

# Nabucco at a glance – opening the Southern Corridor

**Nabucco – linking European gas markets directly to gas reserves in Caspian / Middle East Region**



→ Nabucco pipeline      ■ Nabucco transit countries

## Nabucco – Facts & Figures

- > Pipeline diameter: 56"
- > Distance: ~3,300 km
- > Investment: up to € ~8 bn (real terms)
- > Transport capacity: up to max. 31 bcm/a
- > Construction of pipeline is expected to begin in 2011 and first operations in 2014
- > Capacity in phases:
  - Phase 1: 8 bcm/a (2014)
  - Phase 2: 15.7 bcm/a (2015/16)
  - Phase 3: 25.5/31 bcm/a<sup>1)</sup> (2019/20)
- > Shareholders (each 16.67%):
  - BOTAS (Turkey)      - OMV (Austria)
  - Bulgargaz (Bulgaria)      - RWE<sup>2)</sup> (Germany)
  - MOL (Hungary)      - Transgaz (Romania)

# Security of supply issues for South East Europe were highlighted in the gas crisis of 2006 & 2009. What next ... 2009 again, 2010?

Countries affected by gas crisis 2009



■ Countries affected by gas crisis  
→ Gas flow

Gas crisis showed that South East Europe is/has:

- > Strongly dependent on one supply source of gas
- > Strongly dependent on one gas supply route
- > Insufficiently gas interconnection in South East Europe
- > Insufficient flexibility in its supply structure (LNG, storage, fuel switching, etc.)

# What are South East Europe's opportunities for increased security of supply ...

## LNG

- > Role of LNG in South East Europe could increase but cannot replace need for pipeline diversification
- > LNG competes in global pricing and is more marginal supply. Thus, offering only security of supply at the margin

## Enhanced interconnection and flexibility

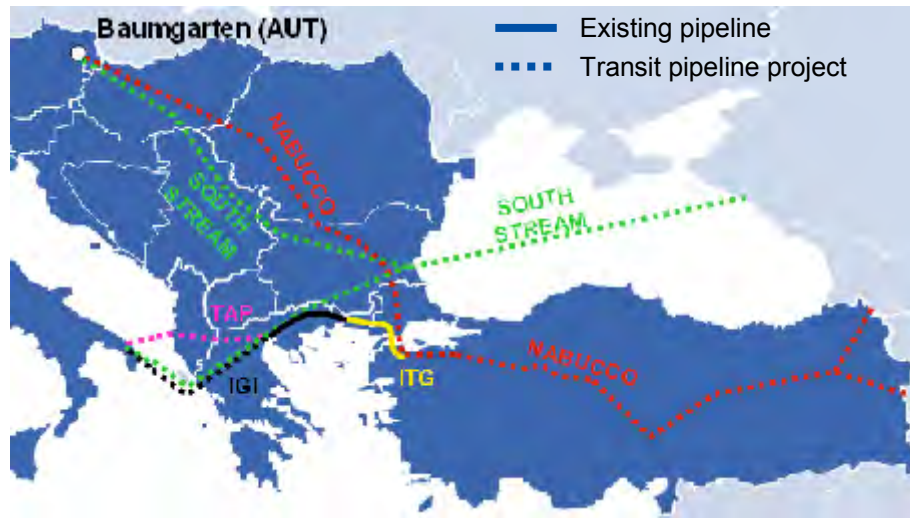
- > Gas crisis under-pinned the demand for new development of gas storage
- > Gas crisis showed that the South East European gas markets are not sufficiently interconnected which only enhances the problem

## Pipelines

- > Given South East Europe's proximity to gas resource countries, new transportation pipelines offer the most reliable option for improving security of supply
- > Gas transportation pipelines offer a dedicated supply and diversification of routing and supply sources

**> Transportation pipelines such as Nabucco create the "trunk" system that interlinks markets and encourages interconnectivity**

