCF – Thousand Standard Cubic Feet	
GRM – Grams	MMB – Million British Thermal Units	

## 5.10 Historical Data Field IDs

When a historical query is placed on an Excel spreadsheet, ExcelTool uses a “field ID” to identify the data to place in the cell. When using Plain or Bold Headers, the header identifies the data field:



	A	B	C
1		Date	7/1/2010
2	/NG<1>	Open	4.67
3	al Gas (2nd Month)	High	5.01
4		Low	3.697

When using Hidden Headers, the Field ID is embedded in the function. In this example, "Open" is the Field ID:

	A	B	C	D	E	F
1	7/1/2010	10/1/2010	1/1/2011	1/1/2011		
2	4.67	4.12	4.509	4.509		
3	5.01	4.635	4.668	4.668		
4	3.697	3.5	4.302	4.302		

- Fields have a number of alias names. "Last", "Last Price", "p", "price", "lastprice" all reference the same data.
- Field IDs can be entered with capitalization or lowercase. "Open Interest", "open interest", "Open interest", and "OPEN INTEREST" are all used to reference the same data.
- Use of a space between words is optional. "MID POINT" and "MIDPOINT" reference the same data.

Display Field	Description	Field IDs (FIDs)
<b>Date</b>	The date for the historical data set. This field is ALWAYS added to a historical query and cannot be removed.	Date
<b>Close</b>	The closing (settlement) price for the session.	Close, pc, prevclose, previoussettle, prevsettle
<b>High</b>	The high price for the session.	High, h
<b>Low</b>	The low price for the session.	Low, l
<b>Mid Point</b>	The Average Price for the session (High + Low / 2)	MidPoint, mp, mpoint
<b>Open</b>	The open price for the session.	Open, o
<b>Open Interest</b>	The number of open positions for the contract.	OpenInterest, oi, opint
<b>Volume</b>	The number of contracts traded for the session.	Volume, tc, totalvol, tvol, vol

## 6. Charts

### 6.1 Chart Process

The ExcelTool' Charts interface allows you to insert a snapshot quote table for one or more symbols, and Excel will then translate the data as a graphical chart in your spreadsheet. You can select from numerous time series (intraday, daily, weekly, monthly, quarterly, yearly, or seasonal) and also from numerous chart types (open, high, low close, midpoint, volume, candlestick, and bar chart).

When you initiate a Chart query, Excel displays a tabular representation of the data for the information you've identified, with the chart above the table. Data is displayed in the table corresponding to the chart type you've selected. Since this is a snapshot (static data), new data is not automatically pulled and displayed on the chart or the table.

#### 6.1.1 The Process of Performing a Chart Query

The process of adding a Chart to your Excel spreadsheet is simple: specify the desired symbol or symbols, select the time series and the chart type.

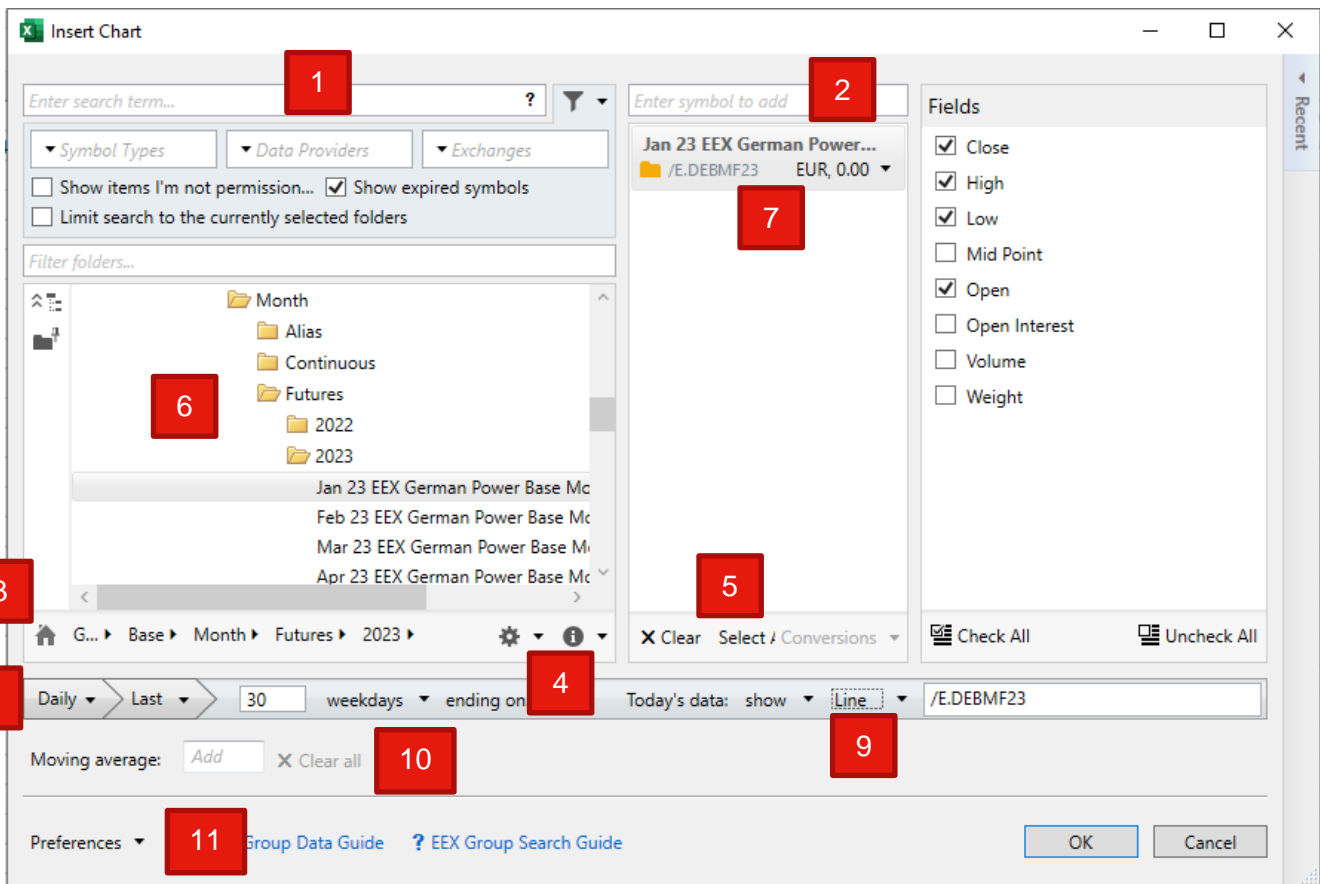
The general process is listed here:



1. Initiate a Charts query by clicking the Chart icon.
2. Select symbol or symbols to display.
  - If you know the specific symbol, enter it directly.
  - If you don't know the specific symbol, use the Search or Symbol Tree to find it.
3. Identify the time series.
4. Identify the chart type.
5. Optionally choose additional display settings (moving average or the data table preferences).
6. Save the query to insert the chart and supporting quoteboard in your spreadsheet.

