



# UKRAINE CRISIS AND ITS IMPLICATIONS TO TURKISH NATURAL GAS MARKET

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# About PETFORM



**Established in 2000, PETFORM has played a crucial role in the transfer of private sector views to the public authorities regarding to Turkish energy legislation amendments. Member companies mainly have activities in 2 sectors:**

- **Exploration & Production Sector**
- **Natural Gas Market**

# Member Companies



- AKENERJİ
- AKFEL
- AKSA
- ALADDIN MIDDLE EAST
- ANATOLIA ENERGY
- ANGORAGAZ
- ATTİLA DOĞAN İNŞAAT
- AVRASYA GAZ
- AYGAZ
- BATI HATTI GAZ
- BM HOLDİNG
- BORDRILL SONDAJ
- BOSPHORUSGAZ
- BP
- CHEVRON
- ÇALIK ENERJİ
- DEMİRÖREN EGL
- DOĞAL ENERJİ
- DOĞAN ENERJİ

- EDİSON
- EGEGAZ
- ENERCO ENERJİ
- ENERJİSA
- ENERYA
- ERDGAZ
- EWE ENERJİ
- EXXONMOBİL
- GDF SUEZ
- GENEL ENERGY
- GLOBAL ENERGY
- GÜNEY YILDIZI PETROL
- HATTUŞA ENERJİ
- HİPOT ENERJİ
- IBS RESEARCH
- KİBAR ENERJİ
- MARSA ENERGY
- NATURGAZ
- OMV

- PALMET ENERJİ
- PERENCO
- POZİTİF DOĞALGAZ
- RWE & TURCAS GÜNEY ELEKTRİK
- SHELL ENERJİ
- SOCAR
- STATOIL
- TBS PETROL
- TEKFEN İNŞAAT
- TEMİ
- THRACE BASIN
- TIWAY
- TOTAL
- TURCAS
- VALEURA ENERGY
- VOLT ENERJİ
- YENİ ELEKTRİK
- ZMB GAZ DEPO
- ZORLU ENERJİ

