



How is the price on the Day-Ahead Market formed?

The price on the European power exchange markets using the auction based exchange model for trading of physically delivered electricity is formed by aggregation of all sale and purchase orders into a supply and demand curves respectively. The intersection point of these curves determines the traded volume for the given interval of delivery and its price. The intersection point is precisely positioned in relation to the price axis - "y" and the volume axis - "x".

EXAMPLE:

1. Purchase order:

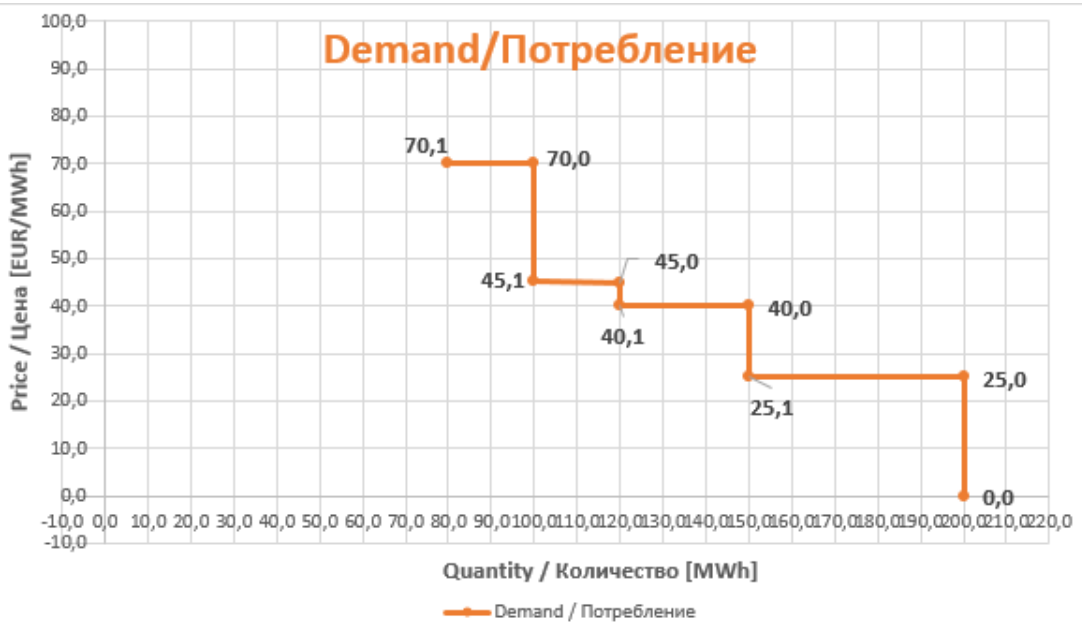
Type	Hourly								
Exported At	05/01/2017 08:17 CET								
Date	06/01/2017								
Time Zone	CET								
Member	Your Company EAD								
Portfolio	BG-Your-BG								
Area	Bulgaria								
Currency	EUR								
Price Steps	0,0	25,0	25,1	40,0	40,1	45,0	45,1	70,0	70,1
Hour 1	200,0	200,0	150,0	150,0	120,0	120,0	100,0	100,0	80,0
Hour 2									
Hour 3									
Hour 4									

When we examine closely the purchase order above we see the following:

- In the price range between 0 and 25 EUR/MWh, the Market participant will buy 200 MWh
- In the price range between 25 and 25,1 EUR/MWh, the Market participant will buy quantity between 200 and 150 MWh
- In the price range between 25,1 and 40 EUR/MWh, the Market participant will buy 150 MWh
- In the price range between 40 and 40,1 EUR/MWh, the Market participant will buy quantity between 150 and 120 MWh
- In the price range between 40,1 and 45 EUR/MWh, the Market participant will buy 120 MWh
- In the price range between 45 and 45,1 EUR/MWh, the Market participant will buy quantity between 120 and 100 MWh
- In the price range between 45,1 and 70 EUR/MWh, the Market participant will buy 100 MWh
- In the price range between 70 and 70,1 EUR/MWh, the Market participant will buy quantity between 100 and 80 MWh

The economic logic of the Buyer – The cheaper the good is, the bigger the volume of it he would like to purchase.

On the figure below we see the graphical representation of the purchase order:



2. Sale order:

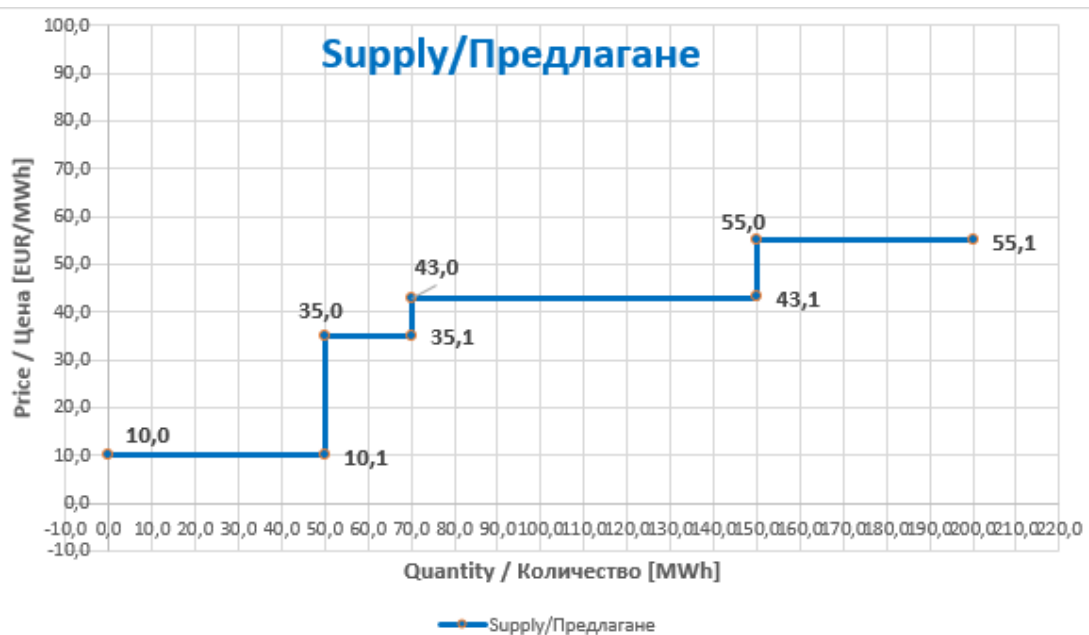
Type	Hourly							
Exported At	05/01/2017 08:17 CET							
Date	06/01/2017							
Time Zone	CET							
Member	Generation Company EAD							
Portfolio	BG-Gcom-BG							
Area	Bulgaria							
Currency	EUR							
Price Steps	10,0	10,1	35,0	35,1	43,0	43,1	55,0	55,1
Hour 1	0,0	-50,0	-50,0	-70,0	-70,0	-150,0	-150,0	-200,0
Hour 2								
Hour 3								
Hour 4								

When we examine closely the sale order above we see the following:

- In the price range between 10 and 10,1 EUR/MWh, the Market participant will sell between 0 and 50 MWh
- In the price range between 10,1 and 35 EUR/MWh, the Market participant will sell 50 MWh
- In the price range between 35 and 35,1 EUR/MWh, the Market participant will sell between 50 and 70 MWh
- In the price range between 35,1 and 43 EUR/MWh, the Market participant will sell 70 MWh
- In the price range between 43 and 43,1 EUR/MWh, the Market participant will sell between 70 and 150 MWh
- In the price range between 43,1 and 55 EUR/MWh, the Market participant will sell 150 MWh
- In the price range between 55 and 55,1 EUR/MWh, the Market participant will sell between 150 and 200 MWh

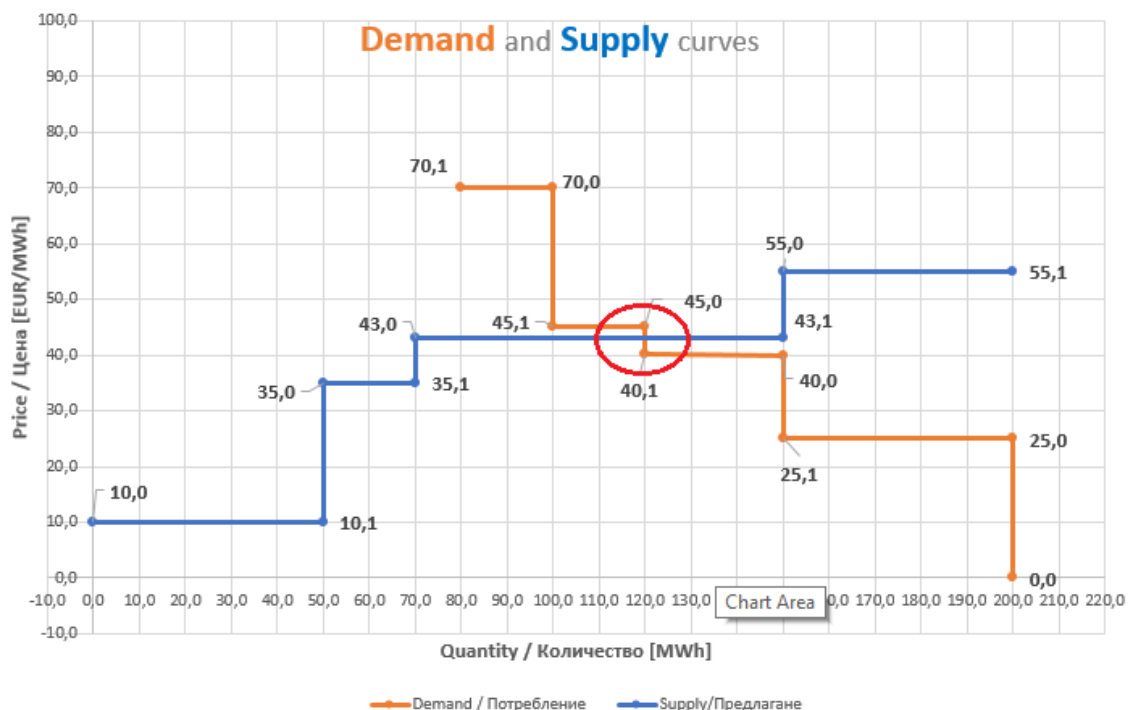
The economic logic of the Seller – The more expensive the good is, the bigger volume of it he would like to sell.

On the figure below we see the graphical representation of the sale order:



3. Formation of the clearing price

In order to see the graphical representation of the clearing price we draw the demand and supply curves on the same coordinate system:



The intersection point of the curves is where the equilibrium between demand and supply is – it also represents the traded volume for the given delivery interval and the clearing price for that volume.

In our example the clearing price for delivery in Hour 1 is **43,06 EUR/MWh** and the traded volume is **120 MWh**.