

Overview of the indicators used in the wholesale gas chapter

Topic	Indicator - Figure	Time series	Sources	Technical note on data or calculation
Developments	EU gas supply portfolio by origin	2015	BP Statistical Review	The difference in consumption and supply figures are the result of re-exports of LNG, stock exchanges, i.e. underground storages, re-gasification terminals and transportation losses.
	International gas consumption, production and key trade movements	2015	BP Statistical Review, ACER Calculations	
	Evolution of EU gas import volumes and oil price	2014-2015	IEA, Platts, ACER	
	EU gas gross inland consumption	2015	Eurostat (Data series nrg_103m, April 2016)	
	Evolution of international wholesale gas prices	2009-2015	Platts, Thomson Reuters, ACER Calculations	
Estimated monthly Ukrainian gas import prices	2014-2015	Natfogg, IEA, Platts, EntsoG TP		
Upstream and infrastructure aspects of wholesale markets	Estimated number and diversity of supply sources in terms of the geographical origin of the gas	2015	Eurostat Comtext, BP Statistical Report (2016)	Data from Eurostat, Eurostat Comtext and BP may not be fully coincident. Involve NRAs in the process. Those supply origins with an asterisk relate to a MSs hosting a competitive hub. Clarification on the methodology are provided in Annex 1.
	EU cross-border gas flows	2014-2015	IEA (2015), ACER Calculations	
	Estimated HHII index per EU MS at upstream sourcing companies' level	2011+2015	ACER Calculations based on Eurostat, Eurostat Comtext, BP Statistical Report, Frontier Consultancy desktop Research for GTM 2014 and NRAs data	HHI is the sum of squared market shares for each firm supplying gas at the import level. HHII revolves around upstream supply. Relates to upstream of supply in accordance with diversity of supply of different member states. The asterisk refers to MSs featuring liquid organised markets where the gas has been purchased. See Annex 1 for additional clarifications.
	Daily storage inventories and storage capacity for gas storage	2010-2016	ACER based on Gas Infrastructure Europe data	1) Ex-ante graph: for every storage year the forward summer/ winter spread is calculated as the difference between the season 2 prices (covering October "Y" to March "Y+1" and Season 1 prices (covering the period from April "Y" to September "Y", as observed on average on March "Y"). 2) Ex-post graph: for every storage year, the ex-post summer/ winter spread is calculated as the difference between the average of the actual spot price during the period from October "Y" to March "Y+1" and the average of actual spot prices during the period from April "Y" to September "Y".
	NBP and TTF forecasted and actual summer/winter spreads	2014-2016	Acet based on GIE's data	
	Daily storage injections and withdrawals for all EU storage			
State of EU gas hubs functioning	Traded volumes at EU hubs and CAGR	2012-2015	Trayport, Hub operators and NRAs 2015	Over-the-counter trade (OTC) refers to volumes traded among parties via brokers, with either the parties arranging credit risk or trading being cleared by the broker. Exchange execution refers to those volumes supervised and cleared by an organised central market operator.
	Available median bid and ask-side volumes in the order book during the day for DA in selected EU hubs	2015-2016	ACER calculations and REMIT data	See Annex 1 of MMR 2015 for a clarification of the methodology and all the assumptions taken related to REMIT database functionality
	Available median bid and ask-side volumes in the order book during the day for MA in selected EU hubs in ranges of MW	2015-2016	ACER calculations and REMIT data	
	Order book horizon in ranges of months for bids for forward products for different blocks of MWs	2015-2016	ACER calculations and REMIT data	
	Bid-offer spread: measure of the average delta between the lowest ask price and the highest bid-price expressed as a percentage of the highest bid-price across the day	2015-2016	ACER calculations and REMIT data	
	Number of executed trades (daily average) for DA and FW products in selected hubs for	2015-2016	ACER calculations and REMIT data	
	Market concentration ranges of finalised transactions of MA products for selected EU hubs for the selling side	2015-2016	Platts (2015) and ACER calculations	
	Oil and gas hubs price evolution in Europe	2008-2015	Eurostat Comtext, Platts, IGU, NRAs, ACER	Prices are an estimate of the yearly average suppliers sourcing price level in each MS based on available public data based on the ACER methodology. See Annex 13 of ACER MMR 2014
	EU MSs assessed gas suppliers' sourcing prices	2015		Spreads in euro/MWh are calculated as the absolute price differential between pair of hubs, with independence on which is at discount or premium. Different categories were determined in order to calculate the distribution of price spreads among hub pairs. The distribution was made over a total number of trading days in a year.