### 6.2 The Chart Dialog Box

Clicking the Chart icon will cause the following dialog box to appear:

Parts of the Chart Dialog Box

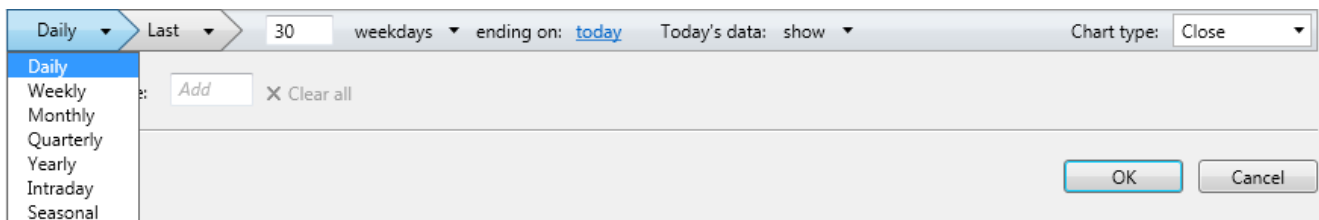


1	SEARCH: Enter one or more words that describe the symbol or category you want. The more information you enter, the finer the search results will be. View more information about Symbol Search.
2	When you know the specific symbols you want, enter the desired symbols here. Examples: <ul style="list-style-type: none"> <li>• Enter /E.G2BMN19 July 2019 for July 2019 Gaspool Natural Gas Month Futures</li> <li>• Enter #EEXT.AC.PMWD.AT-LGNTTE for EEX Available Capacity – Austria – Biomass</li> </ul>
3	Click the  HOME icon to go back to the start of the Symbol Tree. View more information about Symbol Tree.
4	Displays any Filters saved in the Symbol Tree Settings. Click the Settings icon  to change the View (Tree or Slider) Filters.
5	Click the <b>X</b> to Clear all the selected symbols and start over.
6	The left side displays the results of a SEARCH, or the symbols found by moving through the Symbol Tree.
7	Symbols selected to appear on your spreadsheet are listed in the right side of the dialog box. The Unit of Measurement, Currency and Decimal Precision are displayed for each symbol, and can be changed by clicking on the drop down arrow to the right hand side of them.

	When the unit of measure or the currency has been changed, this is reflected in the chart's price scale and description.
8	Select the time series (Daily, Weekly, Monthly, Quarterly, Yearly, Intraday, Seasonal) and either the number of records back or date range. See the Chart Time Series topic for more information.
9	Select the Chart Type (Line, Bar Chart, Candlestick, Volume Bar Chart or Volume Candlestick).
10	Apply any moving average statistics to the chart.
11	Additional display settings for the quoteboard that will display for the supporting data (Header, Formatting and Data options) are chosen in the Preferences area of the dialog box.

### 6.3 The Chart Time Series

The combo box at the bottom of the dialog is used to set the time frequency and amount of data to extract on the chart.



#### 6.3.1 For Daily/Weekly/Monthly/Quarterly/Yearly Queries

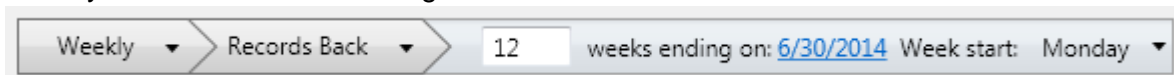
Select either Records Back or Date Range from the drop-down list.

Examples for Records back:

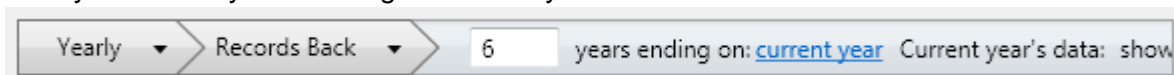
Daily data for 60 days ending on today



Weekly data for 12 weeks ending on 1/2/2011

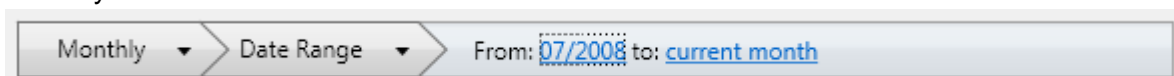


Yearly data for 6 years ending on current year



Examples for Date range:

Monthly data from 7/2008 to current month



Quarterly data for the current quarter only

Quarterly ▾ Date Range ▾ From: [current quarter](#) to: [current quarter](#)

### 6.3.2 For Intraday Queries

Enter the number of bars and the minute aggregation.

Examples:

50 bars with 15 minute aggregation

120 bars with 30 minute aggregation

Intraday ▾ Records Back ▾ Last  intraday bars with  minute(s) aggregation

### 6.3.3 For Seasonal Queries

- Enter the time frame (Daily/Weekly/Monthly), a date range, and the year or years. When setting the date range, click on the date to display a calendar (select the day/month from the calendar).
- When entering the year, one, two and four-digit years are acceptable. Enter multiple years separated either by commas, spaces, or semi-colons. (7,08,2009,10 = 2007, 2008, 2009, 2010)

- Examples:

- Daily from 08/01 to 12/31 for years 05 06 07 (extracts 2005, 2006, 2007)

Seasonal ▾ Daily ▾ From: [08/01](#) to: [12/31](#) years:

- Weekly from April to June for years 2008; 2009

Seasonal ▾ Weekly ▾ From: [Apr](#) to: [Jun](#) years:

- Monthly from June to September for years 0,1,2,3,4,5 (extracts from 2000 – 2005)

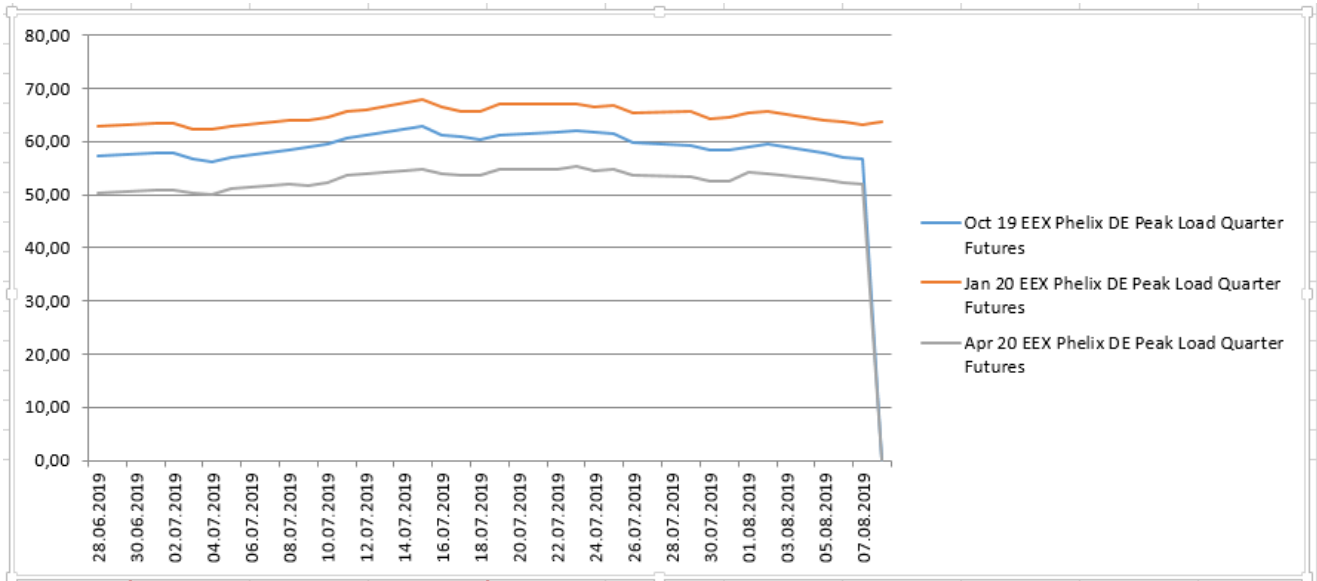
Seasonal ▾ Monthly ▾ From: [Jun](#) to: [Sep](#) years:

Note: Seasonal queries cannot be used with Candlestick or Bar Chart chart types.

