ACER
Agency for the Cooperation of Energy Regulators

12th Stakeholder Group Meeting

GRI South South-East Region

Vienna, 31 May 2012

Agenda

Agenda Topics	
1. Opening • Approval of the agenda • Approval of the minutes of the 11th SG meeting	Chair
2. Update on Gas regional Initiatives Development a. Report on outcome of XXI Madrid forum b. Update on ACER involvement in GRI	Chair ACER
3. Capacity allocation and bundled products a. Pilot Project III – coordinated short term capacity services b. Pilot Project IV – GATRAC bundled products c. Early implementation of CAM NC : the traders' views	TAG/SNAM Net4Gas EFET
4. Enabling Market Integration a. Pilot Project V – Cross regional Balancing Platform b. Pilot Project VI – Structure of future regional balancing and trading zones	CEGH Chair/Project Sponsors
5. Infrastructure a. GRIPS b. EIP: PCI identification in GRI SSE	Net4Gas/Desfa/SNAM European Commission
6. AOB a. SoS b. Next meetings	Member states Chair

1. Opening

- Approval of the Agenda
- Approval of the minutes of the 11th SG meeting
  - Comments received

2. Update on GRI developments

- **Report on outcome of XXI Madrid Forum**
  - Focus to be put on CAM and BAL early implementation
  - ENTSOG commits to encouraging TSOs to establish pilot platforms and early implementation projects for the "*coordinated allocation, through market-based mechanisms, of a common set of bundled capacity products*"
  - Roadmaps for early implementation to be drafted by TSOs, support from ENTSOG, ACER, NRAs
  - Encourages further updates of work plan & monitoring by ACER and ENTSOG

ACER
Agency for the Cooperation of Energy Regulators

2. Update on GRI developments

- **Recent updates of GRI SSE work programme**
  - Latest update of the work programme in February 2012, as requested by Madrid Forum
  - Additional section on cross-regional work and exchange of best practice
  - Gas Target Model implementation studies
  - Security of Supply added as deliverable
  - Work Programme remains work in progress

2. Update on GRI developments

- Update on ACER involvement in GRI

3. Capacity allocation and bundled products

- Pilot Project III – Coordinated short term capacity services

» Presentation by TAG GmbH (PDF)

OBA Tarvisio - Arnoldstein

Background:

•Agreement on the approach at joint meeting NRAs – TSOs on 16th April 2012
•SRG and TAG contacts and discussions (last on 24th May 2012)

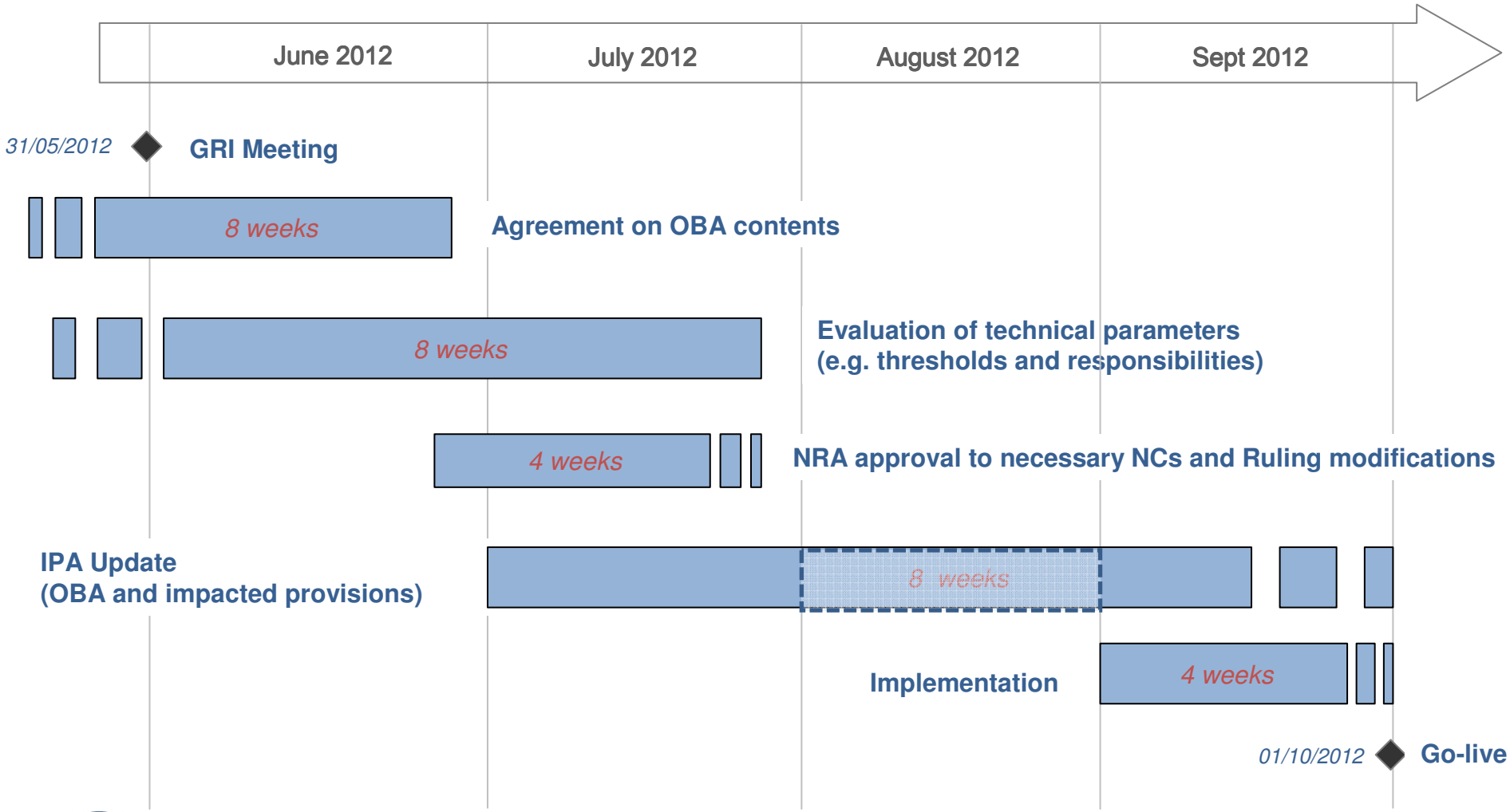
Main principles:

•Economic and financial neutrality for the TSOs
•Reference to gas balancing market
•Minimization of the steering differences
•Regulatory approval of the provisions for cost recovery

Points currently under discussion:

•Thresholds for the OBA application
•IPA affected provisions

OBA Tarvisio Arnoldstein - Timeschedule



ACER
Agency for the Cooperation of Energy Regulators

Pilot project: Bundled capacity allocation at Austria/Italy IP

Status and proposed way forward by the regulators

E-CONTROL

31/05/2012

The GRI SSE workprogramme

- Proposal for a procedure for the coordinated allocation of daily capacity **in 2012**
- Definition of a bundled capacity product to be allocated by explicit auctions in order to connect PSV and Baumgarten **in 2013**
- Strong involvement of the 2 involved TSOs: TAG and Snam Rete Gas

Current situation

- First steps towards the target solution:
  - On the Austrian side: TAG started auctioning day ahead interruptible capacity
  - On the Italian side: modification of the rules to use the entry capacity at Tarvisio so to allow shippers to nominate extra amount of capacity according to the results of the TAG's daily auction
  - Good acceptance by shippers, some price convergence measured between Baumgarten hub and PSV

Main concerns on the current situation

- It is not a coordinated mechanism (auction management, capacity calculation, interruptions management…)
- Only interruptible capacity available at present
- Auction at D-1 on the basis of primary shippers nominations at D-2
- Auction design not fully in line with CAM provisions (pay as bid)

Possible way forward

- E-Control Austria and AEEG have established a joint task force to design the main features of the evolution of the current arrangement
- The target is clear and based on the CAM network code (text not yet binding)
- Not all the provisions of the CAM code are implementable in the short term → need to identify also an intermediate step of development
- The intermediate step is going to be developed by the TSOs on the basis of joint guidelines issued by the regulators upon consultation of mkt participants

Guidelines under preparation by NRAs

- E-Control Austria and AEEG joint task force has agreed on the guidelines for the next step of development of the current mechanism
- The main elements of those guidelines are briefly introduced so to receive first hand comments by stakeholders
- Guidelines will be sent to TAG and SNAM for comments in the next days
- A more formal consultation is anyway foreseen in the near future (end of June at the latest)