# Southern Corridor gas pipeline project competition: Nabucco in competition for gas supplies, gas markets and financing



Southern Corridor gas pipeline projects					
Projects	Capacity (bcm/a)	Pipeline length	Capex (€ bn)	Start-up	Project owner
Nabucco	25.5-31.0	3,300 km	8.0	2014	RWE/OMV/MOL/Bo-tas/BEH/Transgaz
South Stream	63.0	3,200 km	25.0	2015	Gazprom (RUS)/ ENI (IT)
IGI	10.0	807km	1.1	2012	Edison (IT)/ DESFA (GR)
TAP	10.0	520km	1.5	2012	EGL (CH)/Statoil Hydro (NOR)

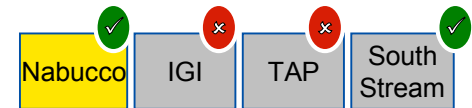
- > 4 “competing” pipeline projects
- > Total “demand” 114 bcm/a – will need gas supply to make investment
- > Geopolitical Background (control over exports to Europe)
- > Will financing constraints hamper some projects?
- > Lots of comparing “apples and oranges” (e.g. distance from wellhead-to-market, transit requirements etc)

# Project comparison shows that the benefits considerably favour Nabucco (1/2)

## Assessment of Southern Corridor pipeline projects

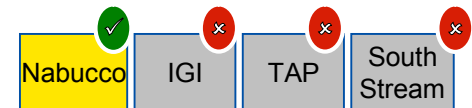
### > Dedicated gas export route vs. dependence on add. parties for transit:

- > Nabucco/South Stream no transit country interference (dedicated pipelines)
- > IGI/TAP need to rely on BOTAS for transit through Turkey



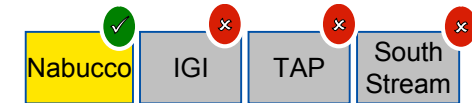
### > Project status:

- > Nabucco development activities scheduled
- > South Stream no selected route nor finalised feasibility studies
- > IGI/TAP need transit access to BOTAS's system
- > TAP constrained due to contentious Iranian gas supply agreement



### > Project "open" to third party shippers – enhancing competition:

- > Only Nabucco grants access to transport capacity to interested 3<sup>rd</sup> party shippers (50% of overall capacity) encouraging diversification and competition



### > Cost Comparison:

- > South Stream is 3 times more expensive Nabucco
- > IGI/TAP have no economies of scale benefits like Nabucco
- > **Nabucco offers most competitive tariff from all projects on a distance and wellhead to market related basis**



# Project comparison shows that the benefits considerably favour Nabucco (2/2)

## Assessment of Southern Corridor pipeline projects

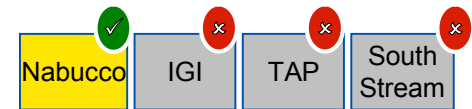
### > Enhances security of supply and competitive prices in Europe:

- > South Stream no diversified supply source
- > IGI/TAP dedicated to Italian market
- > Nabucco open to various gas sources and interconnects markets



### > Will trigger the development of substantial new upstream gas:

- > Nabucco (31 bcm/a) will trigger new upstream projects
- > IGI/TAP too small to justify new investments
- > South Stream constrain new upstream investments as investor risk