## 6.4 Chart Types

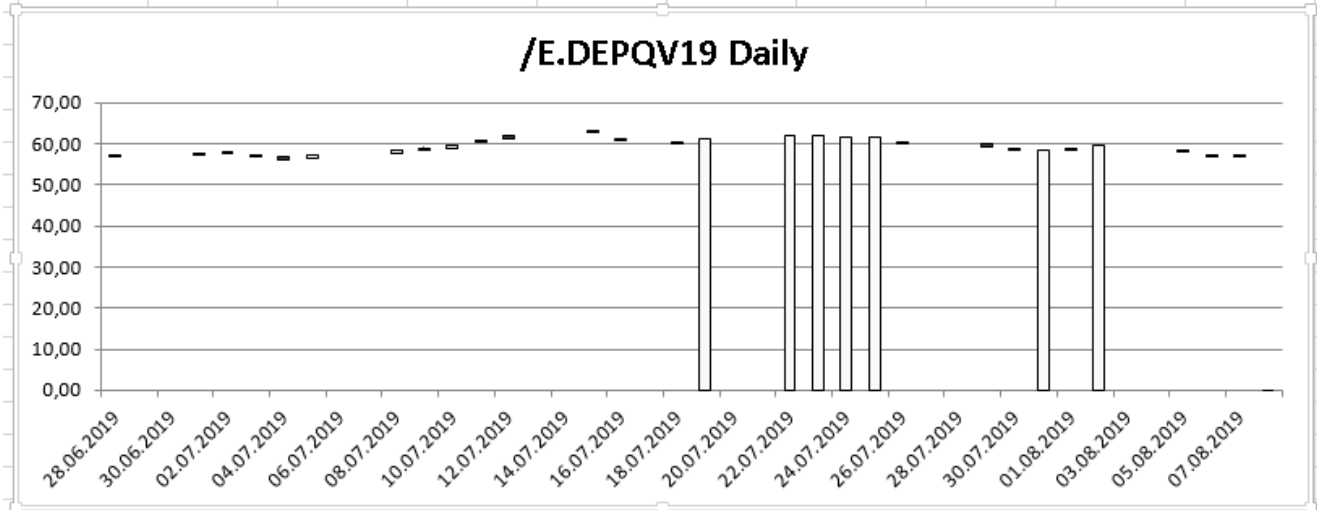
### 6.4.1 Open, High, Low, Close, Midpoint, Volume, Open Interest

Produces a line chart plotting the associated data. For example, if you choose a Chart Type of “Close”, the line represents the closing price of the symbol on each point on the time scale.



### 6.4.2 Candlestick

A Candlestick chart uses the open, high, low, and close of for each point on the time scale. “Hollow” and “filled” candles are formed, depending on whether the close is above or below the open.



### 6.4.3 Bar Chart

A Bar Chart draws a vertical line whose highest and lowest point represents the high and low price for time period. The bar drawn on the right represents the closing price, and the bar drawn on the left represents the opening price.

## 6.5 Chart Preferences

When creating a Chart Query, you have the option of setting multiple display settings by clicking the Preferences link found in the lower left corner of the dialog box.

### 6.5.1 Header options

#### Style

The default setting for a chart query will Bold the headers in each column. You may change this by clicking on a Style icon:



No Headers – no column headings will display



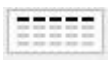
Normal Headers – normal font weight is used for column headers



Bold Headers – bolded font weight is used for column headers (default)

#### Orientation

The default setting for a chart query will place the supporting data for each symbol in a row, with each selected data field as a column. You may change this by clicking on an Orientation icons:



Symbols in Rows – each symbol is placed in a row, with each selected data field in a column (default)



Symbols in Columns – each data field is placed in a row, and each symbol in a column.

### 6.5.2 Data options

Missing Data – The Missing Data setting determines what data (if any) should be inserted in the spreadsheet when there is no reported data from the exchange for a specific time period. Missing data typically occurs when a holiday falls mid-week.

Leave blank – Cells will be left blank when no data is present for the time series.



Use previous – Cells with missing data will be populated with the previous session’s closing values. (default)

Use next – Cells with missing data will be populated with the next session’s opening values.

Interpolate – This option will fill any missing data in a data series by calculating and constructing the data points using the previous and next values in the series. This option will not fill blanks at the beginning or end of the data series.

### 6.5.3 Date options

Direction – The Direction setting identifies how data is sorted on the spreadsheet. The default Direction setting presents the data from Older to Newer.

-  Older to newer – shows the Oldest data at the beginning, with Newer data at the end (default)
-  Newer to older – shows the Newest data at the beginning, with Older data at the end.

## 6.6 Create a Chart

1. Open an Excel spreadsheet.
2. From the Data tab, click the Chart icon from the ExcelTool toolbar. (If you have not saved your credentials, you will be asked to log in.)  
Result: The Insert Chart dialog box appears.

3. Select symbols to appear on the chart. (Multiple symbols can be plotted on one chart.)

There are three ways to do this:

Enter specific symbols.

Search for symbols.

Use the Symbol Tree.

1. When you know the specific symbology, type directly into the symbol field at the top right of the dialog box, pressing ENTER when done. View detailed information on symbology

Examples:



- Enter /E.G2BMN19 July 2019 for July 2019 Gaspool Natural Gas Month Futures
  - Enter #EEXT.AC.PMWD.AT-LGNTE for EEX Available Capacity – Austria – Biomass
2. SEARCH: Enter a phrase to search for in the field marked “Search” at the top left of the dialog box. View detailed instructions for using Search.
  3. Use the Symbol Tree to navigate through the categories to find the desired symbol. View detailed instructions for using the Symbol Tree.
4. Select the Chart Time Series along with the number of records back, or a date range.
  5. Choose the Chart Type.  
Optionally choose additional display settings by clicking the Preferences.
  6. When done, click OK to insert the Chart on your spreadsheet.

## 7. Curves

### 7.1 General Process

The ExcelTool Curve interface allows you to insert a variation of values (last, close, high, low and more) for the forward months of an underlying futures contract, to plot a curve or to purely pull the raw data in and perform your own analysis from. ExcelTool allows you to show the full extension of forward months, or a specific number (12, 24 etc.) and then benchmark these against different historical dates to perform trend analysis.

When you initiate a Curve query, Excel displays a tabular representation of the data for the contracts you've identified, with the the curve plotted using Excel's chart functionality above the table. Data is displayed in the table corresponding to the chart type you've selected.

#### 7.1.1 The Process of Performing a Curve Query

The process of adding a Curve to your Excel spreadsheet is simple: specify the desired symbol or symbols, select the time series and the benchmark type.

