



## **Strengthening Gazprom and European Union Relations**

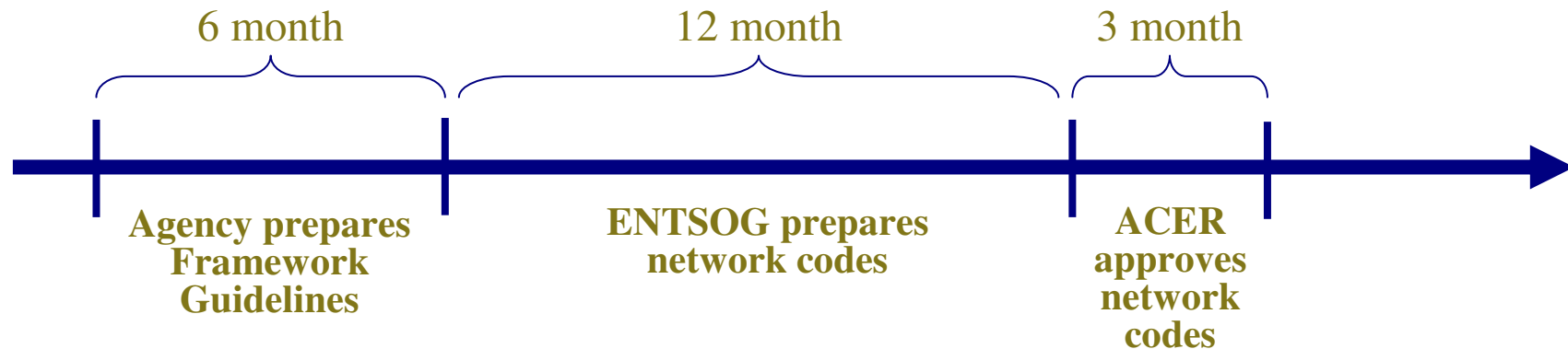
by Alexander Medvedev

Deputy Chairman of Gazprom Management Committee,  
Director General of Gazprom Export

Vienna, 28 May 2010

# Basic Timeline and Scope of 3rd EU Energy Package Implementation

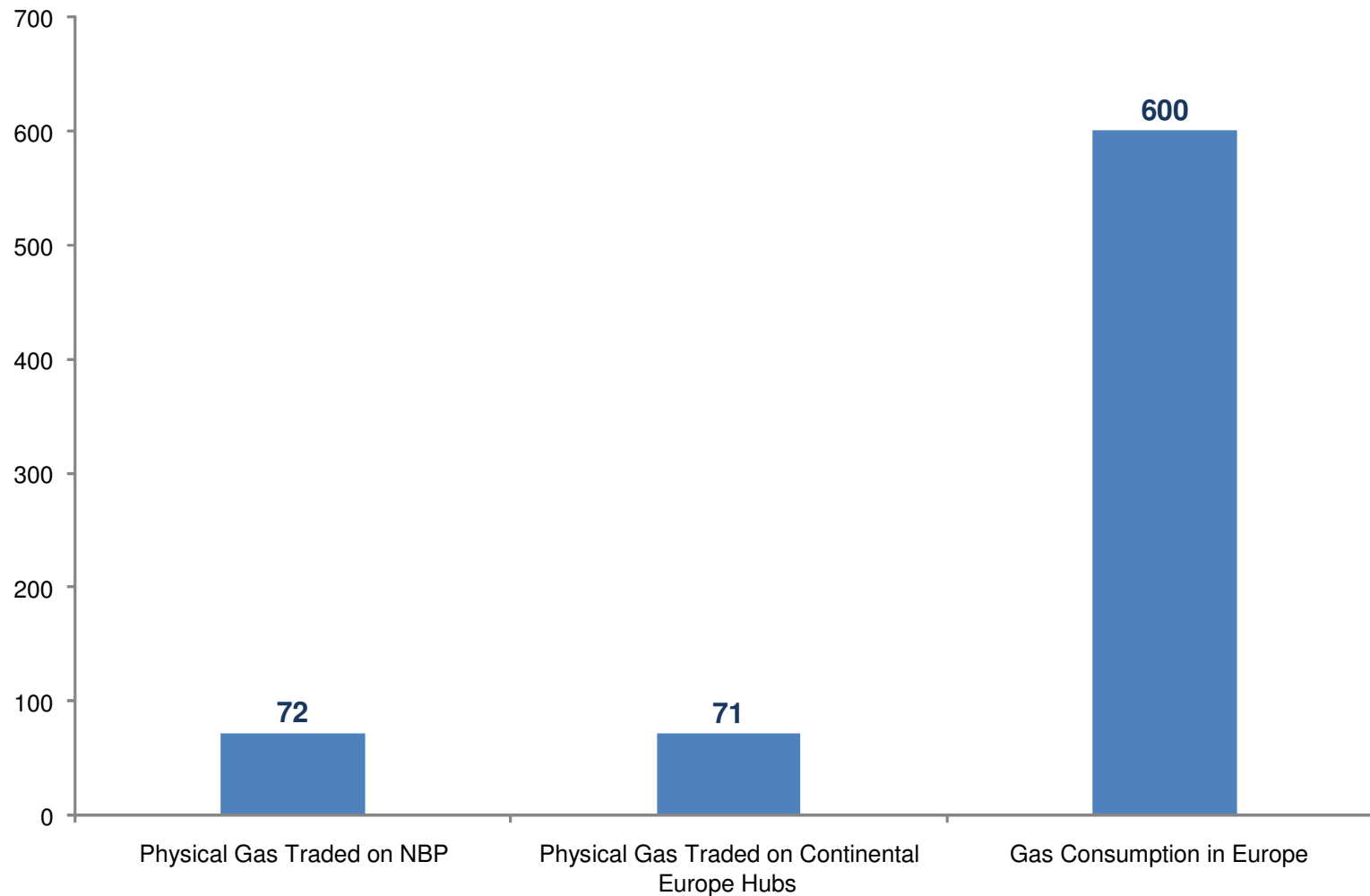
## Basic timeline based on Gas Regulation