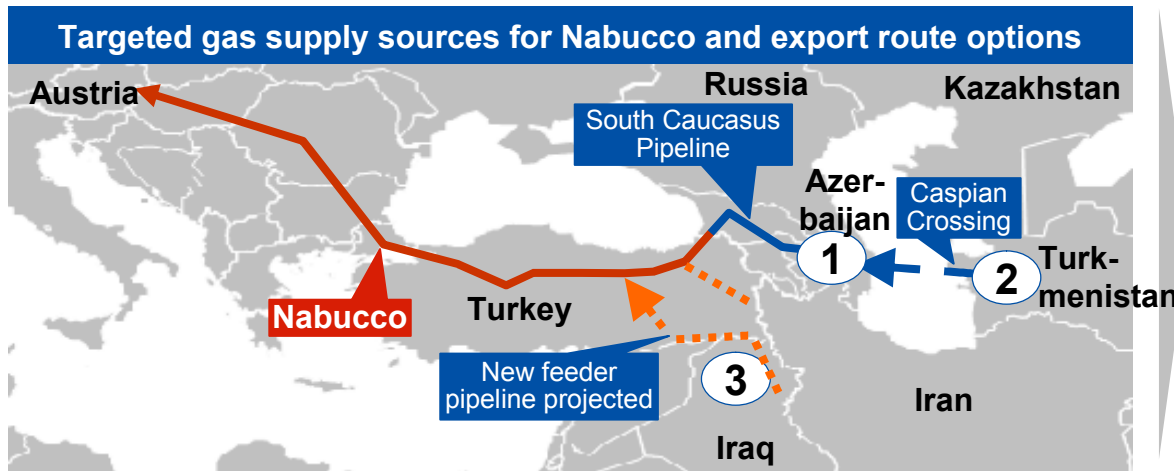


### > Triggers new infrastructure investment:

- > IGI/TAP too small to justify infrastructure investments
- > Nabucco attracts gas supplies from Turkmenistan and a Trans-Caspian pipe
- > South Stream could foster some new investment



# Before you ask, there is enough gas for Nabucco and it is available ...



- > **Sufficient gas available**  
By 2015/2016 “free” gas export capacity of >31 bcm/a from Azerbaijan, Turkmenistan and Iraq
- > **Suppliers pro exporting to Europe**  
Aspiration for direct gas exports to Europe of all three countries

**1 Azerbaijan**

- > **13 bcm/a of gas available for export** by 2015/2016 from Shah-Deniz phase 2 (SD-2) development
- > Transit via upgraded South Caucasus Pipeline (owned by the SD partners)

**2 Turkmenistan**

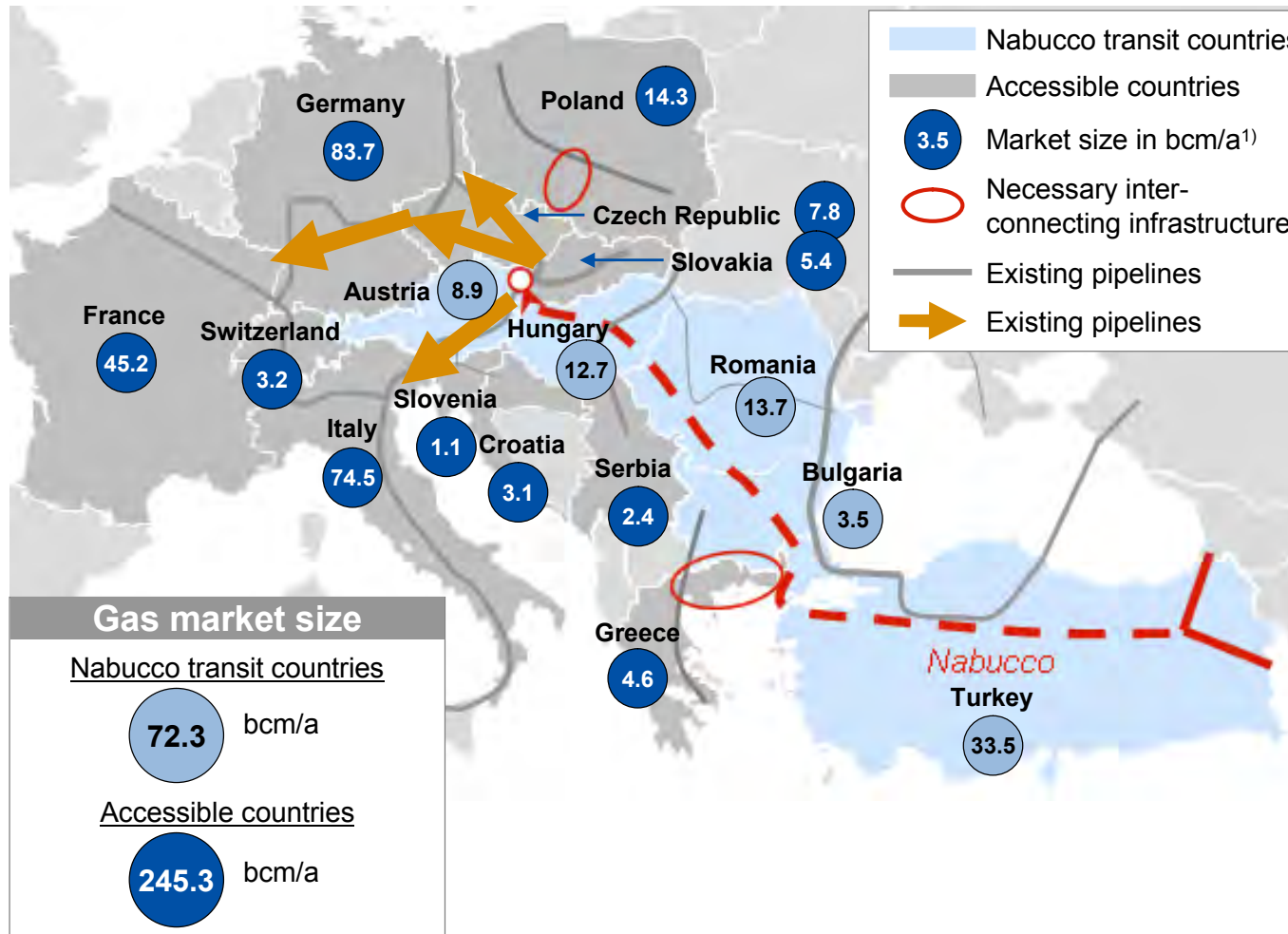
- > Turkmenistan able to supply by 2015/16 **10 bcm/a of export gas** to Europe
- > Trans-Caspian pipeline and transit pipeline through Azerbaijan/Georgia required