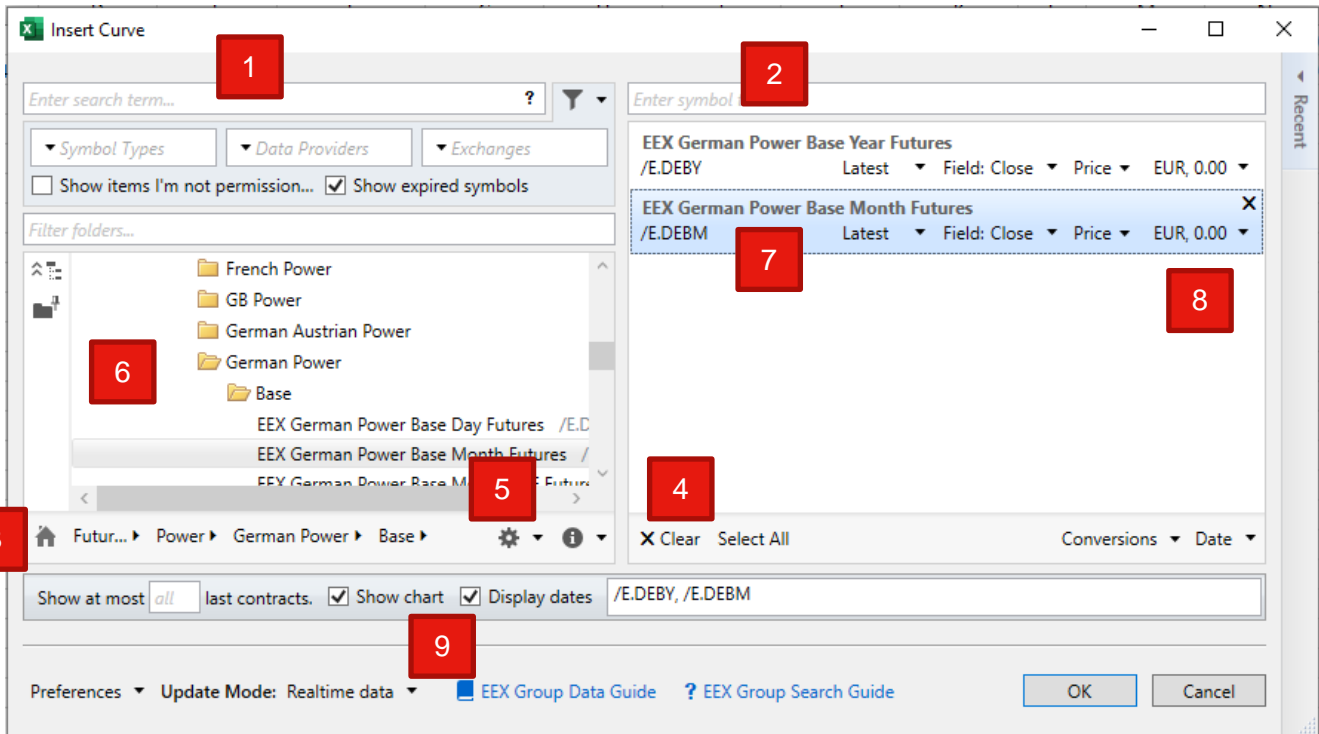
The general process is listed here:



1. Initiate a Curve query by clicking the Curve icon.
2. Select symbol root to display.
  - If you know the specific symbol root, enter it directly.
  - If you don't know the specific symbol root, use the Search or Symbol Tree to find it.
3. Identify the date the curve should be plotted on.
4. Identify the field type for the curve.
5. Optionally choose additional display settings (show chart or display dates check boxes, also preferences).
6. Click OK to insert the curve and supporting data table in your spreadsheet.

### 7.2 Curve Dialog Box

Clicking the Curve icon will cause the following dialog box to appear:

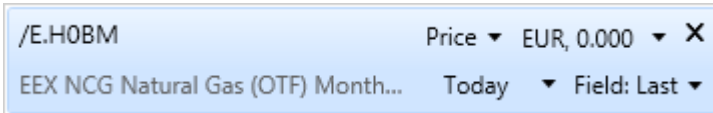
Parts of the Curve Dialog Box



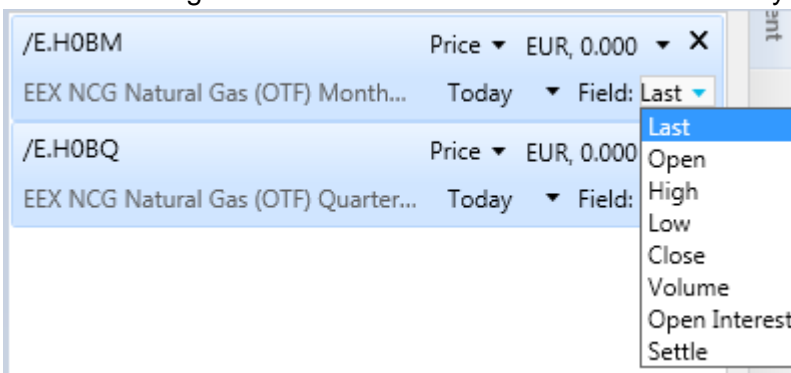
1	SEARCH: Enter one or more words that describe the symbol or category you want. The more information you enter, the finer the search results will be. View more information about Symbol Search.
2	When you know the specific symbol root you want, enter the desired chain here. Examples: <ul style="list-style-type: none"> <li>• Enter /E.G2BMN19 July 2019 for July 2019 Gaspool Natural Gas Month Futures</li> <li>• Enter #EEXT.AC.PMWD.AT-LGNTTE for EEX Available Capacity – Austria – Biomass</li> </ul>
3	Click the  HOME icon to go back to the start of the Symbol Tree. View more information about Symbol Tree.
4	Click the <b>X</b> to Clear all the selected symbols.
5	Displays any Filters saved in the Symbol Tree Settings. Click the Settings icon  to change the View (Tree or Slider) Filters.
6	The left side displays the results of a SEARCH, or the symbols found by navigating through the Symbol Tree.
7	The right side of the dialog box shows the selected symbol roots for the Curve query. The Unit of Measurement, Currency and Decimal Precision are displayed for each symbol and can be changed by clicking on the drop down arrow to the right hand side of them.
8	Ability to change the benchmark fields and dates for the Curve to be plotted against by simply clicking on the required area.
9	Change the display options of your request by specifying contracts to be shown, showing/hiding the chart and displaying/hiding the corresponding dates.

### 7.3 Curve Time Series

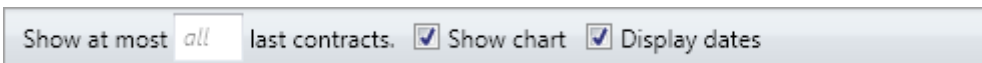
The Curve dialog box will allow you to change the field value and the date the Curve is based on.



You can plot your Curve against the Last, Open, High, Low, Close, Volume, Open Interest or Settle and also change the dates the Curve should be based on by clicking either today or the date.



Lower down in the dialog box you can select the exact amount of contracts to plot the line on, the ability is also there to hide the chart and just show the underlying raw data and to remove dates.