## Areas for Framework Guidelines and Codes

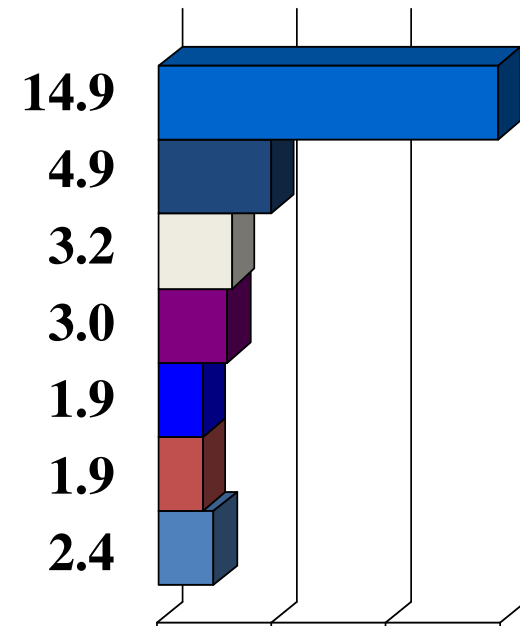
1. Network security and reliability rules
2. Network connection rules
3. Third party access rules
4. Data exchange and settlement rules
5. Interoperability rules
6. Operational procedures in an emergency
7. Capacity allocation and congestion management rules
8. Rules for trading
9. Transparency rules
10. Balancing rules
11. Rules regarding harmonized transmission management rules
12. Energy efficiency regarding gas networks

# Physical Volumes Traded on NBP and Hubs in Continental Europe are Equal to 24% of 2008 Gas Consumption



# Churn Ratio, European Gas Hubs in Q4-2009

- **United Kingdom:** National Balancing Point (NBP)
- **Belgium:** Zeebrugge (ZEE)
- **Austria:** Central European Gas Hub (CEGH)
- **Netherlands:** Title Transfer Facility (TTF)
- **Italy:** Punto di Scambio Virtuale (PSV)
- **France:** Point d'Echange de Gaz (PEG) (av.2009)
- **Germany:** NetConnect Germany (NCG)



For comparison:

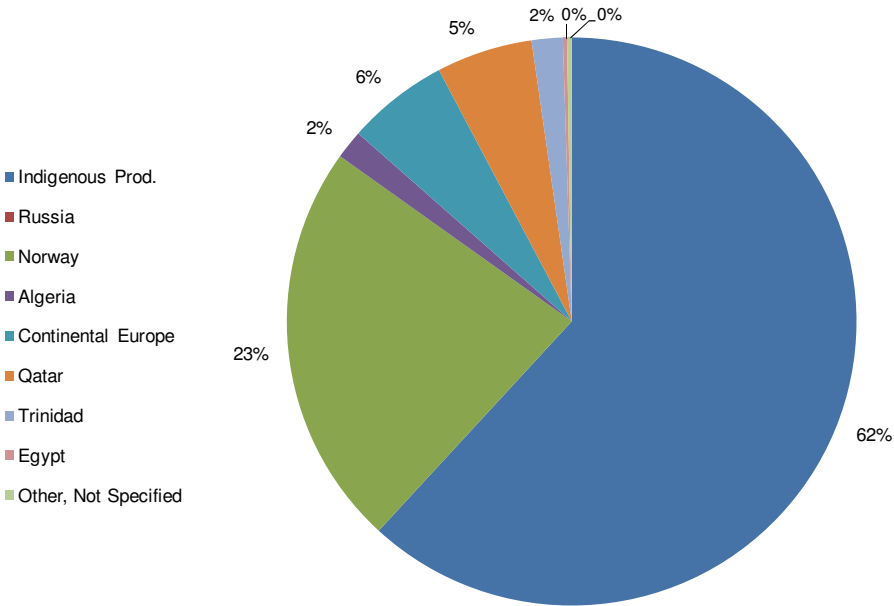
- **USA (oil):** NYMEX (WTI) (Feb.2010) **1680-2240**
- **UK (oil):** ICE (Brent) (Feb.2010) **2014**
- **USA (gas):** NYMEX Henry Hub (av.2009) **377**
- **Break-even churn level for liquid marketplace** **15**