# Gas Imports by Source Country (2012–2013–2014)

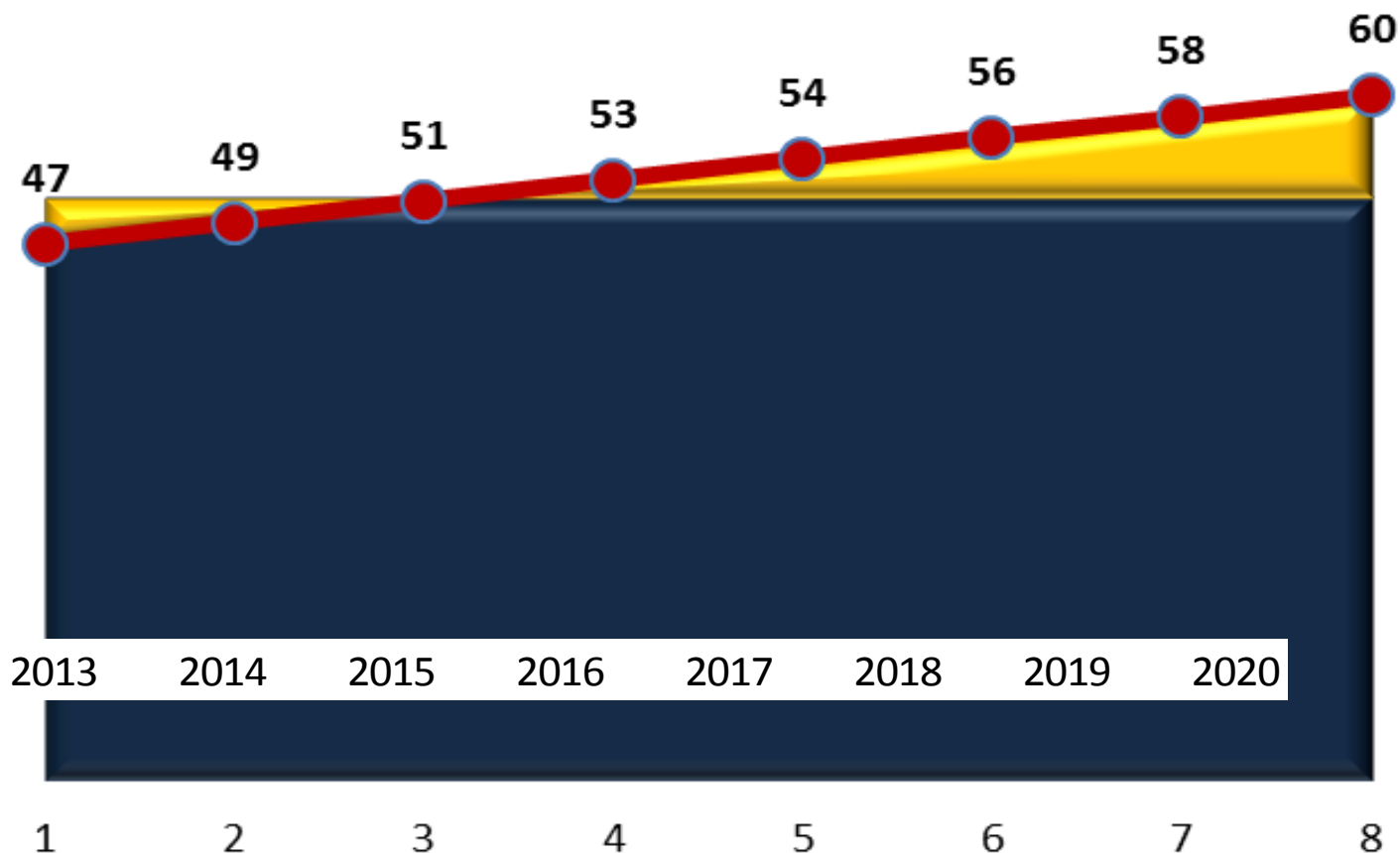


| <i>(bcm)</i>  | 2011   | 2012   | 2013 | Share in Total (2013) |
|---------------|--------|--------|------|-----------------------|
| Russia        | 25.406 | 26.491 | 29   | 59 %                  |
| Iran          | 8.190  | 8.215  | 8    | 16%                   |
| Azerbaijan    | 3.806  | 3.354  | 5    | 10 %                  |
| Algeria (LNG) | 4.156  | 4.076  | 4    | 8 %                   |
| Nigeria (LNG) | 1.248  | 1.322  | 1.3  | 3 %                   |
| Spot LNG      | 1.069  | 2.464  | 1.9  | 4%                    |
| Total         | 43.8   | 45.9   | 49.2 |                       |

# Future Trend: Supply and Demand



Consumption 2020: 60 bcm



# Trading Hub: Gas Market Target Model



## Physical Infrastructure

- Very well developed and maintained physical infrastructure
- No restrictions and congestions to meet peak demand
- Cross border capacity development with minimum congestion
- New storage and LNG facilities for supporting supply security to seasonal and peak demands

## Regulatory Framework

- Policy drafting regulatory body should understand the real Dynamics of the Energy, TPA, Network Code, Independent TSO etc.
- Implementation of policies via EU directives.
- Monitoring of wholesale market integrity, competition (antitrust) and effective consumer interest protection is needed for competition
- Unbundling of transmission and counteraction of incumbents' vertical dominance

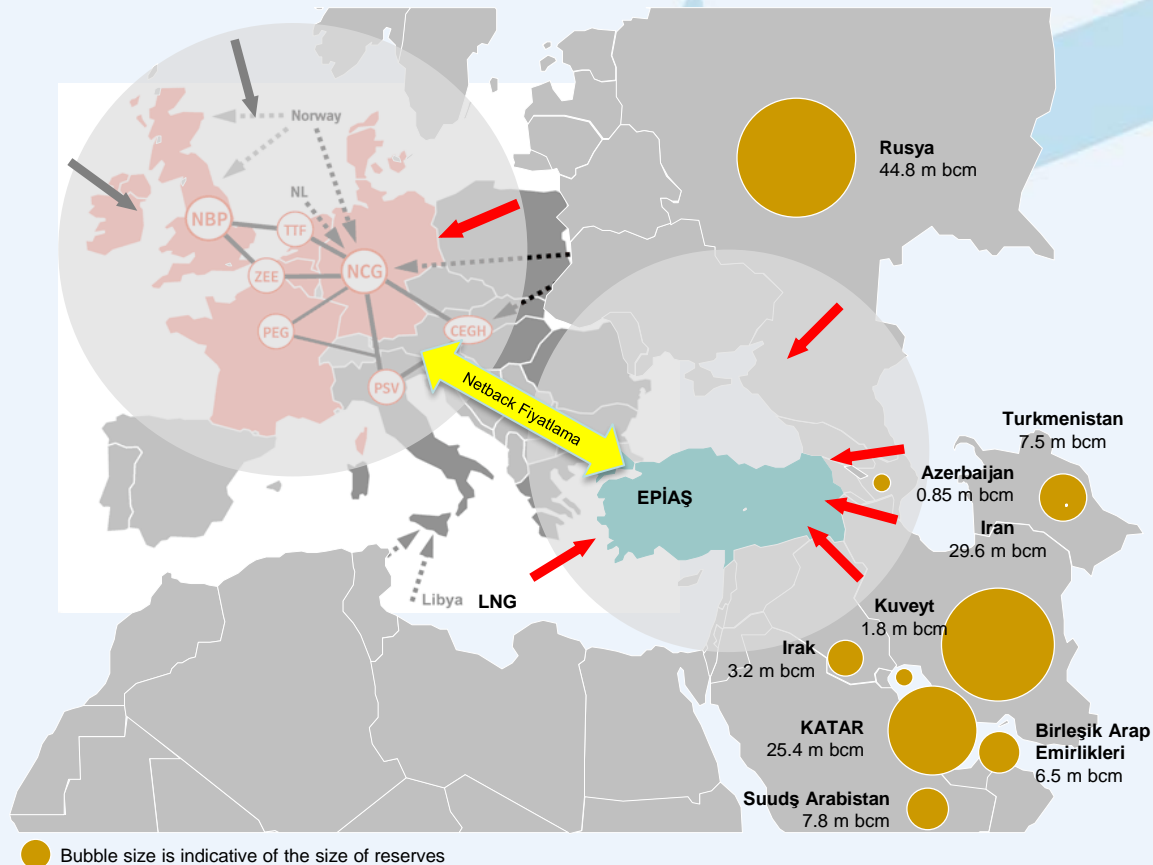
## Independent Transmission System Operator