Key elements of the guidelines

- Based on current CAM NC
- Joint booking platform, to be chosen among:
  - ✓ an existing one,
  - ✓ one TSO acting also on behalf of the other,
  - ✓ a new joint platform to be established
- Capacity offered:
  - ✓ Firm daily (capacity made available by primary shippers and deriving by provisions of the CMP regulation)
  - ✓ Interruptible daily determined in a coordinated way by the TSOs
- Only auctions are considered as allocation method
  - ✓ Marginal price (lowest successful bid)
  - ✓ No reserve price as tariff are applicable independently on both sides of the border to successful bidders

Key elements of the guidelines /2

- Auction revenues:
  - Deriving by the allocation of firm capacity made available by primary shippers: returned to primary shippers
  - All other capacity: split in equal amounts among TSOs and used according to relevant NRA decisions
- Transparency requirements:
  - Final aggregated auction information shall include clearing price and the capacity corresponding to the successful bids

Open points

Interruptible allocation

	OPTION A	OPTION B
Timing	D-1 after nomination matching could be at 15.00 (?)	D-1 before the deadline for the nominations – i.e. before 13.00
Capacity on offer	Non nominated capacity	Calculated on the basis of information related to previous days
Impact on nomination	A new nomination must be put in place after the auction	No changes necessary

Open points/2

Interruptible allocation

- Option A and B:
  - Option A allows a more accurate estimation of the capacity actually available in day D
  - Option B inaccuracy seems not a particular problem due to recent experiences (capacity offered always exceeding requests) – things may differ during winter period
  - Option A may require some time to be implemented
  - Option A timing may hamper network users possibility to arrange trading and manage flows (?)

- What is possible to do immediately?
  - Better coordination among TSOs in communicating capacity availability on both sides
  - Better algorithm to determine the amounts to be auctioned
  - What else?

Bundled
Day-ahead VP2VP Capacity

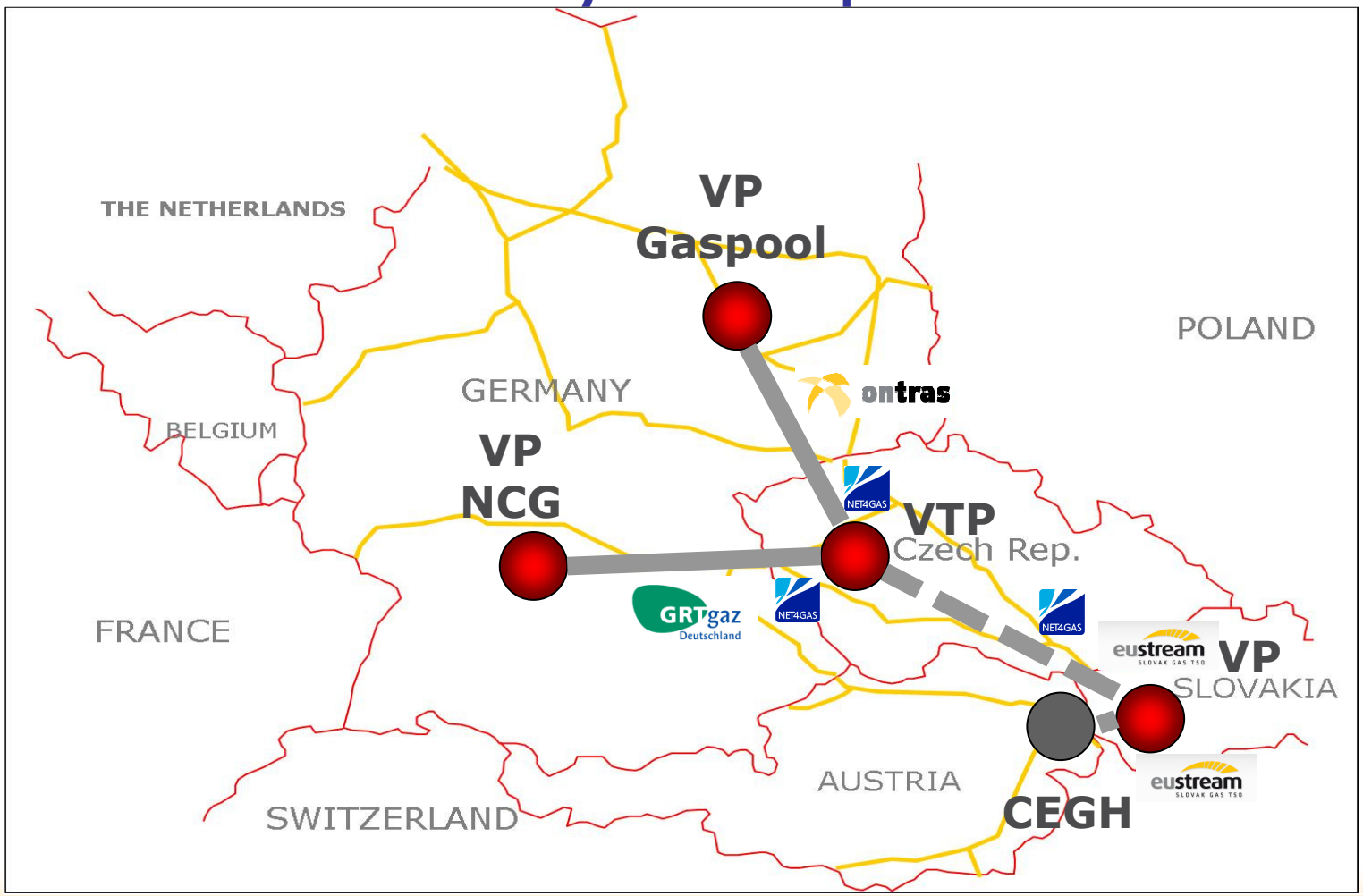
Enhancing Gas Transport Cooperation between Ontras, NET4GAS, GRTgazD and Eustream

GRI SSE
Vienna, 31.05.2012

Bundled Day-ahead VP2VP Capacity

GATRAC
GAS TRANSPORT COOPERATION

Overview about the current situation – partnerships for bundled day-ahead capacities



Bundled Day-ahead VP2VP Capacity

GATRAC
GAS TRANSPORT COOPERATION

Overview about the current situation:

- **Direct connection between respective VPs**
- **Bundled products with one single contract („train-ticket", oTSO concept)**
- **Bookable with each participating TSO (close to „one-stop-shop")**
- **Currently implemented products:**
  - **Firm and interruptible daily capacity (VTP CR <> GASPOOL) – since 25.11.2010 / 02.05.2011**
  - **Interruptible daily capacity (VTP CR <> NCG) – since 09.05.2011**
  - **No re-nomination rights , nominated as booked**
- **Used capacity allocation procedure: FCFS (until now accepted by the NRAs)**

Enhancing the Cooperation by Eustream

GATRAC
GAS TRANSPORT COOPERATION

Project target:

Implementation of firm and interruptible daily capacity (VTP CR <> VP SK/CEGH) asap.

Project key milestones (already done) for integration of Eustream:

- **Soon after last GRI SSE meeting – Kick-off meeting regarding GATRAC integration of Eustream**
- **Evaluation of legal framework for implementation in SK**
- **Mid of March 2012 - Commercial Agreement between IT provider and Eustream**
- **Implementation:**
  - **February 2012 - Preparation of implementation concept**
  - **End of March 2012 – Agreement on the implementation process**
  - **Beginning of May 2012 – Eustream Front-end implemented**
  - **Beginning of May 2012 – NET4GAS Front-end adjusted**

Enhancing the Cooperation by Eustream

GATRAC
GAS TRANSPORT COOPERATION

Planned key milestones for integration of Eustream:

- **Until end of June 2012– External system testing by NET4GAS, Eustream and IT provider**
- **18.06.2012 – Go live Eustream registration (first part of Eustream front-end functionality; creation of www.gatrac-eustream.com)**
- **26.06.2012 – Joint test session (check of full system functionality)**
- **01.07.2012 – Go live (full operation of the product)**

GATRAC
Development (in discussion)

GATRAC
GAS TRANSPORT COOPERATION

Capacity products *

- **Mid- and long-term contracts, offered as the multiple contract**
- **Within-day contracts, probably as single contract**
- **"Link chain" contracts on FCFS basis**

Capacity allocation procedures *

- **Coordinated cross border auctions**

*** at least in order to meet NC CAM**

3. Capacity allocation and bundled products

- **Pilot Project IV – GATRAC bundled products**
  - » Extension of GATRAC platform to Eustream?
  - » Evolution of GATRAC in the light of CAM NC
  - » Presentation by Net4Gas

12th Stakeholder Group Meeting
GAS REGIONAL INITIATIVE
SOUTH SOUTH-EAST
Vienna, 31/05/2012

EFET

European Federation of Energy Traders

Capacity Allocation in the SSE Region

EFET view on Pilot projects implementation

Riccardo Rossi

riccardo.rossi@eon.com

Capacity Allocation in the SSE Region
EFET view on Pilot projects implementation

Agenda

- EFET view on Capacity Allocation Mechanisms and Congestion Management Procedures
- Pilot projects on capacity allocation in the SSE Region

Capacity Allocation and Congestion Management EFET view

- TSOs either side of an interconnection point should offer fully **consistent** capacity products
- These can be combined into a single **bundled** product but bundling should **not** be **mandated**
- Capacity should be allocated in **long**, **medium** and **short** term durations through auctions
- **Reserve prices** should be harmonised across the EU and it should enable to reveal the value of short-term capacity without distortions
- **Interruptible** capacity should be interrupted on a pro-rata basis

Short term capacity allocation Pilot Project /Snam-TAG

- Entry/exit system, 1 main TSO
- Gas Day 6AM-6AM
- Entry Capacity allocation⇔ import contract in place
- Daily nominations at Entry points at 12 D-1, No renominations rights afterwards
- Market based balancing regime 'end-of day' started in Dec-2011
- ....