**Churn** is the commonly used parameter for measuring liquidity level of marketplaces & is defined as the ratio of traded volumes to physical gas deliveries after trades

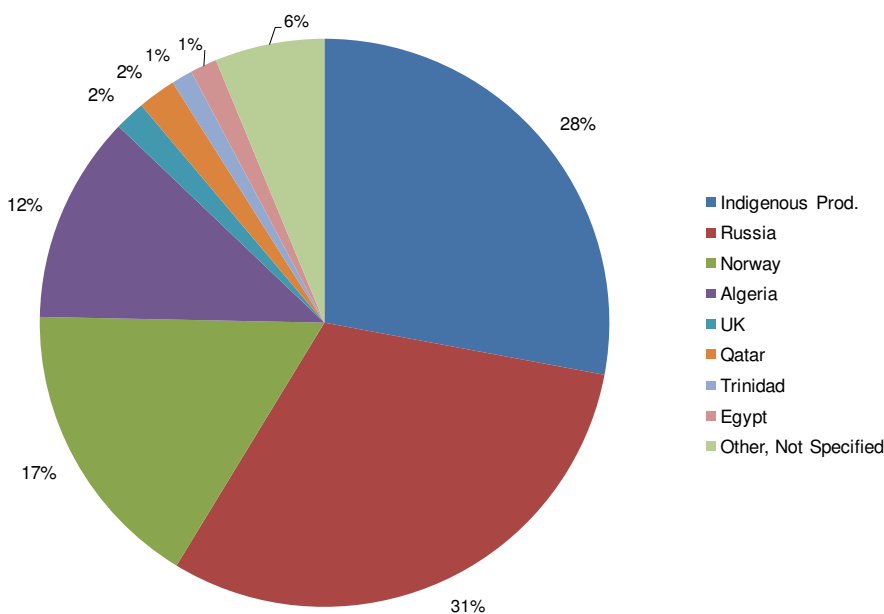
Source: "Gas Matters", IHS-CERA, M.Kanai (ECS)

# Gas Supply Mix in the UK and Continental Europe, 2009

UK



Continental Europe

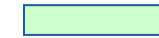


Source: IEA, Eurostat, Gazprom Export estimates.


# Example of Spreadsheet for xxx Company

## Daily Nominations and Revisions in Summer 2009

Date	Weekly Nomination	Daily Nomination (before the 6 p.m. D-1)	Revision 1	Revision 2	Revision 2	Revision 4	Last revision	Δ (last revision – daily nomination)
01.07.2009	42050	29034					29034	0
02.07.2009	43998	38390	49390				49390	11000
03.07.2009	43998	46476	45524				45524	-952
04.07.2009	43998	32447	33977	33957	32957		32957	510
05.07.2009	43998	33959	30959				30959	-3000
06.07.2009	42040	42040	45924				45924	0
10.07.2009	42040	44280					44280	0
11.07.2009	42040	44502					44502	0
12.07.2009	42040	44538	43038				43038	-1500
13.07.2009	44580	44522					44522	0
14.07.2009	44580	44380	40380				40380	-4000
15.07.2009	44580	44513	42513				42513	-2000
16.07.2009	44580	42311	40311				40311	-2000
17.07.2009	44580	40580	38580				38580	-2000
18.07.2009	44580	38580					38580	0
19.07.2009	44580	38580					38580	0
20.07.2009	44580	44580					44580	0
21.07.2009	44580	44162	36162	40162			40162	-4000
22.07.2009	44580	40457	44457				44457	4000
23.07.2009	44580	42079					42079	0
24.07.2009	44580	43883	39883	37883	37383		37383	-6500
25.07.2009	44580	39790	36790				36790	-3000
26.07.2009	44580	35792					35792	0
27.07.2009	42040	38107	33107	38107			38107	0
28.07.2009	42040	28662	37662				37662	9000
29.07.2009	42040	37657	35657				35657	-2000
30.07.2009	42040	33528					33528	0
31.07.2009	42040	33381					33381	0
01.08.2009	37502	33910					33910	0
02.08.2009	37492	33897	32897				32897	-1000
03.08.2009	38046	40889	37199				37199	-3600
04.08.2009	38046	36973	39425	36973	38835		38835	1862
05.08.2009	38046	39826					39826	0
06.08.2009	38046	40116					40116	0
07.08.2009	38046	39795					39795	0
08.08.2009	38046	34364	29799				29799	-4565
09.08.2009	38046	32364					32364	0
10.08.2009	38046	39822	41870				41870	2048
11.08.2009	38046	39825					39825	0
12.08.2009	38046	39829	34377	36377			36377	-3452
13.08.2009	38046	39633	36633				36633	-3000
14.08.2009	38046	33834	40124				40124	6290
17.08.2009	40586	41175					41175	0
18.08.2009	40586	43842	40842				40842	-3000
19.08.2009	40586	40629					40629	0
20.08.2009	40586	41672	31672				31672	-10000
21.08.2009	40586	43619	39119	41119			41119	-2500
22.08.2009	40586	33336	36836	34336			34336	1000
23.08.2009	40586	37339	36839	34339	30489		30489	-6850
24.08.2009	40134	35342	40342	38389	40342	37342	37342	2000
25.08.2009	40134	27637	21637				21637	-6000
26.08.2009	40134	28548	31048	26548			26548	-2000
27.08.2009	40134	26628	29628	30628	28628		28628	2000
28.08.2009	40134	23670	29670				29670	6000
29.08.2009	34134	29346	39346				39346	10000
30.08.2009	34134	34351	39851				39851	5500
31.08.2009	27134	33573	39573				39573	5500

 Last revision before beginning of gas day (before 8:00 a.m.)