- Appropriate capacity-booking model (entry/exit model, use it or lose it principle)
- Effective balancing mechanism
- Effective nomination processes
- Publicized imbalance charging structures (not overly punitive)
- Very well integrated storage injection and withdrawal processes to the transmission system
- Transparent tariffs for system entry and exit

## Commercial and Market Conditions

- Formation and active promotion of common pricing reference
- Free day ahead and intraday price assessment mechanism
- Standard and commonly expected physical contracts
- No barrier for new entries
- No destination clauses
- Transparent price-discovery mechanisms / platforms ,functioning forward market
- Good synchronization between balancing, nearby and forward markets
- Stable financial and credit environment and mechanisms

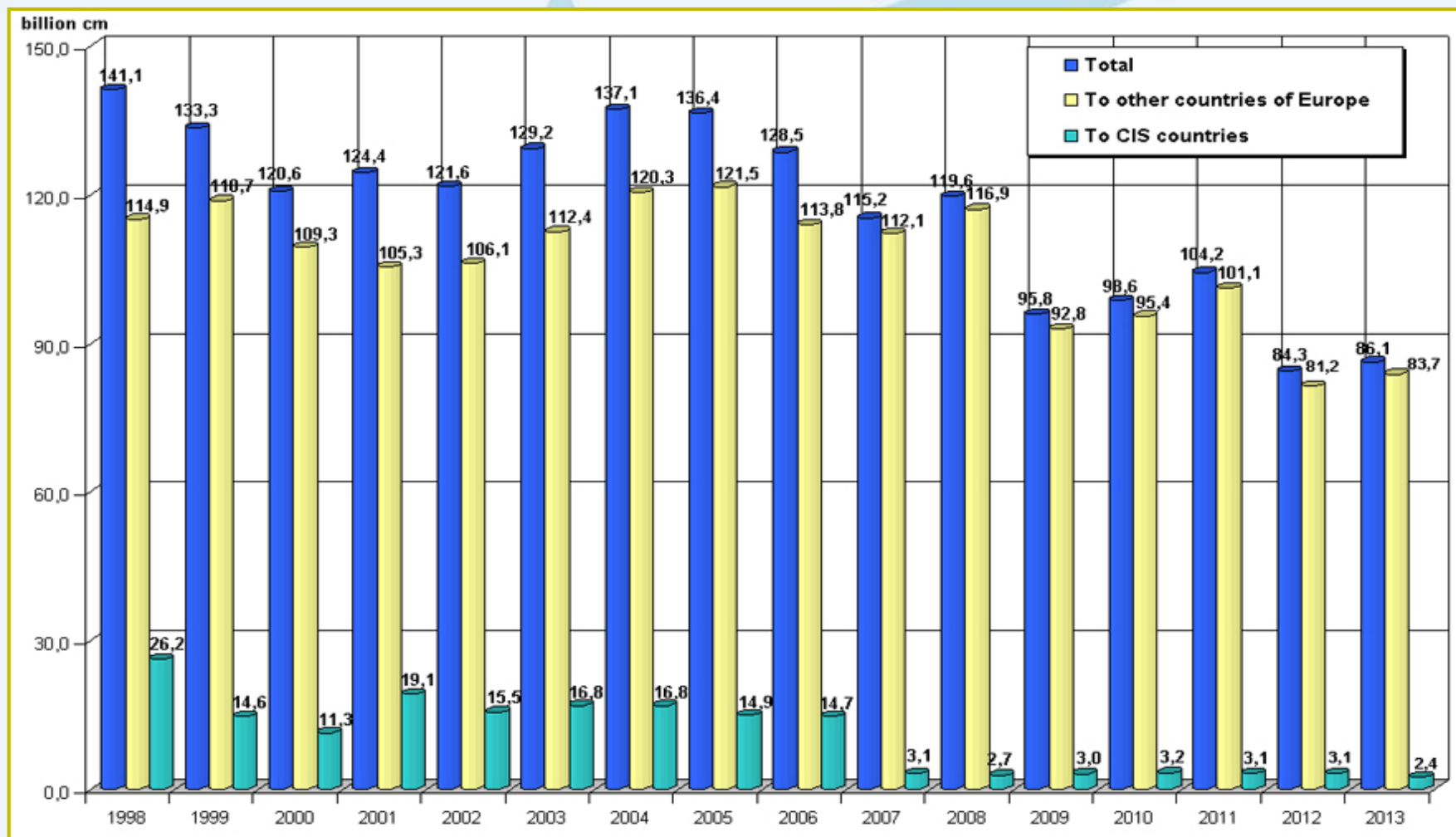
# Integration of Turkey with European Hubs