- Entry/Exit system from Jan 2013, three main TSOs
- Hourly nominations 0-24
- Historical differentiation between transit VS local market
- Long Term capacity contracts
- Auction based capacity allocation for capacity still available
- ....

→Arnoldstein/Tarvisio is an IP that connect two markets with relevant differences in market design

Short term capacity allocation Pilot Project /Snam-TAG

- Pre-xisting situation
  - Snam: Penalties for entry-capacity overrun allocation
  - TAG: no daily capacity
- Study announced in May 2011, Milan
- Proposal in Dec 2011, Vienna → TAG consultation D-2 vs D-1
- TAG implementation March 2012, T&C not subject to consultation
  - Critical supply situation, penalties suspended
  - DA capacity 'allocated as used'
  - Daily allocation of interruptible capacity, calculated 'D-2'
  - Auction: Entry fee + bid
- AEEG consultation on interim 2012
  - Penalties reintroduced
  - DA capacity 'allocated as used'
  - Capacity price: a + b + c
  - Revenues to primary holders

a) Monthly capacity tariff/days +
b) DA auction result on TAG +
c) (AVG – min) auction price D-7

→ **Coordination needed. It is key to make efforts effective!**

Early 2011
May 2011
Dec 2011
Mar 2012
...
...
Apr 2012
May 2012
What's next?

Short term capacity allocation Pilot Project /GATRAC

Pros

- Overall functioning

Cons

- No renomination rights
- Commodity + Capacity
- Deadline (15:30)
- Sub-account needed (Gaspool)
- (FX rate risk)

Short term capacity services
Pilot Projects

- Early involvement of **market participants** is essential to meet market needs
- **Auction based mechanism** to release daily interruptible and firm capacity is preferred
- The **reserve price** for within-day capacity should facilitate price convergence and be set at the estimate of the short-run marginal cost (SRMC) of providing capacity, ensuring that no distortions are introduced
- **Bundling** of capacity should be an alternative
- Other elements of the **market design** (renominations, balancing regime,...) must be taken into consideration to find the most effective interim solution

Thanks for your attention

European Federation of Energy Traders

Amstelveenseweg 998
1081 JS Amsterdam

Tel: +31 (0)20 5207970
Email: secretariat@efet.org
www.efet.org

4. Enabling Market Integration

- Pilot Project V – Cross Regional Balancing Platform

GRI SSE – 12th SG Meeting

Setup of Balancing Platform
Vienna,
May 31, 2012

Within-day Market: Contract Specifications - BoD

WITHIN-DAY Product: Balance of the Day:

- Object: Physical delivery or receipt of the remaining hours (i.e. Rest of Day) of the respective gas day with consideration of a lead time of 3 hours based on the next full hour to 06:00 am (t or t+1) [t … trading day]
- Gas product type: Base load
- Delivery point: VTP - Austria
- Trading hours: 24/7 (t.b.d)
- Price units: EUR / MWh
- Minimum price increment: 0.025 EUR / MWh
- Minimum trade size: 10 MW / 1 MW
- Single sided nomination by ECC, counter party nomination done by CEGH on behalf of exchange member

Trayport Trader Screens
Market Access for Everybody

Current exchange IT Landscape

XETRA
Spot

eurex
Futures

New exchange IT Landscape

TRAYPORT
Integrated
Spot (+ Within Day) + Futures

Native Trayport connectivity

Trayport Trader Screens
Market Access for Everybody

Native Trayport Exchange Trading System

TRAYPORT

CEGH

wiener börse.at

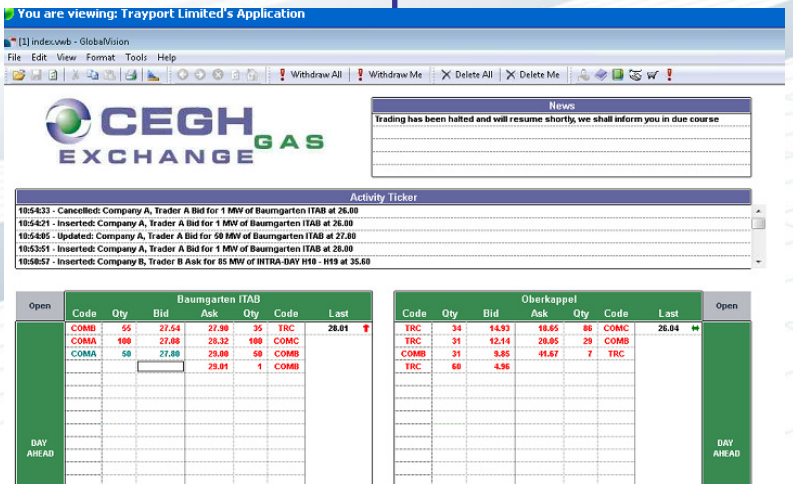
A.) connectivity for trading gateway users