 Revisions after beginning of gas day

 Decrease of final Buyers daily nominations vs. initial one

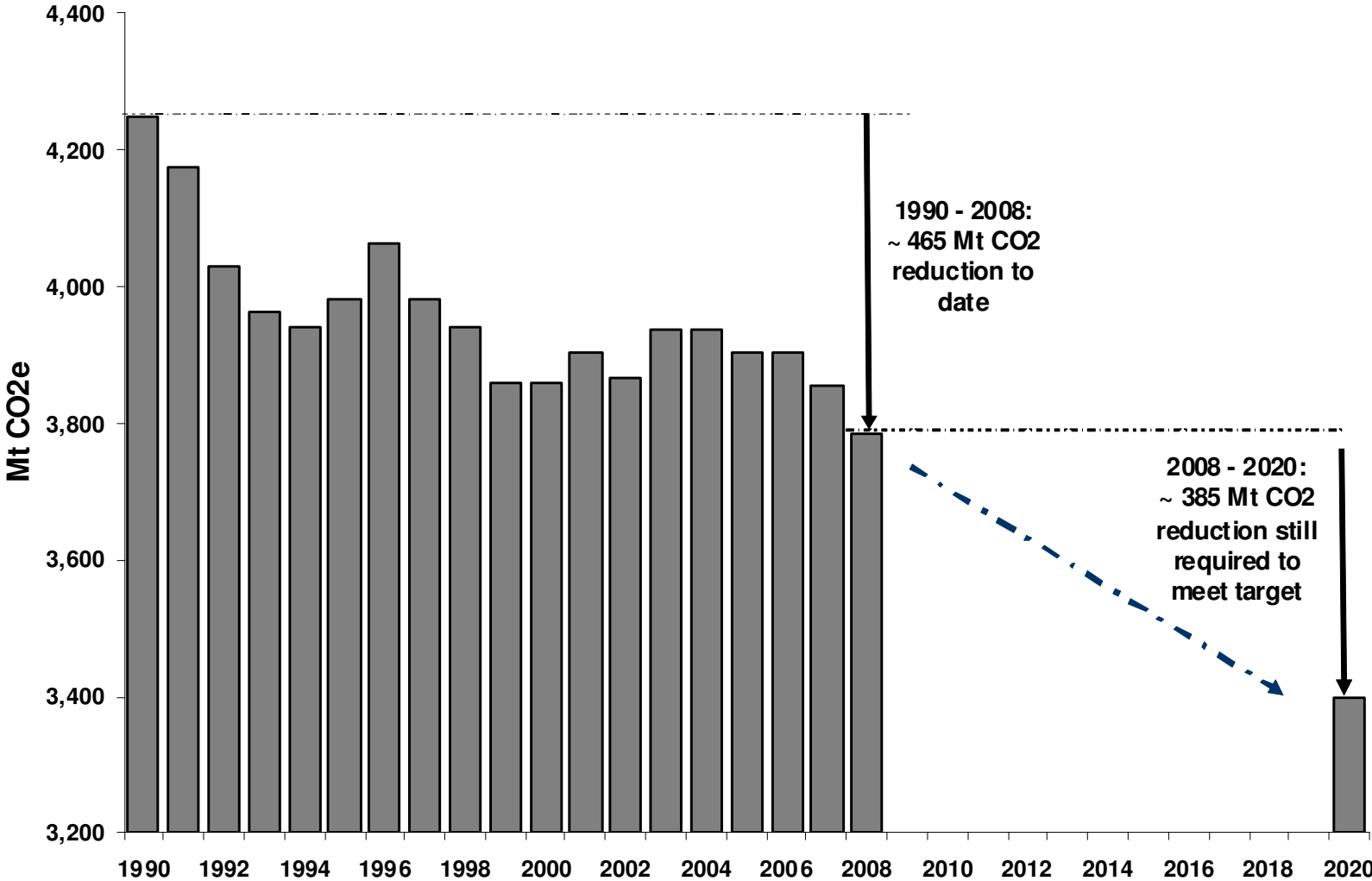


... but according to new Congestion management rules Bayer could make a nomination once before gas day