**3 Northern Iraq**

- > **30 bcm/a export potential** by 2015/2016
- > 10% equity stakes taken by Nabucco shareholders OMV and MOL
- > New feeder pipeline linking to Nabucco will be required

> **Nabucco will offer the most competitive tariff and thus the cheapest transportation cost for gas producers (higher value). THUS why would they not ship their gas through Nabucco? ...**

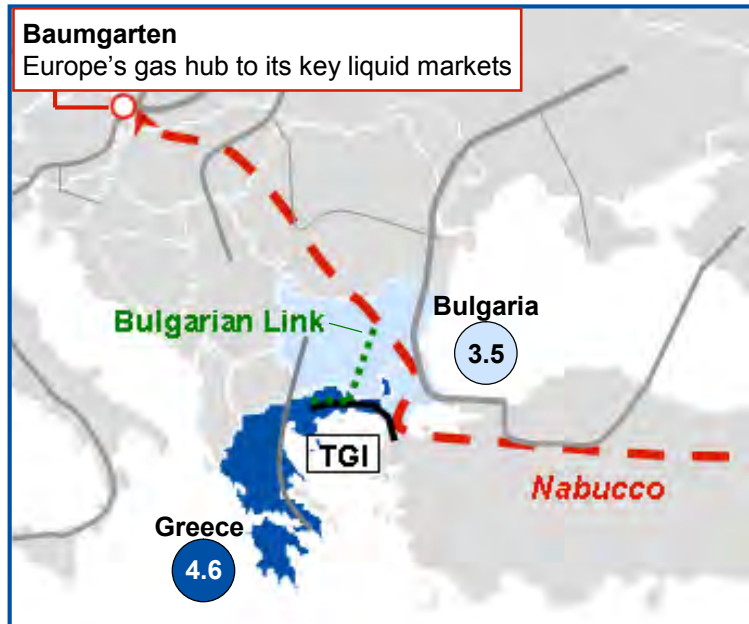
# Nabucco will interconnect the gas markets of Europe and South East Europe enhancing security of supply, competition, trading and retailing of gas ...