B.) Direct (native) front end for all other customers

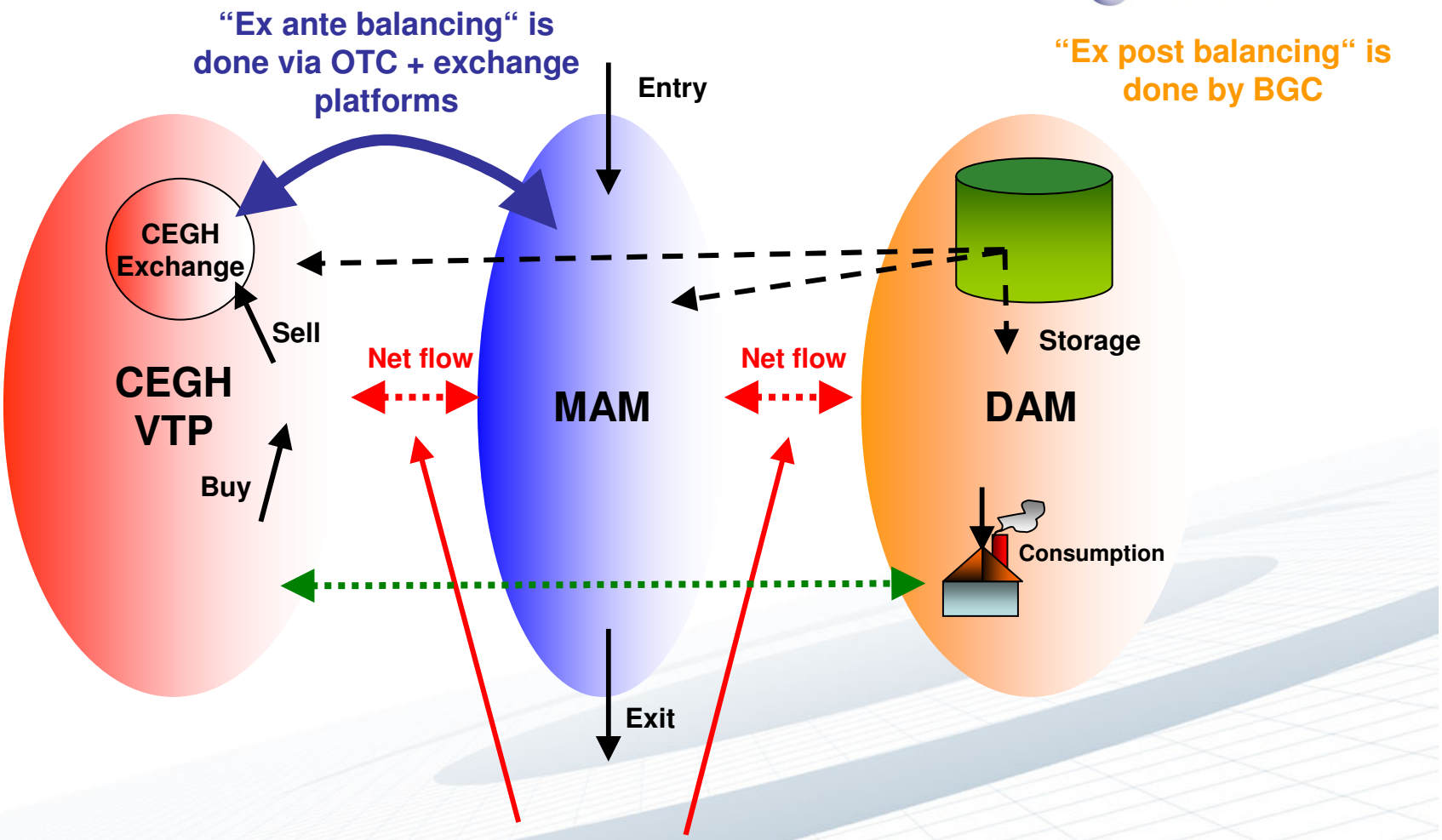
Trading Gateway

TRAYPORT

Menu	Qty	Bid	Ask	Qty
Within Day	60	18,00	19,00	240
Day Ahead	30	18,35	18,65	60
Bal of Week				
Oct-10	30	18,30	18,45	30
Nov-10	30	18,80	19,65	30
Dec-10			20,30	30
Jan-11	30	20,00		
Q410	30	19,00	19,465	30
Q111	30	19,75	20,40	30
Q211				
Q311				
Q411	30	21,30	22,30	30
Q112	30	22,70	23,70	30
Win 10	30	19,40	19,80	30
Sum 11	30	19,40		
Win 11	30	21,996	22,997	30

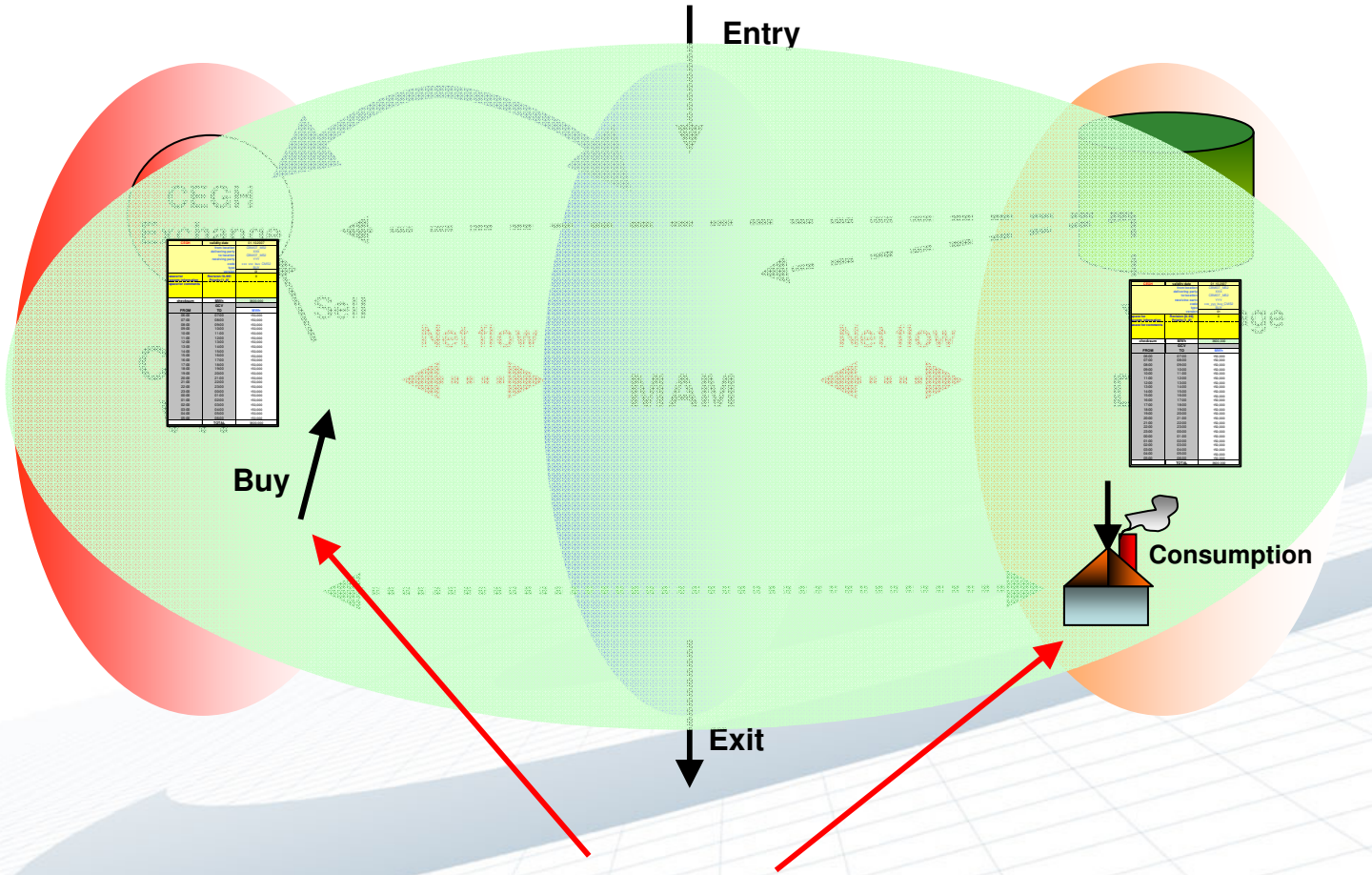


Interaction between operators



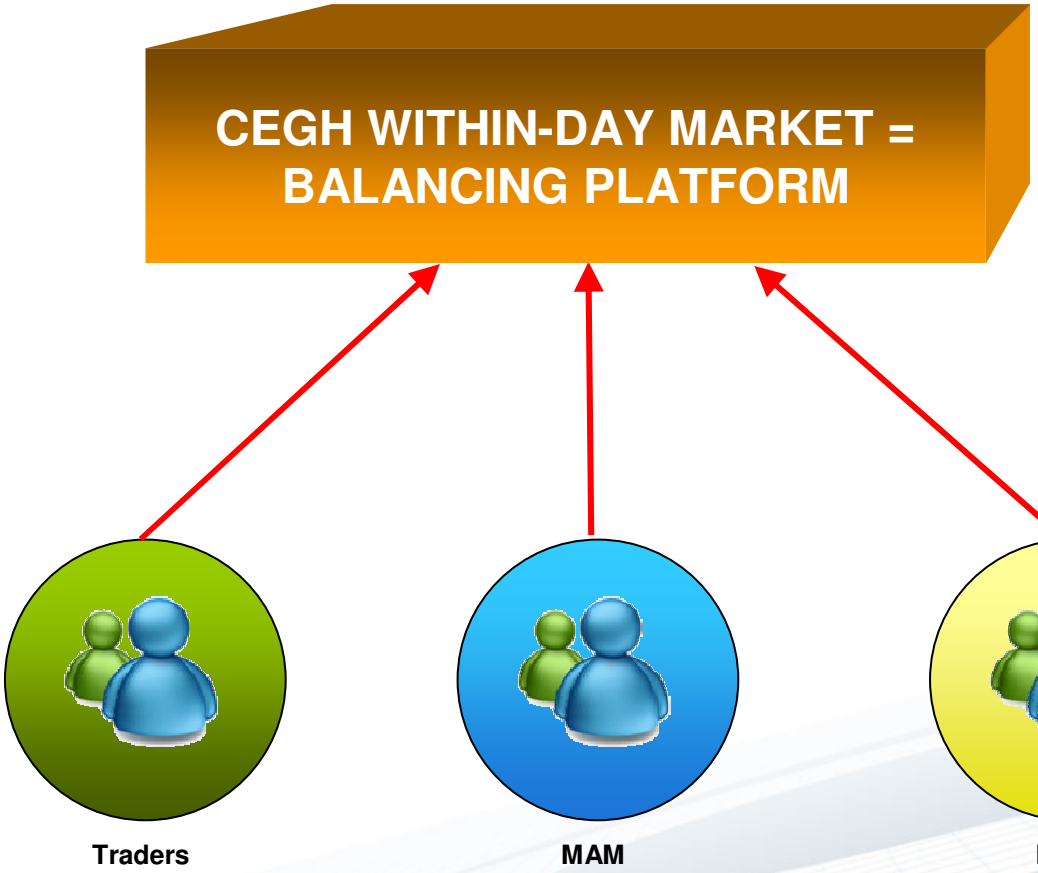
VTP … Virtual Trading Point
MAM … Market Area Manager
DAM … Distribution Area Manager
BGC … Balance Group Coordinator