	Levels of DA price convergence between TTF and selected hubs year on year	2013-2015	ACER Calculations based on Platts and hub operators data	
	Levels of DA price convergence between TTF and NCG	2011-2015	ACER calculations based on Platts data	
	Levels of DA price convergence between TTF and PSV	2011-2015	ACER calculations based on Platts data	
	Levels of DA price convergence between NCG and selected hubs	2013-2015	ACER calculations based on Platts data	
Levels of DA price convergence between CEGH and selected hubs	2013-2015	ACER calculations based on Platts data		
Day-ahead price convergence levels in EU hubs compared to transmission tariffs	2015	ACER calculations based on Platts and hub operators data for prices and ENTSOG for transmission tariffs	Hub day-ahead on average daily settlement prices for each individual year are correlated using the Pearson product-moment correlation coefficient. The value of 1 represents perfect negative correlation between two data sets, while value 1 corresponds to a perfect positive correlation. A value of 0 resembles no correlation among data sets.	
Levels of DA price correlation between TTF and selected hubs	2013-2015	ACER Calculations based on Platts and hub operators data	To conduct volatility analysis first logarithmic returns of daily gas hub prices are gauged. Then, the standard deviation of returns is calculated and multiplied by the square root of total trading days in a year. The value is expressed as a percentage.	
Day-ahead gas prices and price volatility evolution in selected EU hubs	2013-2015	ACER Calculations based on Platts	Correlation is calculated using the Pearson product-moment correlation coefficient methodology looking at monthly values of standard deviation of logarithmic returns, previously calculated for volatility values.	
Price volatility correlation between selected pairs of hubs	2013-2015	ACER Calculations based on Platts		
Impact of Network codes on Market Functioning	Evolution of ratios of booked over technical capacity	2014-2015	ENTSO TP and ACER calculations	IP sides analysed represent circa 60% of total CAM scope list. Values represent the weighted average quantities of all IPs at each border. Calculations are made firstly for the average of all daily values during the year and secondly by considering the 10 peak days.
	Evolution of ratios of physical flows over technical capacity	2014-2015	ENTSO TP and ACER calculations	IP sides analysed represent circa 60% of total CAM scope list. Values represent the weighted average quantities of all IPs at each border. Calculations are made firstly for the average of all daily values during the year and secondly by considering the 10 peak days.
	Yearly average used versus booked capacity at selected IPs in the EU	2012-2015	ENTSO TP and individual TSO data	In those IPs offering reverse flow possibilities, capacities can be nominated in both directions. Utilisation values are shown on the basis of physical flows after their commercial setting. This may result in lower rates than initially received nominations. In cases where technical capacities at both IP sides do not fully overlap, the lower value was considered.
	Marketable and allocated bundled capacity for European cross-border IPs via dedicated auctioning platforms	2014-2015	ENTSO TP, PRISMA, ACER Calculations	
	Aggregated capacity utilisation of EU IPs - flows over bookings	2014-2015	ENTSO TP and PRISMA	IP sides represent circa 80% of the CMP scope list (see Annex 2). Note that the analysed IP's list is not fully coincident with those in Figure 31 and Figure 32.
	Benchmark of average gas cross-border transportation tariffs	2016	ENTSO, individual TSOs and ACER calculations	See Annex 1 for methodological clarifications and important notes.
Gross welfare losses per average household consumer in gas wholesale markets	2015	Eurostat Comtext, Platts, NRAs, CEER Database Indicators data (2014) and ACER calculations	The EU average household consumption level of 11,000 MWh/year is taken from the CEER indicators database 2014. Significant differences in average consumption levels exist among MSs household consumers. Actual figures would have an impact on values of net welfare losses.	



The aim of this document is to provide an overview of the indicators used in the Market Monitoring Report. Please consult also the latest edition of the Report which is available here:

[http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/ACER_Market_Moni](http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/ACER_Market_Monitoring_Report)

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