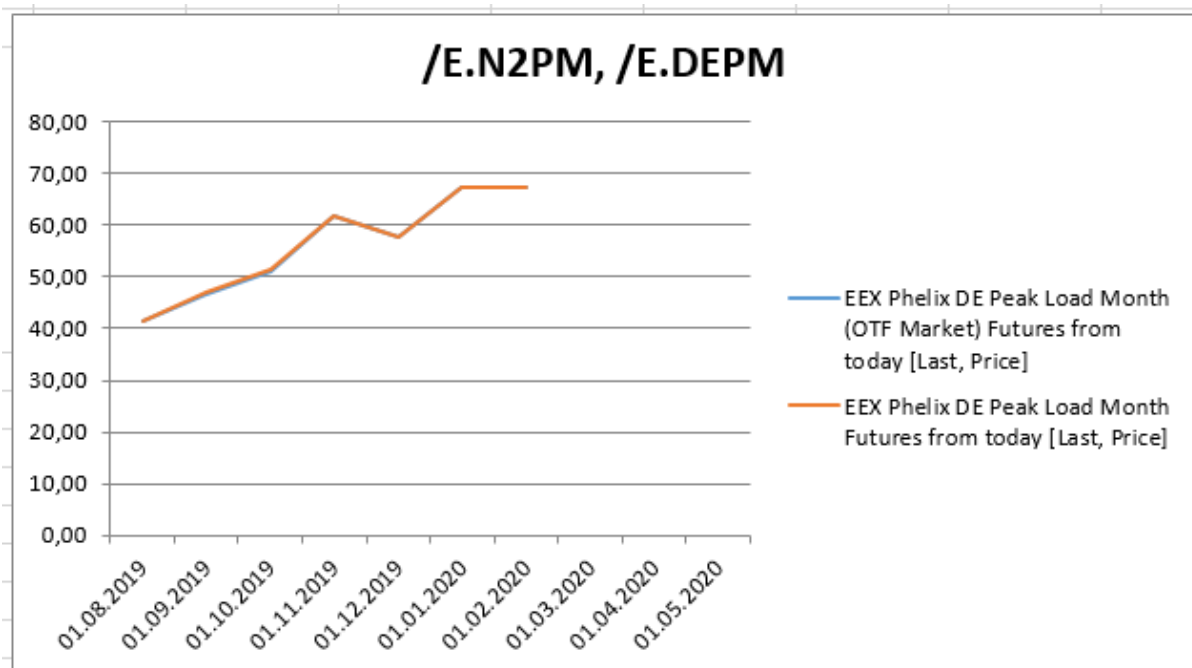
### 7.4 Curve Types

In the Curve dialog box you have the ability to change the price type of your curve to the following.

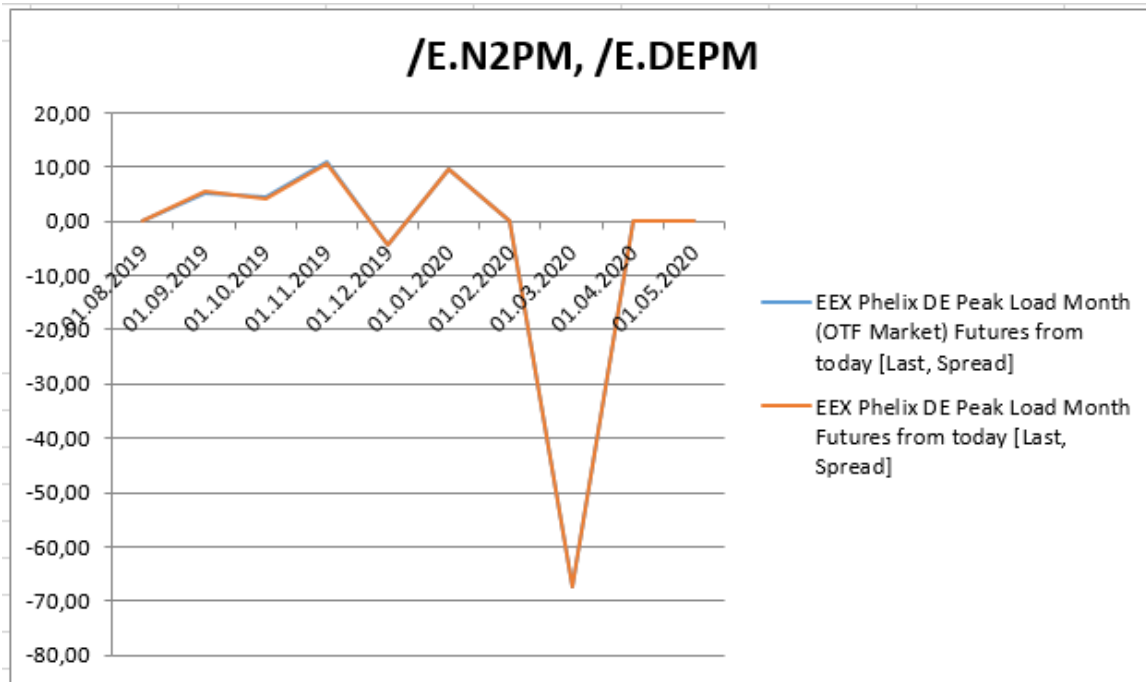
- Price
- Spread
- Relative

/E.N2PM	Price ▼ EUR, 0.00 ▼ X
EEX Phelix DE Peak Load Month (OTF Market) Fu...	Price
/E.DEPM	Spread
EEX Phelix DE Peak Load Month Futures	Spread %
	Relative
	Relative %
	Spread (OI-WAVE)
	Spread % (OI-WAVE)
	Spread (OI-WAVE = 100%)
	Spread (AVG)

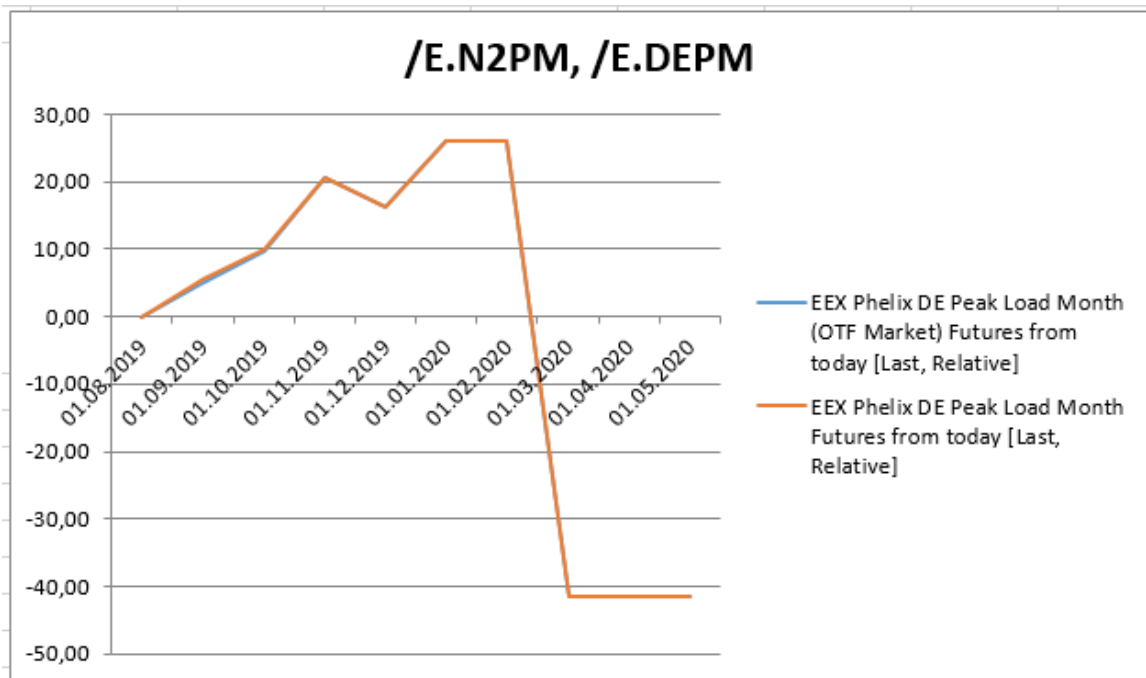
### 7.4.1 Price



### 7.4.2 Spread

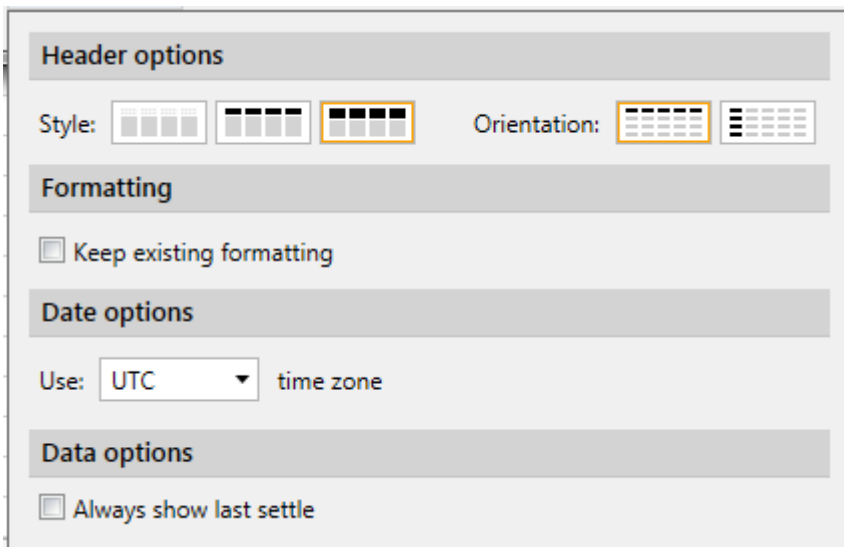


### 7.4.3 Relative



## 7.5 Curve Preferences

When creating a Curve, you have the option of setting multiple display settings by clicking the Preferences link found in the lower left corner of the dialog box.