Simplified + barrier-free access to VTP



Customer only nominates contracted services:
Single combined market model

Price determination for within-day / balancing volumes



Hourly auction, price is determined via the principle of highest executable volumes

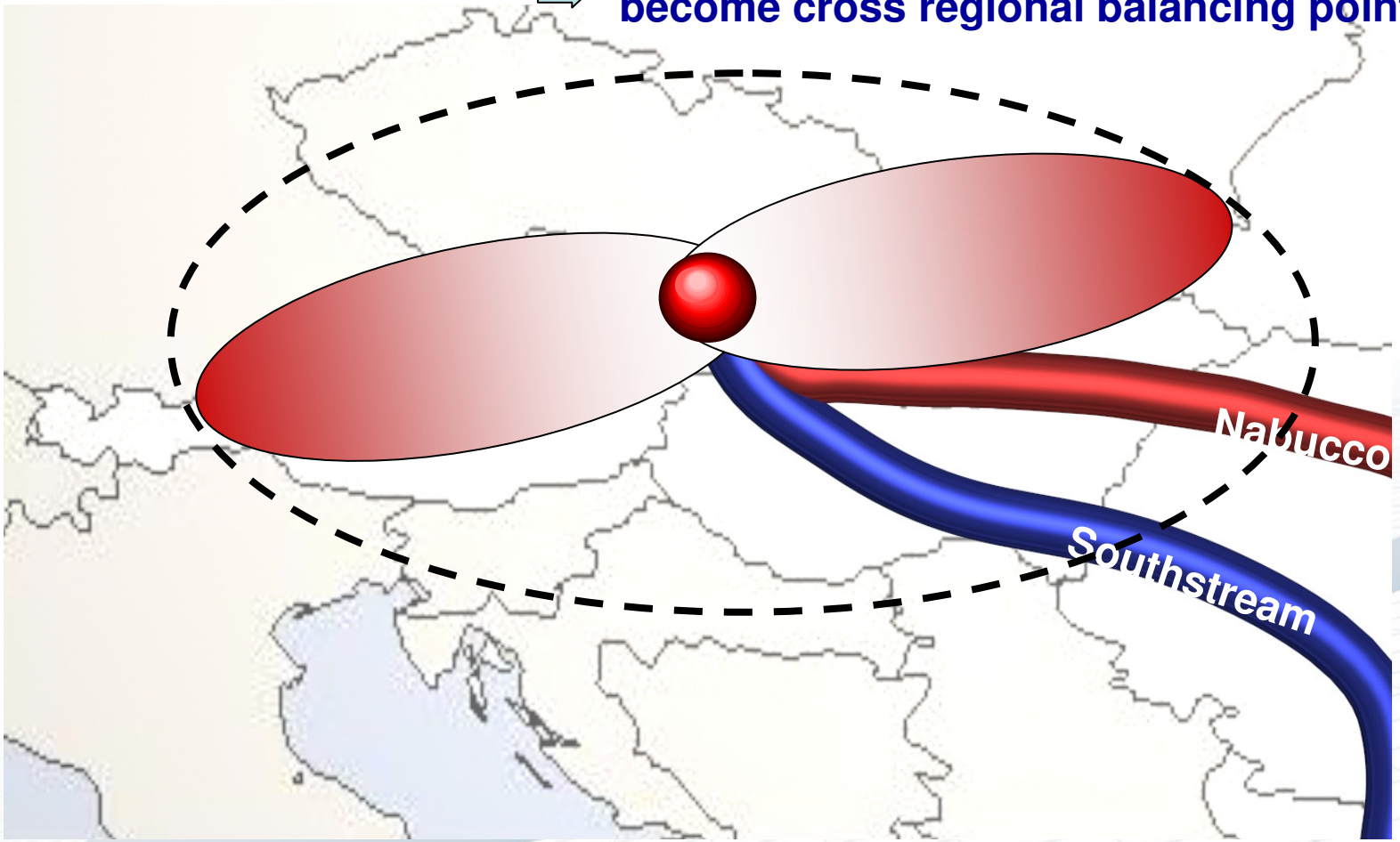
All participants are using the same product on the same platform:
SAME PRICE IN EACH HOUR FOR ALL ORDERS!

Development of regional balancing platform

One stop shop for cross regional trade including virtual trading point Austria

⇨ Serving different zones and systems

⇨ become cross regional balancing point



Thank you very much for your attention

CEGH OTC MARKET GAS

CEGH EXCHANGE GAS

wiener borse.at

4. Enabling Market Integration

- **GTM implementation**
  - » E-Control launched a study analysing the implementation of the measures proposed in the Gas Target Model -> focus on CEE region
  - » Final report to be published shortly

ACER
Agency for the Cooperation of Energy Regulators

4. Enabling Market Integration

- **GTM implementation**
  - » Furthermore, E-Control did conduct a macroeconomic analysis of cross-border market integration
  - » Issues being analysed:
    - Capacity utilization at major European IPs
    - Analysis based on publicly available data supplemented by interviews with the TSOs.
    - Data has been analysed for the year 2011 and depending on data availability for preceding periods.
  - » The study involved the estimation of social welfare and price convergence in selected regions

4. Enabling Market Integration

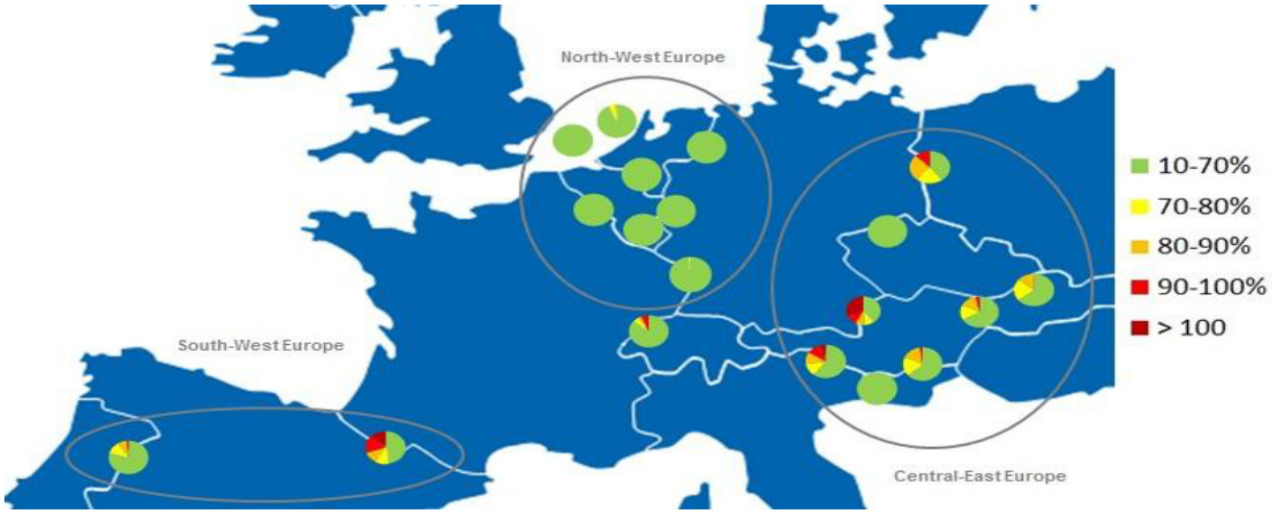


Figure 4: Capacity utilization in Europe in 2011

- Physical capacity utilization is measured by comparing actual physical flows with declared technical capacities on a daily or hourly basis.
- The pie represents the percentage of time of different PCU levels.
- TC are usually calculated for long periods and do not consider short term short term changes in market and network conditions.
- Interruptible capacities are only interrupted at Oberkappel.

4. Enabling Market Integration

Case study of the implementation of a CEE trading region including CZ, SK and AT

- How would the CEE trading region look like from an institutional perspective?
- How would market participants in the CEE trading region collaborate in order to make the trading region work?
- How would a process model for the trading region look like?
  - TSO - shipper processes
  - inter TSO processes
  - TSO - DSO processes
- How could the trading region be integrated with the markets of its neighbouring countries?

4. Enabling Market Integration

Case study of the implementation of a CEE trading region including CZ, SK and AT

- Which legal challenges exist (overview) and what needs to be done to overcome them?
- Which financial challenges exist regarding tariff income of TSOs and how could they be overcome?
- How could an implementation plan look like? (tasks and timing)
- Who needs to collaborate on what in order to implement the trading region?
- What are the critical success factors?
- What are the major challenges?
- What macroeconomic effects are to be expected from the trading region?