# Austrian Gas Infrastructure Map

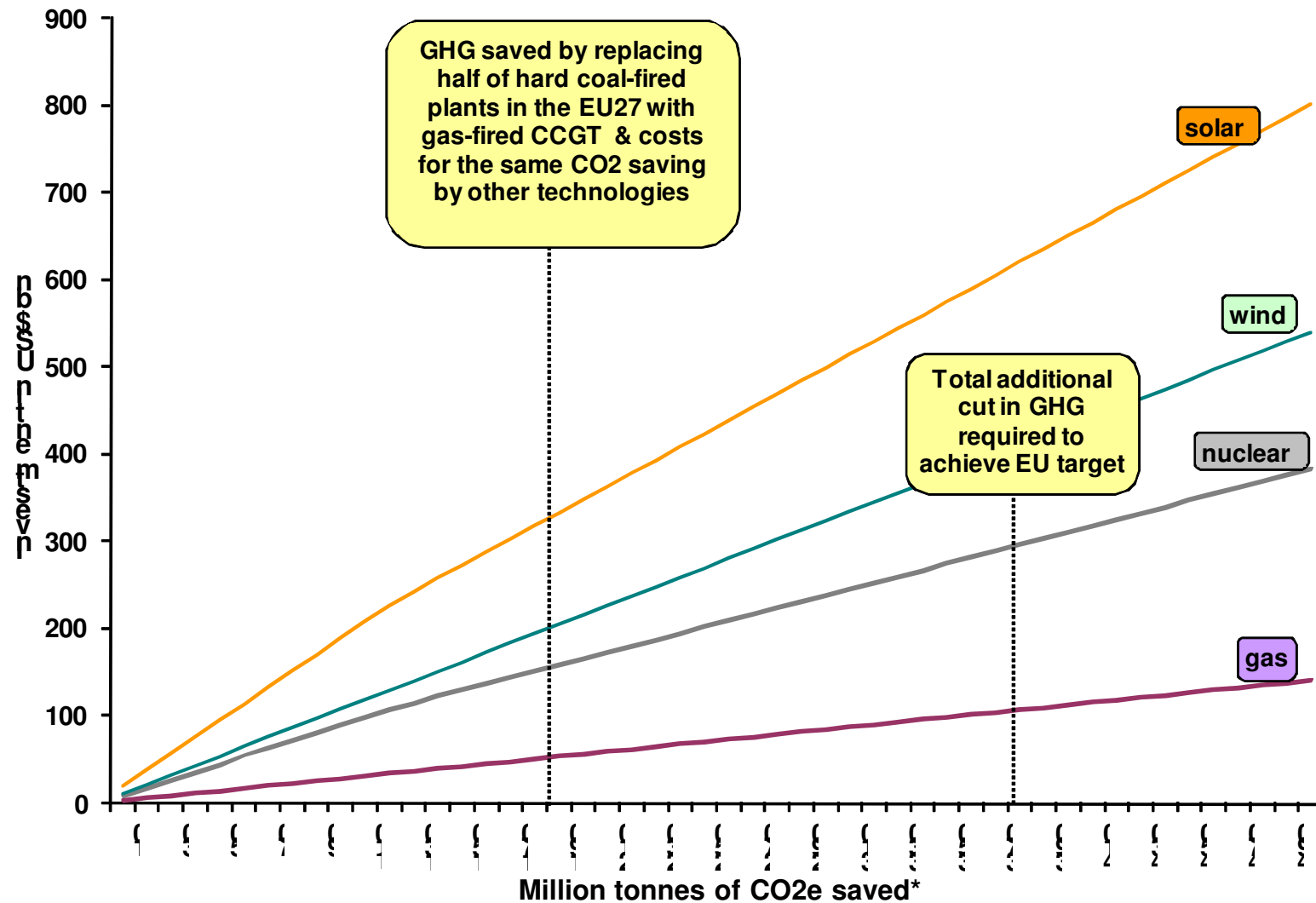


# EU27 GHG Historic Emissions and Targets



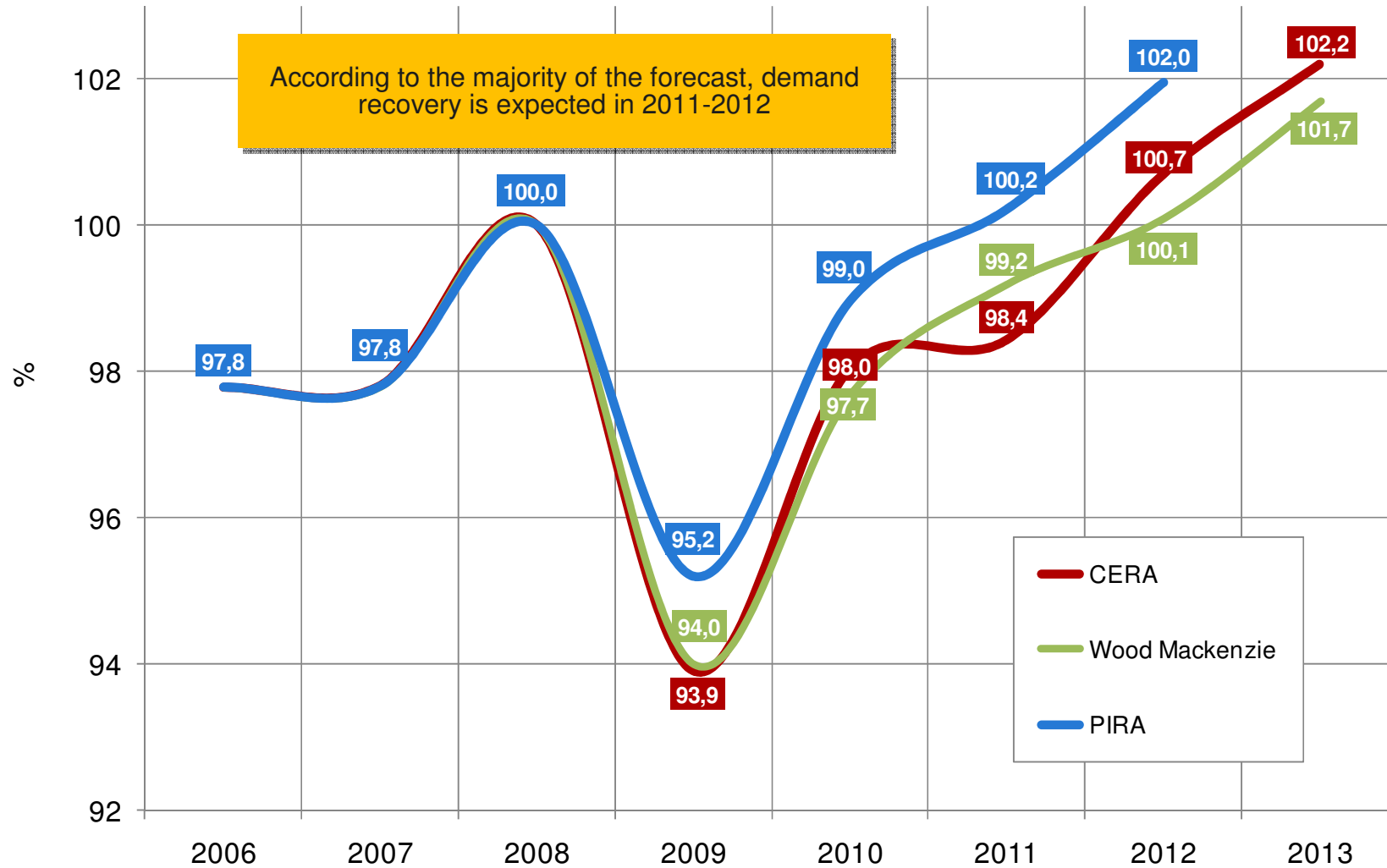


# The Investment Costs of Achieving Different Levels of GHG Reductions in Europe by Displacing Coal-Fired Power Generation