### 7.5.1 Header options

#### Style

The default setting for a curve query will Bold the headers in each column. You may change this by clicking on a Style icon:



No Headers – no column headings will display



Normal Headers – normal font weight is used for column headers



Bold Headers – bolded font weight is used for column headers (default)

#### Orientation

The default setting for a chart query will place the supporting data for each symbol in a row, with each selected data field as a column. You may change this by clicking on an Orientation icons:



Symbols in Rows – each symbol is placed in a row, with each selected data field in a column (default)



Symbols in Columns – each data field is placed in a row, and each symbol in a column.

## 7.6 Create a Curve

1. Open an Excel spreadsheet.
2. From the EEX Group tab, click the Curve icon from the ExcelTool toolbar.  
(If you have not saved your credentials, you will be asked to log in.)  
Result: The Insert Curve dialog box appears.
3. Select symbols to appear on the chart. (Multiple symbols can be plotted on one chart.) There are three ways to do this:
  - Enter specific symbols.
  - Search for symbols.
  - Use the Symbol Tree.
  1. When you know the specific symbology, type directly into the symbol field at the top right of the dialog box, pressing ENTER when done. View detailed information on symbology
 

/E.C1104Q19

    - Examples:
      - Enter /E.G2BMN19 July 2019 for July 2019 Gaspool Natural Gas Month Futures
      - Enter #EEXT.AC.PMWD.AT-LGNTTE for EEX Available Capacity – Austria – Biomass
  2. SEARCH: Enter a phrase to search for in the field marked “Search” at the top left of the dialog box. View detailed instructions for using Search.
  3. Use the Symbol Tree to navigate through the categories to find the desired symbol. View detailed instructions for using the Symbol Tree.
4. Select the Curve Time Series along with the number of selected contracts, by modifying date curve is based on.
5. Choose the Curve Type.
6. Optionally choose additional display settings by clicking the Preferences.
7. When done, click OK to insert the Curve on your spreadsheet.



## 8. Options

### 8.1 General Process

The ExcelTool Options interface offers basic Option Analytics functionality that allows you to easily view strike and at-the-money prices for an underlying futures contract.

Included in this functionality is the ability to create and configure an Options query that lets you select symbols in the same way you would for the Futures contracts in the Quote and History components. It also provides a way to view the “Greek” values (Delta, Gamma, Theta, Rho and Vega), as well as Implied Volatility and Fair Value (theoretical value), to selected symbol chains.

The Options uses the Black-Scholes model as default but there are a range to choose from and these price updates can be obtained in realtime.

#### 8.1.1 The Process of Performing an Options Query

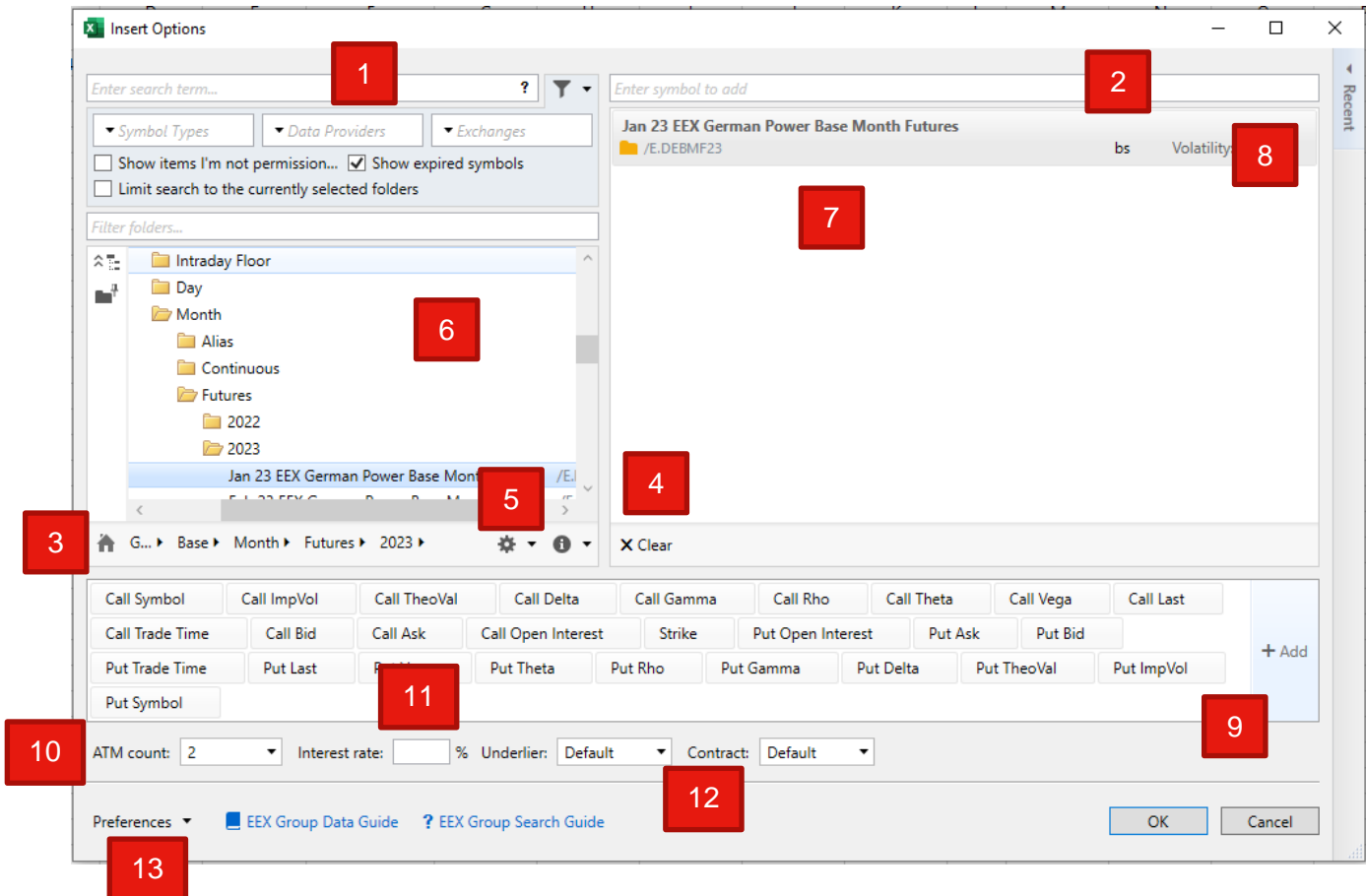
The process of adding an Option Chain query to your Excel spreadsheet is simple: specify the desired symbol or symbols, select the model, underlier and how far the ATM stike prices should go out.