➔ Participation in the study is open to all interested stakeholders

5. Infrastructure

- **GRIPS**
  - » Public consultation of GRIPS?

Central-Eastern Europe
Gas Regional Investment Plan
2012-2021

Gas Regional Investment Plan Central-Eastern Europe **2012 - 2021**

Definition of CEE Region

Members:

Austria
- BOG GmbH

Bulgaria
- Bulgartransgaz EAD

Croatia
- Plinacro d.o.o.

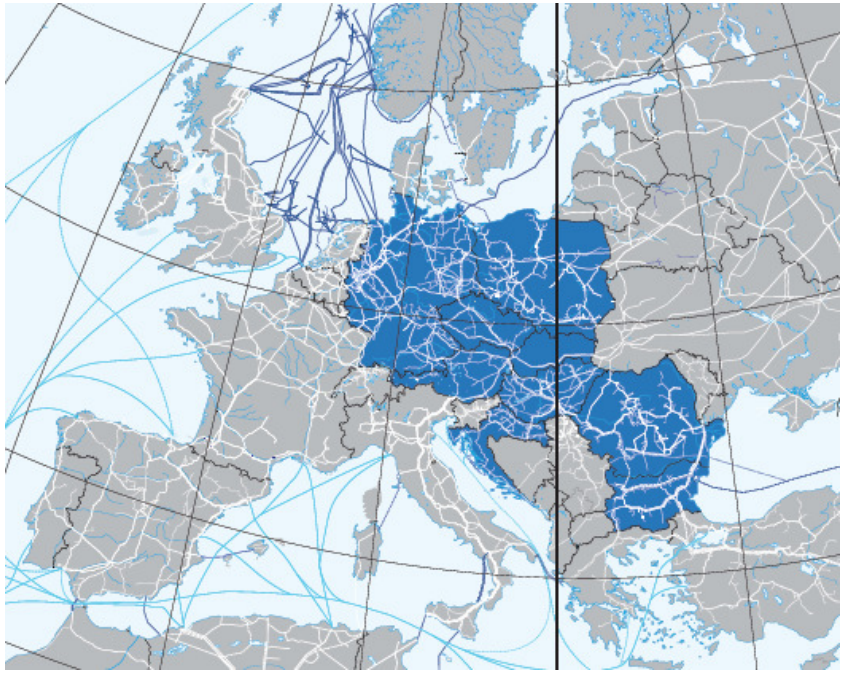
Czech Republic
- NET4GAS, s.r.o.

Hungary
- FGSZ Ltd.

Poland
- GAZ-SYSTEM S.A.

Romania
- Transgaz SA.

Slovakia
- eustream, a.s.

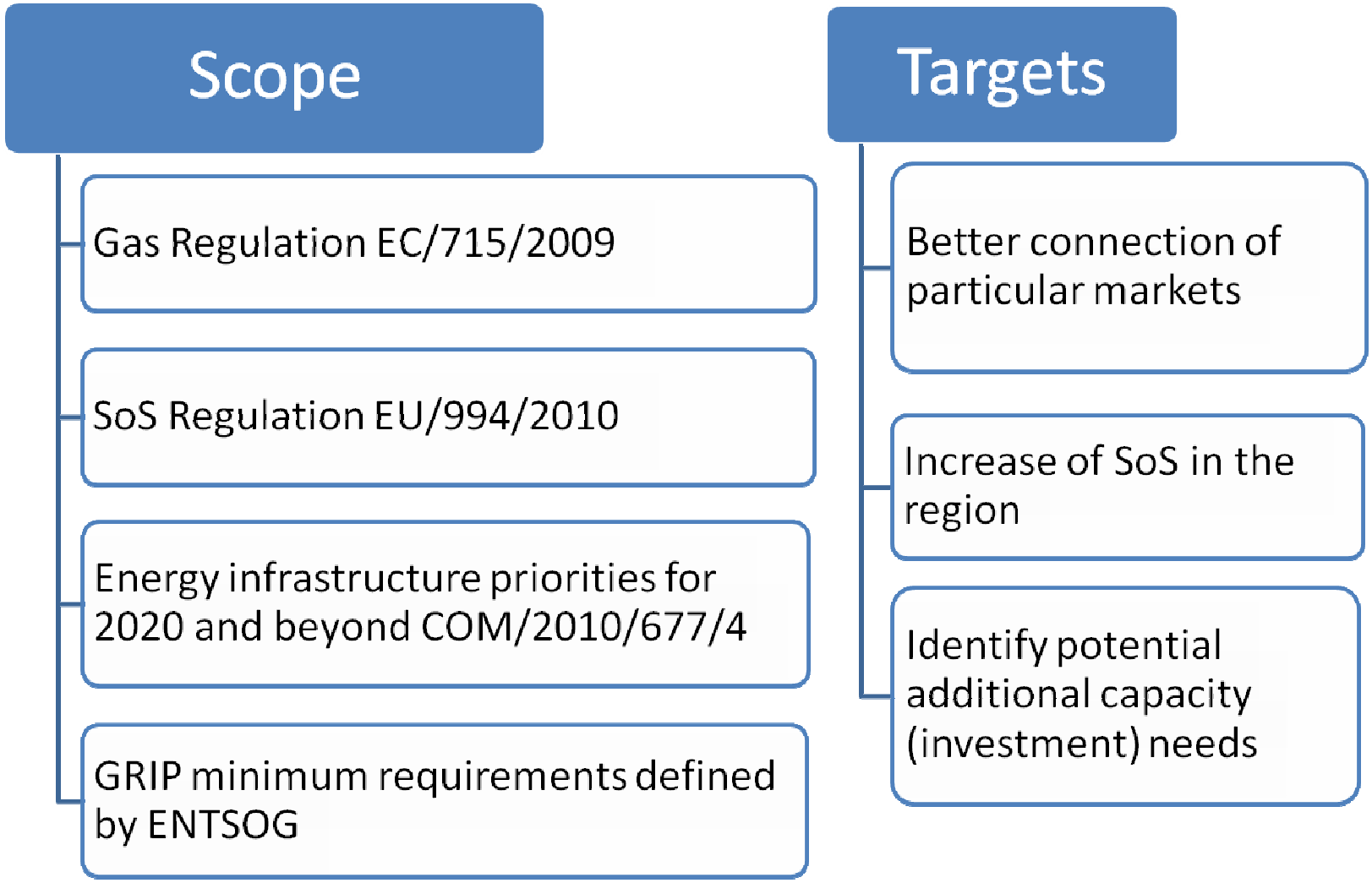


Observing members:

Austria
- Trans Austria Gasleitung GmbH
- GAS CONNECT AUSTRIA GmbH
- Tauerngasleitung GmbH

Germany
- GRTgaz Deutschland GmbH
- ONTRAS – VNG Gastransport GmbH
- Open Grid Europe GmbH
- GASCADE Gastransport GmbH

Scope and Targets of CEE GRIP



CEE GRIP structure

1	• Foreword
2	• Executive Summary
3	• Introduction
4	• Infrastructure Projects
5	• Network Modelling and Resilience Assessment
6	• Demand and Supply
7	• Regional N-1 analysis for CEE countries
8	• Conclusions and Way Forward
9	• Definitions
10	• Abbreviations
11	• Country Codes
12	• Legal Disclaimer

Annex A	• Country /TSO profiles
Annex B	• Infrastructure Projects
Annex C	• Data Tables: Demand and National Production
Annex D	• Data Tables: IPs Capacity

Infrastructure Projects

- Infrastructure project questionnaire based on the ENTSOG TYNDP Infrastructure project questionnaire,
- Data collection from TSOs (directly) and 3rd party project sponsors (through ENTSOG),
- The information reflects the situation in September 2011.

Project categories:

- Division into FID and non-FID projects; further the projects are divided by the type of infrastructure (transmission, storage, LNG and others),
- The capacities show only additional compared to the current state.

Network Modelling and Resilience Assessment I.