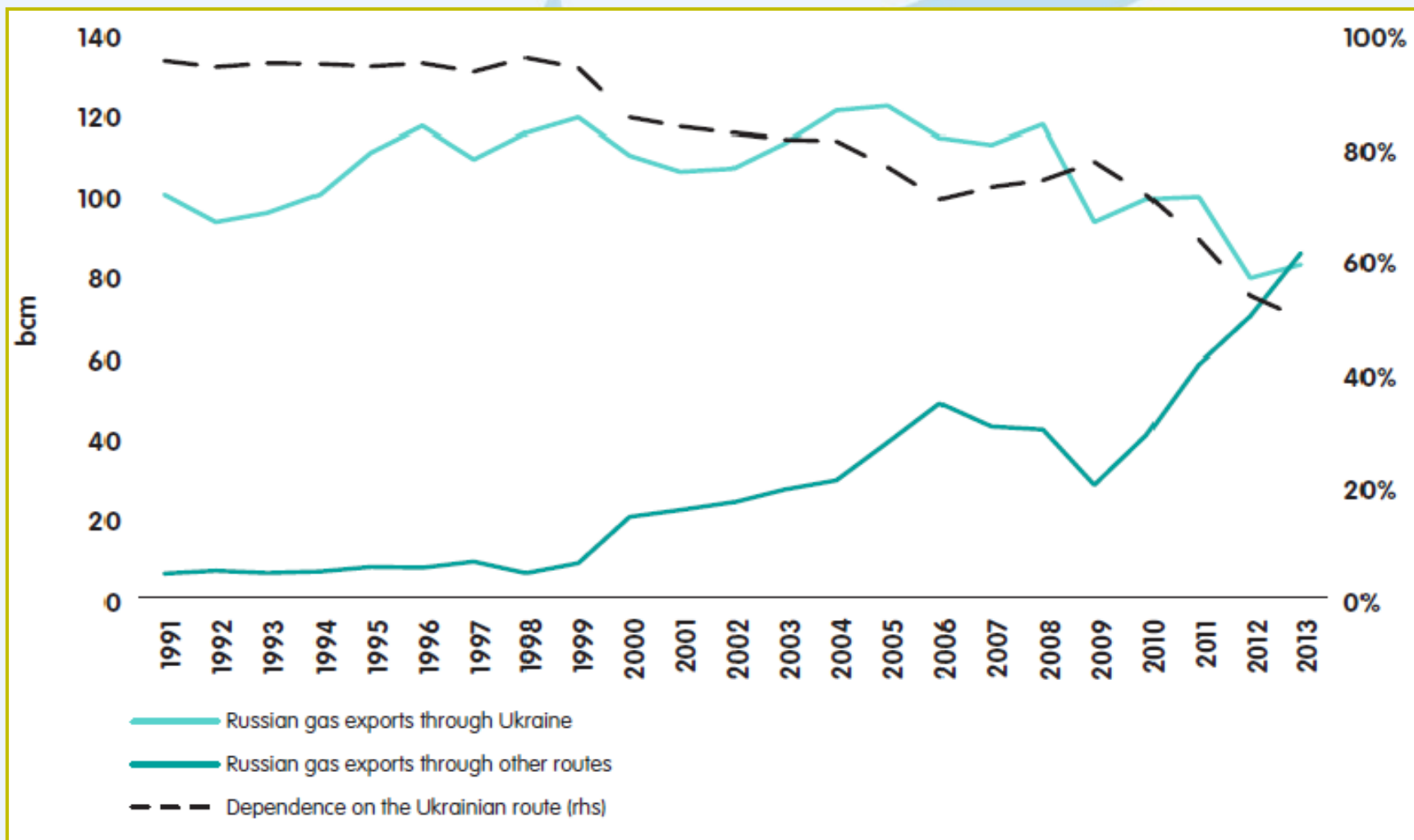
- 8 Major European Trading Hub
- Trading on OTC's via Brokers
- Trading on Energy Exchanges