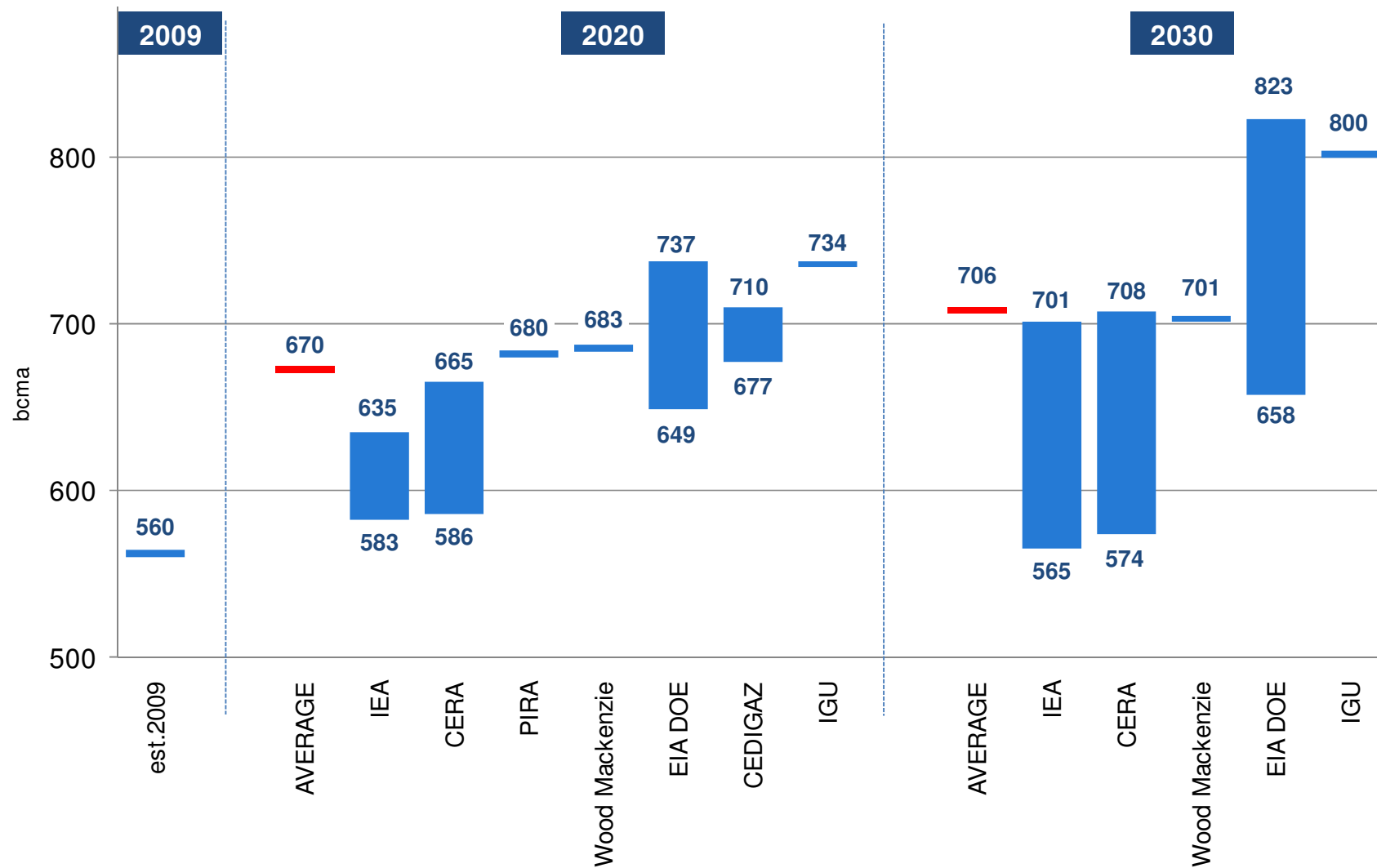


# European Gas Demand Recovery Scenarios

Demand Recovery Scenarios (Consumption in 2008 = 100%)

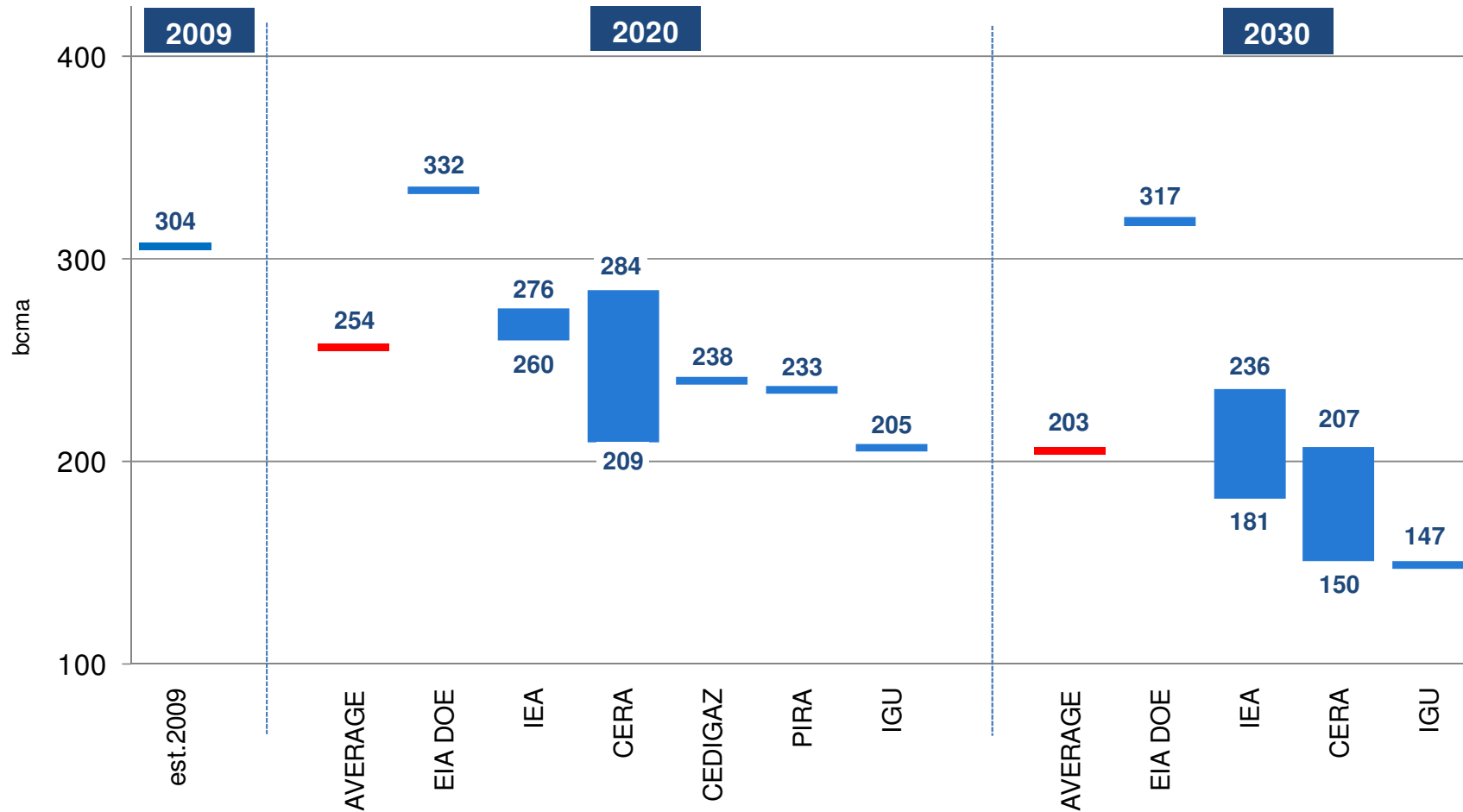


# Gas Consumption in Europe in the Long Term



Combination of countries included in the forecast may vary slightly between the forecast makers.  
 All the numbers are calculated based on CAGRs, published by forecast makers.  
 All volumes are up to the Russian gas quality standard.