The general process is listed here:



1. Initiate an Option query by clicking the Options icon.
2. Select symbol or symbols to display.
  - If you know the specific symbol, enter it directly.
  - If you don't know the specific symbol, use the Search or Symbol Tree to find it.
3. Identify the columns/data fields you wish to display using the field selector.
4. Identify the underlier for the Options.
5. Optionally choose any additional settings (the model, volatility, modify ATM and strike price views, also preferences).
6. Click OK to insert the chain and supporting data table in your spreadsheet.

## 8.2 Options Dialog box

Clicking the Option Chain icon will cause the following dialog box to appear:



### Parts of the Options Dialog Box

1	SEARCH: Enter one or more words that describe the symbol or category you want. The more information you enter, the finer the search results will be. View more information about Symbol Search.
2	When you know the specific underlying symbols you want, enter them here. Examples: <ul style="list-style-type: none"> <li>▪ Enter /E.G2BMN19 July 2019 for July 2019 Gaspool Natural Gas Month Futures</li> <li>▪ Enter #EEXT.AC.PMWD.AT-LGNT for EEX Available Capacity – Austria – Biomass</li> </ul>
3	Click the  HOME icon to go back to the start of the Symbol Tree. View more information about Symbol Tree.
4	Click the <b>X</b> to Clear all the selected underlying symbols and start over.
5	Displays any Filters saved in the Symbol Tree Settings (unpermissioned and expired contracts). Click the Settings icon  to change the View (Tree or Slider) Filters or to change the Filters.
6	The left side displays the results of a SEARCH, or the symbols found by moving through the Symbol Tree.

7	Underlying symbols selected to appear on your spreadsheet are listed in the right side of the dialog box. The Options Volatility and Model are displayed for each underlier, and can be changed by clicking on them, bs in this case representing a Black-Scholes model.
8	Remove a symbol by clicking on it once, then clicking the “X” that displays.  You may also change the Implied Volatility, if desired. Valid settings are Implied, Historical, and Actual.
9	Add or delete data fields to display in the spreadsheet. You can also change the order in which they are displayed by dragging and dropping them.
10	“At the Money” (ATM) provides the opportunity to configure the number of strike prices you want to see on either side of the At The Money price. For example, if you select “ATM + 12”, then twelve strike prices display above and below the At The Money price in the grid.
11	The risk-free Interest Rate.
12	Edit between the Underlier and Contract value being used. The options are Last, Bid, Ask, Mid, Settle, Close, Most Recent Value.
13	Additional display settings for the options that will display for the supporting data (Header options, Orientation and Decimal Precision) are chosen in the Preferences area of the dialog box.

## 8.3 Create an Options Query

### 8.3.1 Insert Options

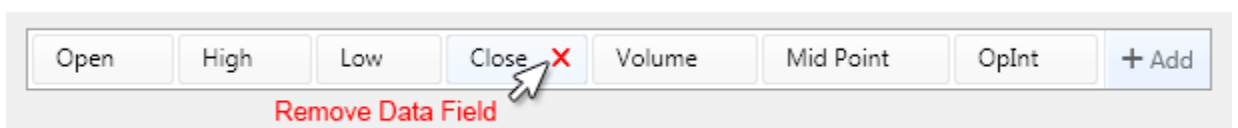
1. Open an Excel spreadsheet.
2. Click the Option Chain icon from the ExcelTool toolbar.  
(If you have not saved your credentials, you will be asked to log in.)  
Result: The Insert Option Chain dialog box appears.
3. Select symbols to appear on the query. There are three ways to do this:  
Enter specific symbols.  
Search for symbols.  
Use the Symbol Tree.

1. When you know the specific symbology, type directly into the symbol field at the top right of the dialog box, pressing ENTER when done. View detailed information on symbology

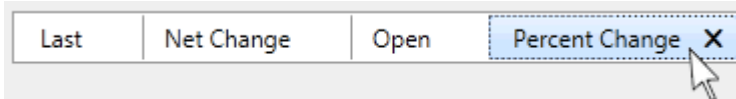
Examples:

- Enter /E.G2BMN19 July 2019 for July 2019 Gaspool Natural Gas Month Futures  
  
Enter #EEXT.AC.PMWD.AT-LGNTTE for EEX Available Capacity – Austria – Biomass

2. SEARCH: Enter a phrase to search for in the field marked "Search" at the top left of the dialog box. View detailed instructions for using Search.
3. Use the Symbol Tree to navigate through the categories to find the desired symbol. View detailed instructions for using the Symbol Tree.
4. For any symbol, you may change the Unit of Measurement, Currency or Decimal Precision. View detailed instructions for performing unit and currency conversions.
5. Select the data fields you wish to include on the query.
  1. To select more fields, click "Add", then click on the data field(s) you want from the Field Selector (sorted alphabetically).
  2. To remove a selected field, hover over the field and then click the "X". (This places the field back into the Field Selector.)

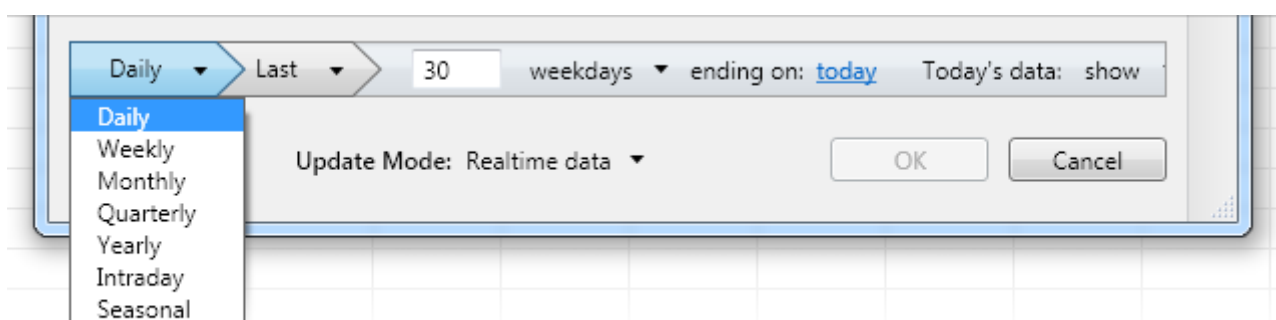


3. By default, the symbols will be displayed in the spreadsheet from left to right in the order in which they are entered into the symbol field grid. You can drag/drop the symbols along with the data fields (see below) to change the order in which they appear:



NOTE: The Data Fields area "remembers" the last set of fields you selected for a query and will display those fields by default.

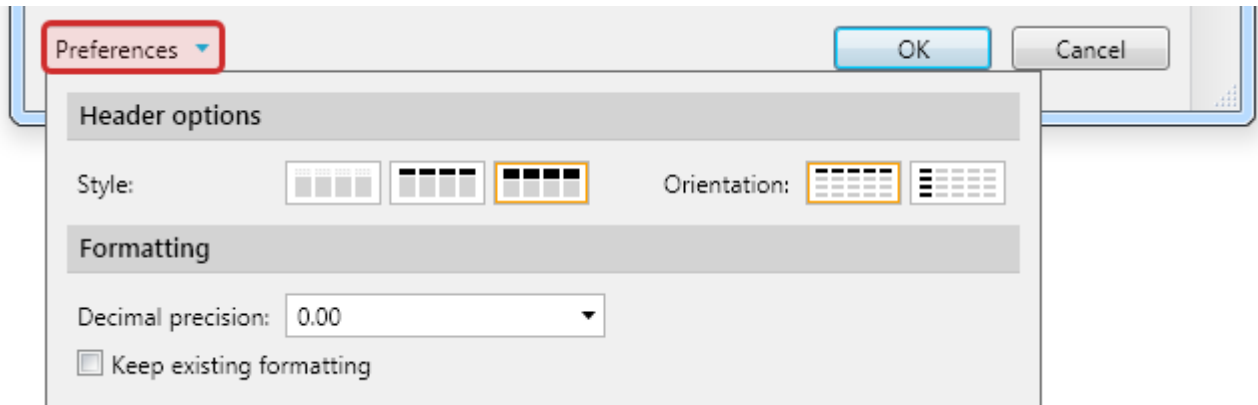
6. The combo box at the bottom of the dialog is used to set the ATM view (how many strike prices to be shown from the ATM quote) and the interest rate, underlier and contract benchmarks. It also allows you to change the underlier and contract value being used for the symbol(s) selected in the options chain query. The options are Last, Bid, Ask, Mid, Settle, Close, Most Recent Value



7. Optionally choose additional display settings by clicking the Preferences.
8. When done, click OK.

## 8.4 Options Query Preferences

When creating an Options Query, you have the option of setting display settings by clicking the Preferences link found in the lower left corner of the dialog box.