If Turkey can make necessary structural reforms, Turkish natural gas market will be integrated with European trading hubs and generate reference price for natural gas trade in the region.

# Gas Transit via Ukraine



# Dependency to Ukraine for Gas Transit



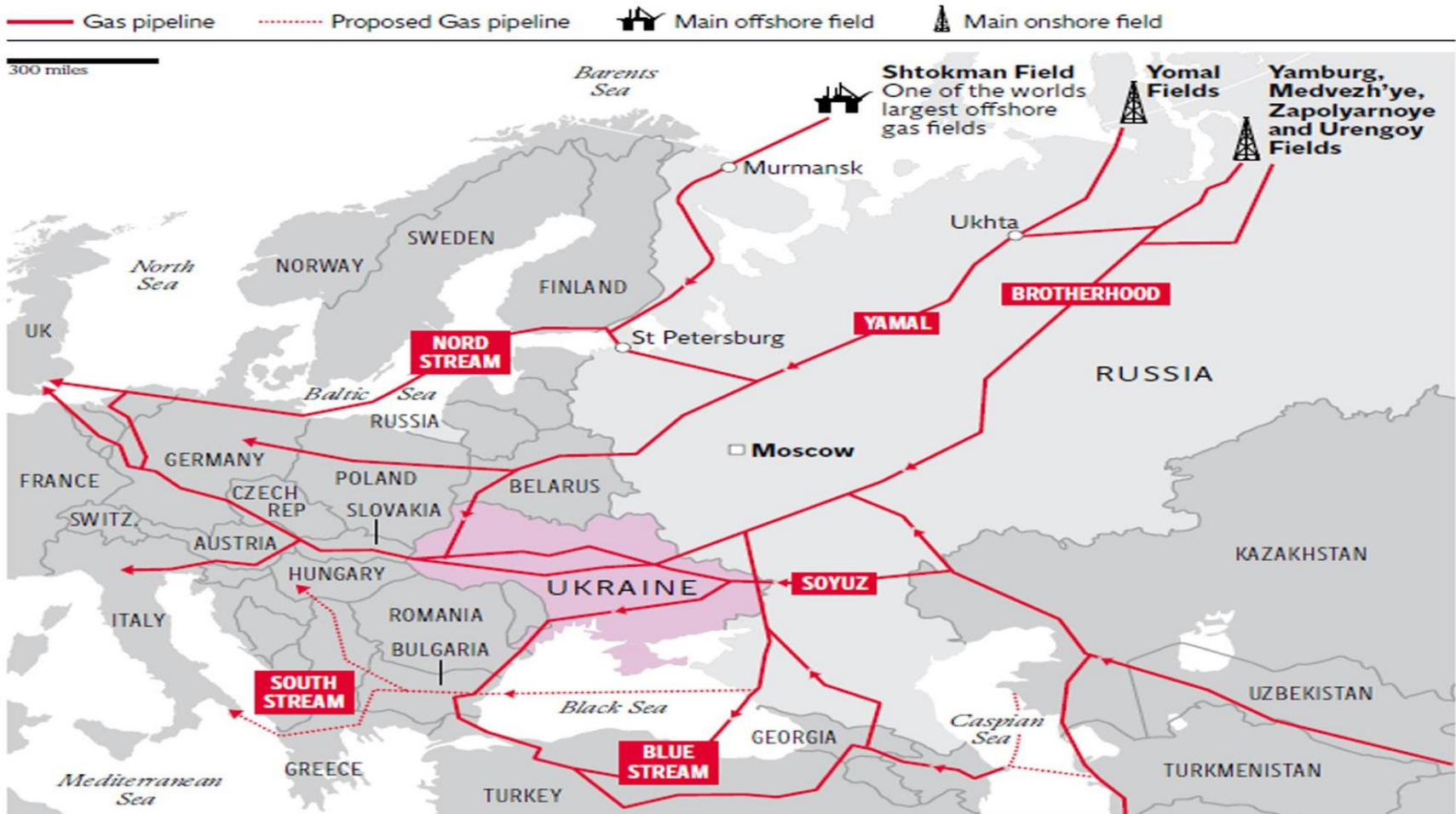
# Natural Gas Transmission System of Ukraine