- Network model
  - ENTSOG model was used,
  - Three years were modelled, i.e. 2012, 2016 and 2021.
- Scenarios
  1. Reference Scenarios

     → standard supplies - no disruptions, average and peak demand,

  2. Disruption Scenarios

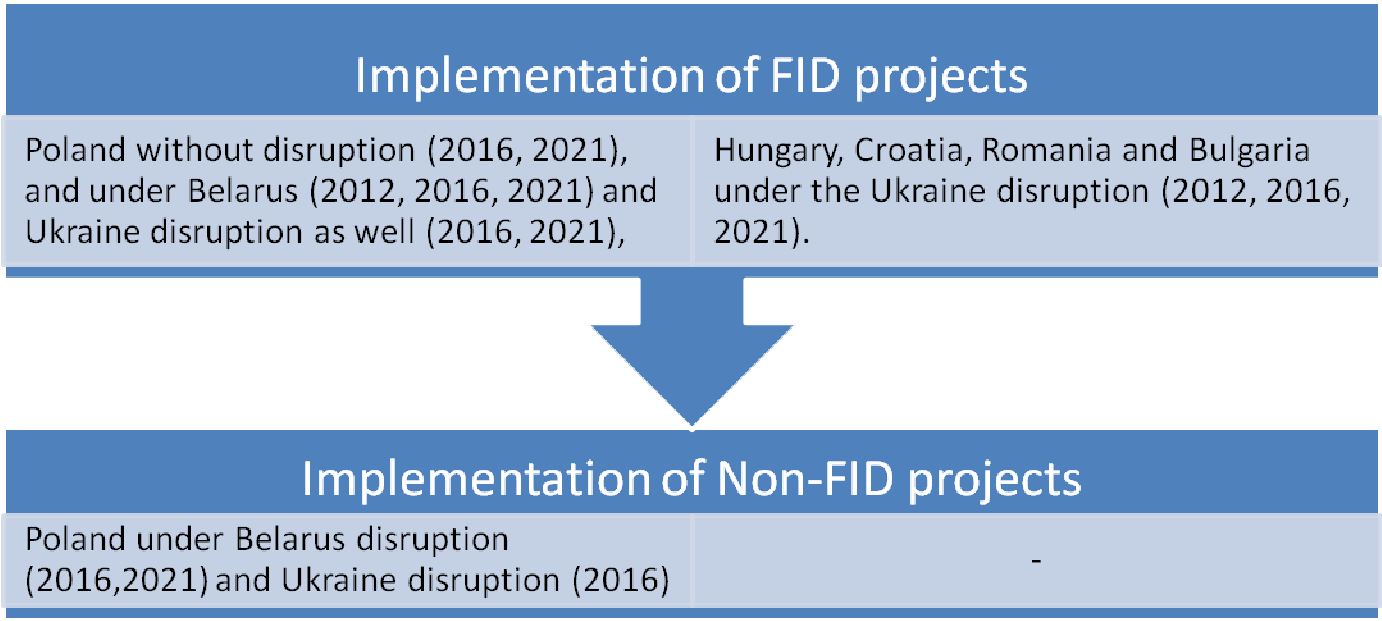
     → security of supply - transit disruption of Russian imports via Ukraine, via Belarus and via Ukraine and Belarus simultaneously, peak demand,

  3. Market Integration Scenarios

     → no disruption, average demand, supply predominance: No predominance, Max RU and Min RU).

Network Modelling and Resilience Assessment II.

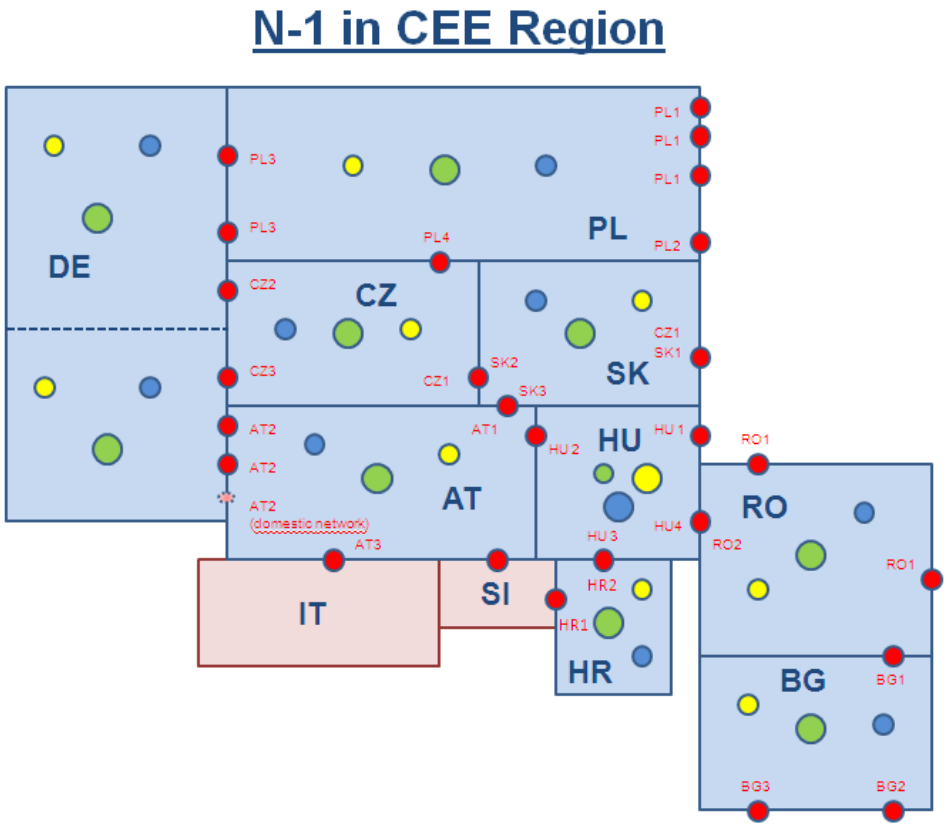
- Results
  - Identification of the investment gaps consistent with those mentioned in the ENTSOG TYNDP 2011-2020,
  - Improving of the overall situation over the 10-year range (implementation of the FID projects and non-FID projects),
  - Countries that will not have enough capacity to achieve full supply-demand balance under Peak Daily Demand conditions:



Regional N-1 analysis for CEE countries I.

- Regional N-1 analysis is based on the capacities at IPs and resulting residual capacities for neighbouring countries through Supply Corridors within the region,
- The analysis was prepared for the winter (1.10.2012 - 31.3.2013) and summer period (1.4.2012 - 30.9.2012).

Main Supply Corridors:
AT1, BG1, CZ1, HR1, HU1,
PL1, RO1, SK1
2nd Supply Corridors:
AT2, BG2, CZ2, HR2, HU2,
PL2, RO2, SK2
3rd Supply Corridors:
AT3, BG3, CZ3, HU3, PL3, SK3
4th Supply Corridors:
HU4, PL4



Regional N-1 analysis for CEE countries II.

Belarus Disruption

- Winter period:
  - Problem indentified only in Poland.

Country	N-1 WINTER
Austria	5.08
Bulgaria	no effect
Croatia	1.89
Czech Republic	2.54
Hungary	1.77
Poland	0.89
Romania	no effect
Slovak Republic	1.32

- Summer period
  - Poland - potential problem to inject into UGS facilities (only if the disruption will last more than 117 days).

Ukraine Disruption

- Winter period:
  - Gap indentified in Bulgaria and Romania

Country	N-1 WINTER
Austria	2.11
Bulgaria	0.86
Croatia	1.26
Czech Republic	1.52
Hungary	1.15
Poland	1.08
Romania	0.87
Slovak Republic	1.89

- Summer period
  - Potential problems to inject into UGS facilities in Austria and Hungary (only if the disruption will last more than 152 and 106 days respectively).

Conclusions and Way Forward

- The overall supply demand balance improves over the 10-year range owing to the FID projects to be implemented.
- However there are still two sub-regions that will not have enough capacity (including all FID projects) to achieve full supply demand balance under Peak Daily Demand conditions, which are:
  - Poland without disruption, and under Belarus and Ukraine disruption,
  - Hungary, Croatia, Romania and Bulgaria under the Ukraine disruption.
- Nevertheless the problems and gaps identified by this assessment could be removed by non-FID projects listed in CEE GRIP 2012-2021 with the exemption of Poland under Belarus disruption and Ukraine disruption mainly occuring in mid-2010s.
- The overall analysis of the CEE GRIP also confirmed the need to develop transmission systems in North-South direction to complete N-S corridor in the CEE region.

Thank you for your attention

CEE GRIP

c/o NET4GAS, s.r.o.
Na Hřebenech II 1718/8
140 21 Praha 4
Czech Republic
EML: ceegrip@net4gas.cz

SOUTHERN CORRIDOR
GAS REGIONAL INVESTMENT PLAN

Presentation to the

GRI SSE meeting

Vienna, 31 May 2012

Joseph Florentin

DESFA

Hellenic Gas Transmission System Operator S.A.