### 8.4.1 Header Options

#### Style

The default setting for a historical query will Bold the headers in each column. You may change this by clicking on a Style icon:



No Headers – no column headings will display



Plain Headers – normal font weight is used for column headers



Bold Headers – bolded font weight is used for column headers (default)

#### Orientation

The default setting will place the supporting data for each symbol in a row, with each selected data field as a column. You may change this by clicking on an Orientation icons:



Symbols in Rows – each symbol is placed in a row, with each selected data field in a column (default)



Symbols in Columns – each data field is placed in a row, and each symbol in a column.

## 8.5 Option Data Field IDs

When an options query is placed on an Excel spreadsheet, ExcelTool uses a “field ID” to identify the data to place in the cell. When using Plain or Bold Headers, the header identifies the data field:

	B1	fx Last		
	A	B	C	D
1		Last	Open	Close
2	/CLF12	93.12	93.68	94.3

When using No Headers, the Field ID is embedded in the function. In this example, "Last" is the Field ID:

	B1	fx =GVQUOTE(\$A1, "Last")			
	A	B	C	D	E
1	/CLF12	93.12	93.68	94.3	

- Fields have a number of alias names. "Last", "Last Price", "p", "price", "lastprice" all reference the same data.
- Field IDs can be entered with capitalization or lowercase. "Open Interest", "open interest", "Open interest", and "OPEN INTEREST" are all used to reference the same data.
- Use of a space between words is optional. "PERCENT CHANGE" and "PERCENT CHANGE" reference the same data.

Data fields are specified for both Put and Call symbols.

Display Field	Description	Field IDs (FIDs)
<b>Symbol</b>	The full symbol designation for the option.	Symbol
<b>ImpVol</b>	Implied Volatility is a statistical measure of the dispersion of returns for a given security or market index. Volatility can either be measured by using the standard deviation or variance between returns from that same security or market index. Commonly, the higher the volatility, the riskier the security.	ImpVol
<b>TheoVal</b>	Fair Value, or Theoretical Value.	TheoVal
<b>Delta</b>	Delta is a measure of the change in an options price resulting from a change in the underlying commodity. The value of delta should range from -100.00 to 0 for puts and 0 to 100 for calls.	Delta
<b>Gamma</b>	Gamma measures the rate of change of delta. Gamma is smallest for deep out of the money and deep in the money options. Gamma is highest when the option gets near the money.	Gamma
<b>Rho</b>	Rho represents the rate at which the price of a derivative changes relative to a change in the risk free rate of interest. Rho measures the sensitivity of an option to a change in interest rate.	Rho
<b>Theta</b>	Theta measures the rate of decline in the value of an option due to the passage of time. Theta can also be referred to as the time decay on the value	Theta

	of an option. If everything is held constant, then the option will lose value as time moves closer to the maturity of the option.	
<b>Vega</b>	Vega represents the amount that the price of an option will change compared to a 1% change in Volatility.	Vega
<b>Strike</b>	Strike Price is the dividing column between the Put and Call data. The At The Money row is automatically highlighted.	Strike

Source: <http://investopedia.com>

## 9. Export

### 9.1 Export Process

The ExcelTool Export feature allows you to extract any particular range of data derived from our add-in without the underlying formulas. This allows users to share files more easily and does not require the add-in to be installed to view data, once the Export function has been applied.

#### 9.1.1 The Process of Performing the Export function

The process of using the Export function in an Excel spreadsheet is easy: create the desired data queries, from Quote, History, Chart, Curve, Option Chain, etc. then click on the Export icon from the toolbar to open/save a new workbook file without the GV formula links in.

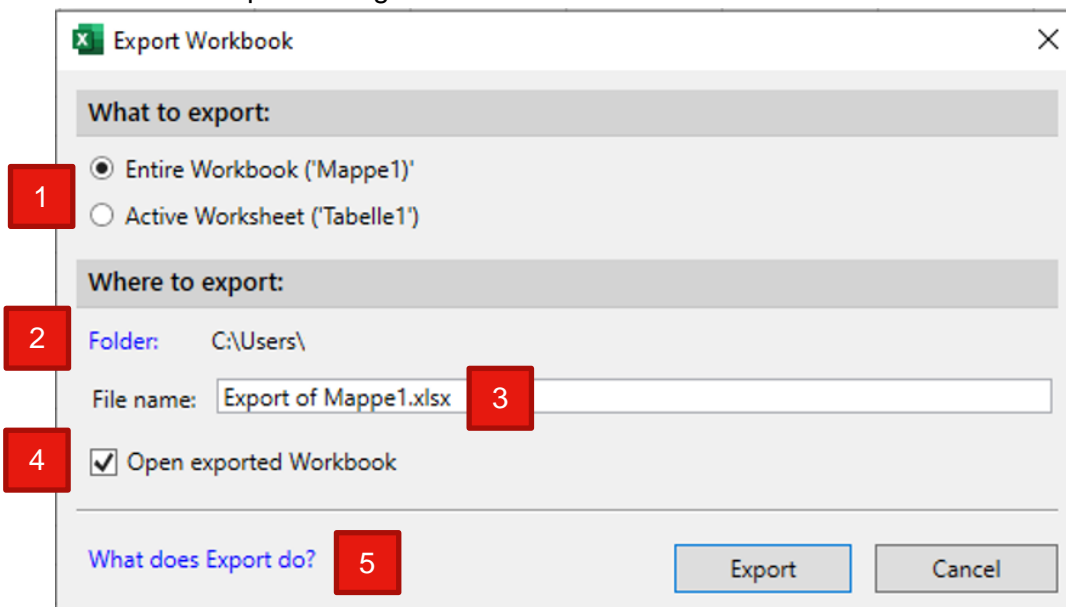
The general process is listed here:

1. In the Excel Workbook navigate to the EEX Group toolbar and click on the 'Export' icon.
2. Once you have done that you will be prompted with the location in which the exported file should be saved.
3. From here you have the option to either open or save the entire workbook or active worksheet currently being used.
4. You then just click the 'Export' function and the task is complete.

### 9.2 Export Dialog Box

Clicking the Export icon will cause the following dialog box to appear:

Parts of the Export Dialog Box





1	Option to choose whether to export the entire workbook, or just the active worksheet.
2	Folder location – Gives the user the option to choose where the file should be saved.
3	File Name – Allows a user to modify the name of the saved file.
4	Once exported – Can have the file open up automatically when you click the Export button or disable the feature by unchecking the box.
5	What does Export do? – A hyperlink that when clicked on will expand a definition of this feature below in the dialog box.