# Major Russian Natural Gas Pipelines to Europe



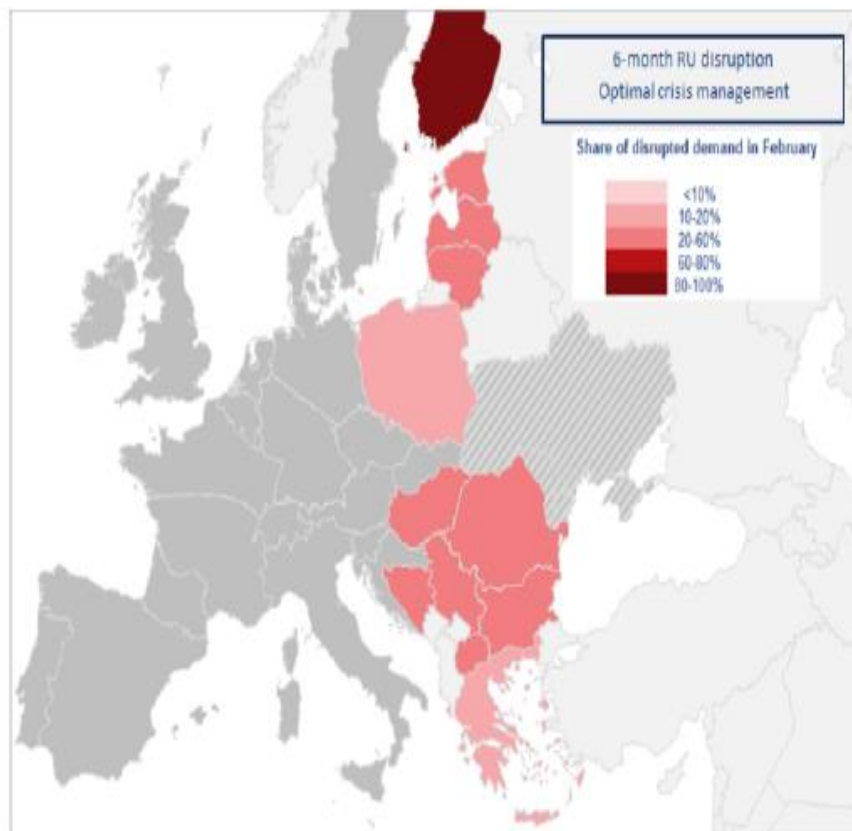
## MAIN RUSSIAN GAS PIPELINES TO EUROPE



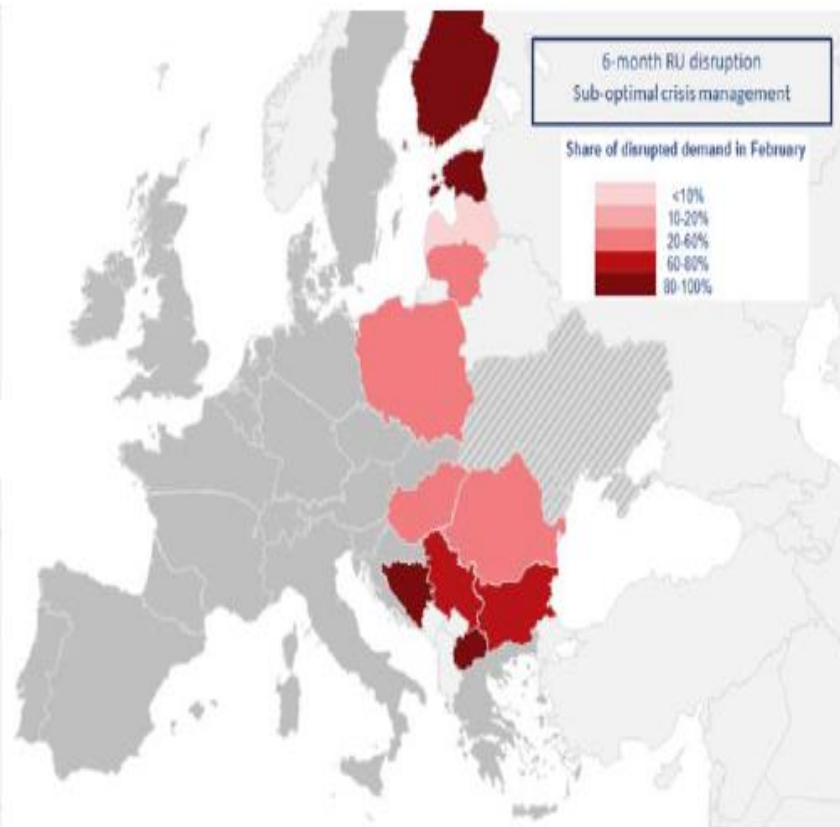
# EU Gas Stress Test Results



*Cooperative Scenario*