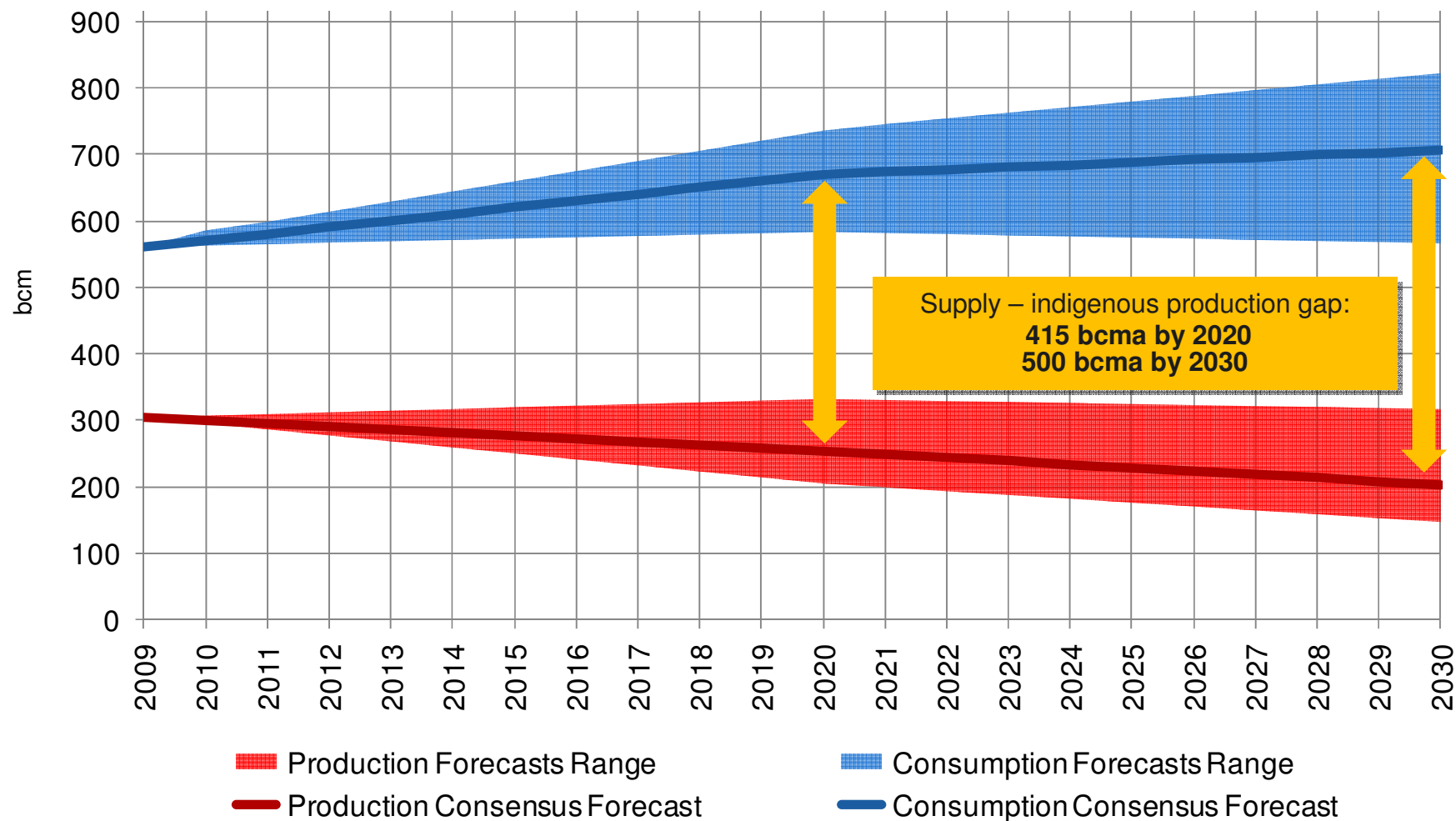
# Gas Production in Europe in the Long Term



Combination of countries included in the forecast may vary slightly between the forecast makers.  
 All the numbers are calculated based on CAGRs, published by forecast makers.  
 All volumes are up to the Russian gas quality standard.

# Gas Consumption and Production Gap in Europe

## Gas consumption and production forecasts for 2020 and 2030



*Combination of countries included in the forecast may vary slightly between the forecast makers.  
 All the numbers are calculated based on CAGRs, published by forecast makers.  
 All volumes are up to the Russian gas quality standard.*

**Thank you for your attention**