- > A direct route into the centre of Europe's gas market (with reverse flow)
- > Interconnects 4 countries in South East Europe
- > From existing or new pipes can Supply 10 to 15 countries with gas
- > And Incentive for further interconnection investments
- > Encourage competition/trade flows
- > Enhancing security of supply



# Greece can gain the benefits from Nabucco as much as dedicated transit countries such as Bulgaria



## Strategic background

### Similarities between Bulgaria and Greece

- > Bulgaria and Greece are not interconnected well with other markets and gas sources and dependent on Russian gas imports (Bulgaria 90%; Greece 65%)
- > Both countries pursue a strategy of **supply diversification** to reduce dependence on Russian gas imports

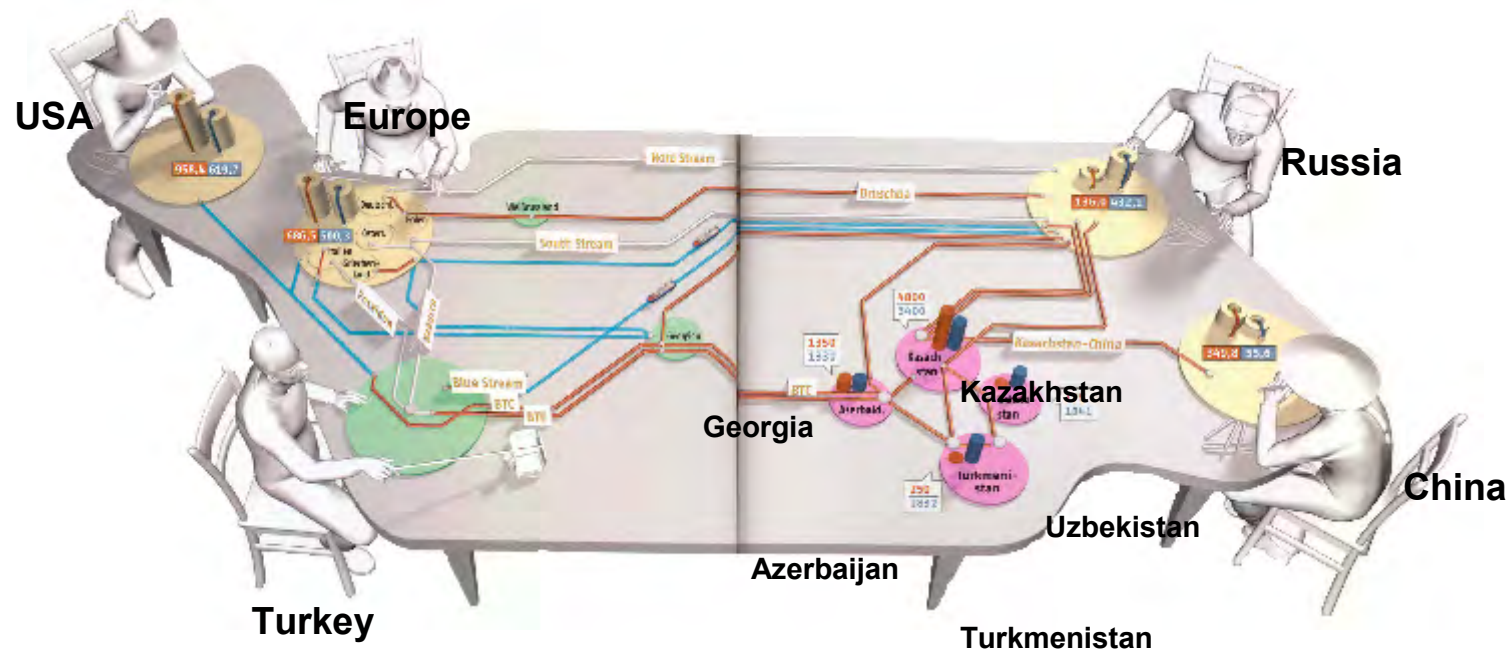
## Nabucco's benefits

### For Bulgaria

- > Nabucco **interconnects Bulgaria** with liquid European markets which will increase competition, interconnectivity, security of supply, options, investment and encourage cheaper gas prices

> **Greece can benefit also - an interconnector between Nabucco and the Greek pipeline system. Gas can be bought and shipped through Nabucco for Greece or even for IGI!!!!!!**

“If there is any one secret of success, it lies in the ability to get the other person's point of view and see things from that person's angle as well as from your own.” Henry Ford



**NABUCCO HAS SEEN THE OTHER PERSON'S POINT OF VIEW AND MET IT**