*Non-cooperative scenario*



# Contribution of Working Market Mechanisms to Crisis Management



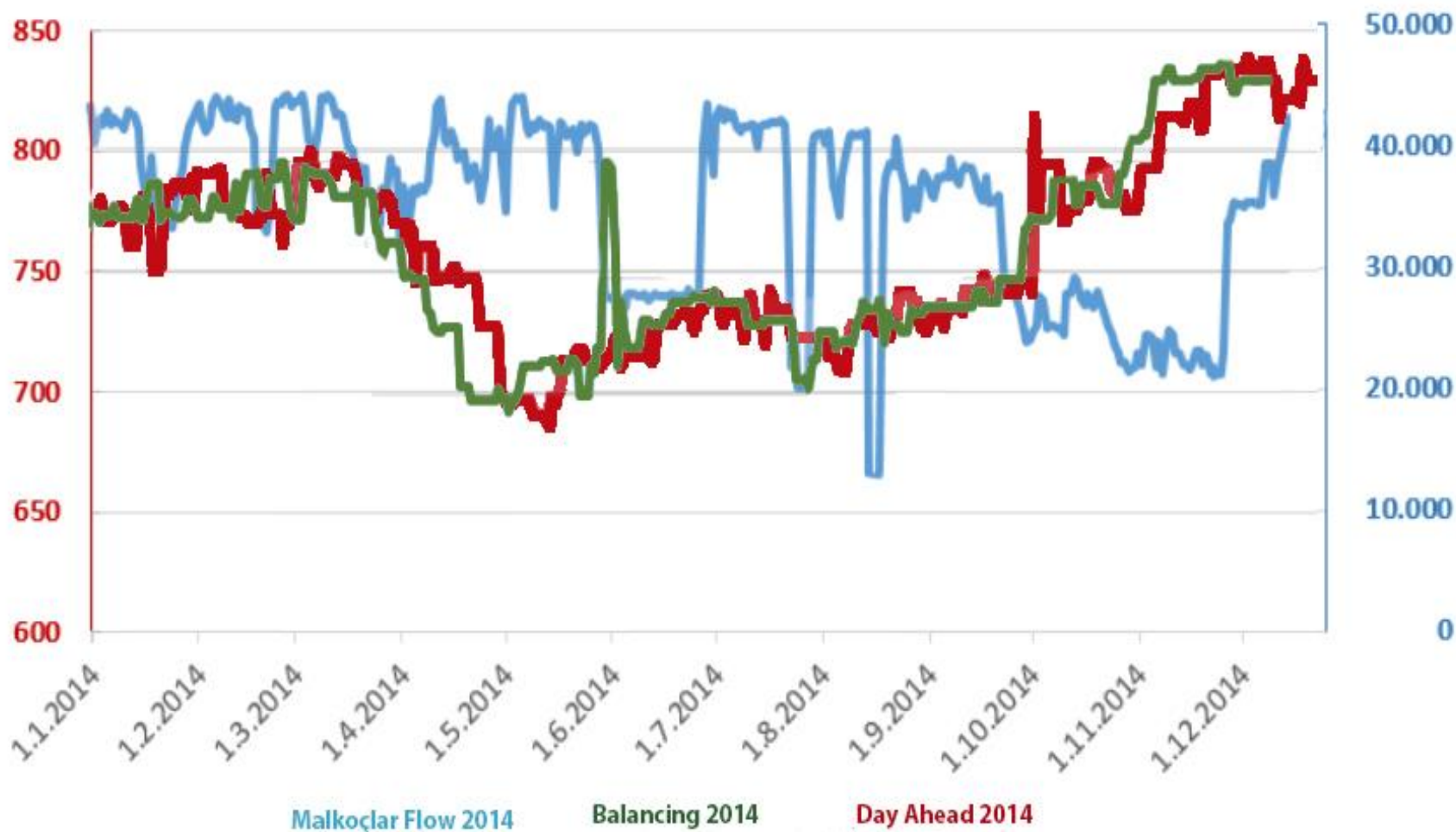
Figure 7 – Chart of temporal introduction of national measures

Scenario 6 month without Russian gas

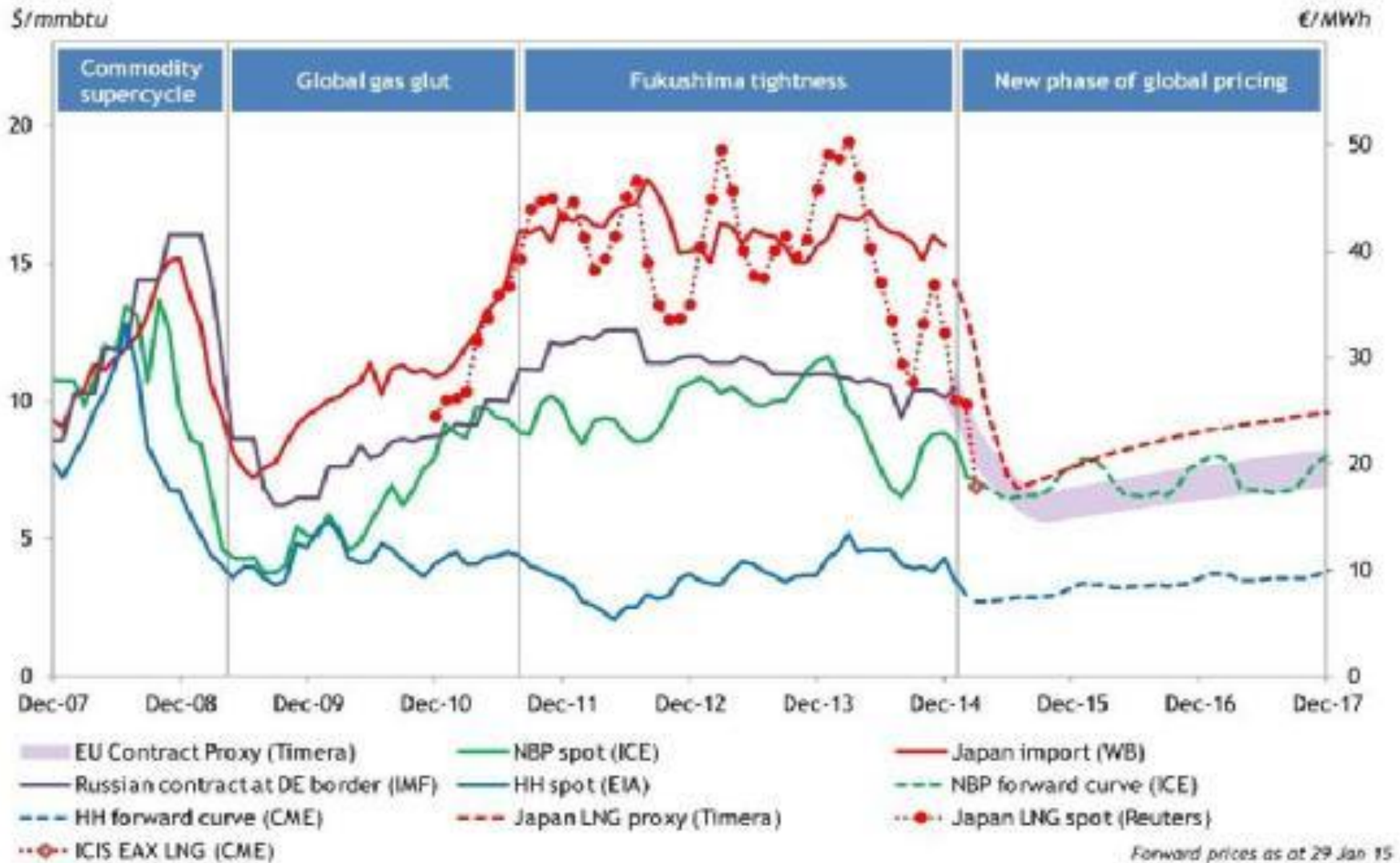


Source: National Reports, Commission analysis

# Entry Volumes & Balancing and Day Ahead Market Prices



# Future Trends





***THANK YOU...***