WITHIN THE JURISDICTION OF THE MINISTRY OF ENVIRONMENT, ENERGY & CLIMATE CHANGE

MINISTRY OF ENVIRONMENT ENERGY & CLIMATE CHANGE

Source of Development, Supplier of Energy

Contents

- Southern Corridor Region Countries
- TSOs & 3rd Party Sponsors
- Scope of the GRIP
- Methodology
- Questionnaire TSO Projects
- Questionnaire 3rd Party Projects
- TSOs' projects data
- Third Party projects data
- Main characteristics of region and projects
- Projects by country and type
- SC GRIP: the way forward

DESFA
Hellenic Gas Transmission System Operator S.A.

WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

MINISTRY OF ENVIRONMENT ENERGY & CLIMATE CHANGE

Southern Corridor Countries

- AT Austria
- BG Bulgaria
- GR Greece
- HR Croatia (observer)
- HU Hungary
- IT Italy
- RO Romania
- SI Slovenia
- SK Slovakia

DESFA
Hellenic Gas Transmission System Operator S.A.

WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

MINISTRY OF ENVIRONMENT ENERGY & CLIMATE CHANGE

Southern Corridor Region TSOs

Austria		BOG Baumgarten-Oberkappel Gasleitungsgesellschaft GmbH
	GAS CONNECT AUSTRIA	GAS CONNECT AUSTRIA GmbH
	TAG Trans Austria Gasleitung GmbH	TAG GmbH (Trans Austria Gasleitung GmbH)
Bulgaria	BULGARTRANSGAZ	Bulgartransgaz EAD
Greece	DESFA Hellenic Gas Transmission System Operator	DESFA S.A. Hellenic Gas Transmission System Operator S.A.
Hungary	NATURAL GAS TRANSMISSION MEMBER OF THE MOL GROUP	FGSZ Natural Gas Transmission Ltd.

Italy	EDISON Edison Stoccaggio Spa	Edison Stoccaggio S.p.A.
	SNAM RETE GAS	Snam Rete Gas S.p.A.
Romania	TRANSGAZ MAGISTRALA ENERGIEI	Transgaz S.A.
Slovakia	eustream	eustream, a.s.
Slovenia	Plinovodi	Plinovodi d.o.o.

observer

Croatia	plinacro L.T.D GAS TRANSMISSION SYSTEM OPERATOR	Plinacro L.T.D Gas Transmission System Operator

Southern Corridor Third Party Sponsors

Project:	SPONSOR:	
Nabucco	NABUCCO GAS PIPELINE	Nabucco Gas Pipeline International GmbH
ITGI	IGI Poseidon	IGI Poseidon S.A.
TAP	TAP Trans Adriatic Pipeline	Trans Adriatic Pipeline AG
South Stream	South Stream Europe's Energy Security	Gazprom, Eni, EdF and 5 J/V between Gazprom and local TSOs
IGB	IGI Poseidon / Bulgarian Energy Holding	ICGB A.D.
Tauerngasleitung Gas Pipeline Project (TGL)	tgl Tauerngasleitung	Tauerngasleitung GmbH
Adria LNG	ADRIA LNG	Adria LNG d.o.o.

Scope of the GRIP

- **REGULATION (EC) No 715/2009, Art. 12 para. 1**:

"TSOs shall establish regional cooperation within the ENTSO for Gas … In particular they shall publish a regional investment plan every two years, and may take investment decisions based on that regional investment plan."

- **Purpose:**

GRIPs should :

  - help identify potential additional capacity (investment) gaps as well as the need for an enhanced analysis of bi-directional flows at IPs linked to SoS investments.
  - Provide the market with a valuable outlook of the future energy investments in the region, consistently with the ENTSOG TYNDP.

GRIPs do not :

  - Evaluate, assess, rank or propose projects

Methodology 1

- Only projects of regional relevance have been included in the SC GRIP
- The projects included have been either:
  - selected by the TSOs
  - included in the TYNDP
  - proposed by 3rd parties with the agreement of one or more TSOs
- All project data have been collected or updated with dedicated questionnaires, one for TSO projects and one for 3rd party projects
- No supply & demand modeling was carried out in this first issue of the SC GRIP
- The GRIP depicts the situation on the 1st December 2011

Methodology

- Projects have been clustered according to two criteria:

- FID
  - Projects with Final Investment Decision already taken (FID projects)
  - Projects that have not reached the FID state (non-FID projects)

- Sponsors
  - Projects sponsored by the TSOs of the Region
  - Projects sponsored by third parties

Questionnaire – TSO projects

- General Information
  - Types of projects (Pipeline, Storage, LNG, Compressor, CNG)
  - List of projects (FID status, Commissioning, Remarks)
  - Expected costs
- Technical Information
  - Total length of pipes
  - Diametre range
  - Technical capacity
  - Interconnections with other gas infrastructures
- Time Schedule
- Expected benefits
- Intergovernmental Agreements
- Financing Structure

Questionnaire – 3rd Party Projects

- General Information
  - Name of project
  - Type of project
  - Sponsors and their share
  - Project website
- Technical Information
  - Length of pipe / Diametre
  - Capacity / Load factor
  - Power of Compressor Stations
  - Interconnection with other gas infrastructures
- Time Schedule
  - Probable date of commissioning and other milestones
  - Project development phase reached
  - IGA, FEED, Long Lead Items tender

Questionnaire - 3rd Party Projects

- TEN-E Project Information
  - Is project part of TEN-E? / Category
  - Financing requested / received
- Expected Benefits
- TPA Regime
- (Expected Gas Sourcing)
- Inter-governmental Agreements
- Financing Structure

TSOs projects data

- **Number of FID projects 17**
  - Transmission 13 of which P/L 12 C/S 1
  - Underground Storage 3
  - LNG 1
- **Number of non-FID projects 34**
  - Transmission 26 of which P/L 23 C/S 3
  - Underground Storage 6
  - LNG 1
  - CNG 1
- **Total Pipeline length: 4.270 km**
- **Total Compressor capacity: 75 - 115 MW**
- **Total UG Storage w. volume: 6.000 mcm**
- **Total LNG capacity*: 6 – 8 bcm/y**

***In cases of upgrading only the differential capacity has been considered**

DESFA
Hellenic Gas Transmission System Operator S.A.

WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

MINISTRY OF ENVIRONMENT ENERGY & CLIMATE CHANGE

Third Party projects data

- **Number of FID projects**
  - Underground Storage 1
- **Number of non-FID projects**
  - Transmission (pipeline incl. C/S) 7
  - LNG 1
- **Total Pipeline length:**
  - **Onshore: 7.245 – 8.045 km**
  - **Offshore: 1.150 km**
- **Total Compressor capacity: 2.085 – 2.380 MW**
- **Total UG Storage w. volume: 1.600 mcm**
- **Total LNG capacity:**
  - **Storage 390.000 – 585.000 cm**
  - **Sendout 10 – 15 bcm/y**

DESFA
Hellenic Gas Transmission System Operator S.A.

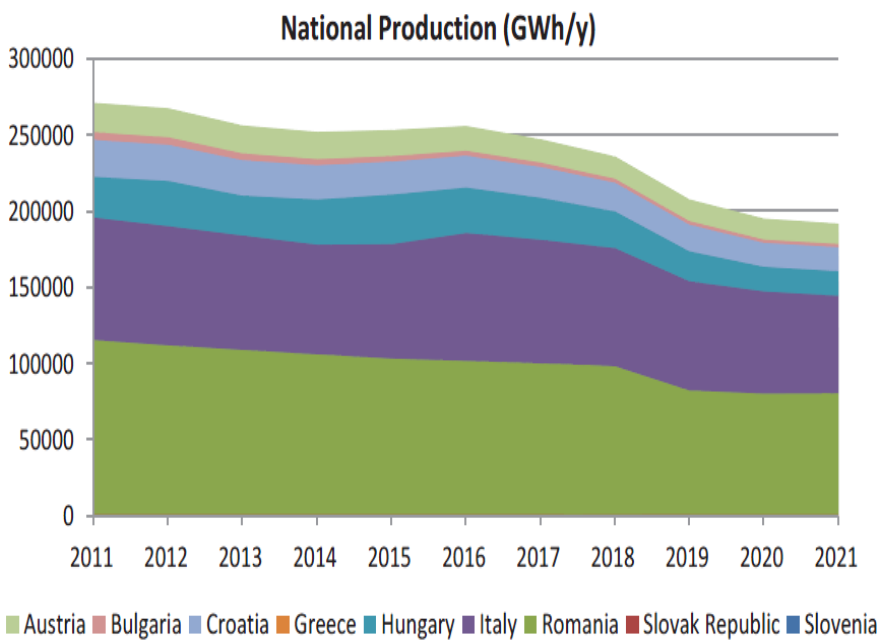
WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

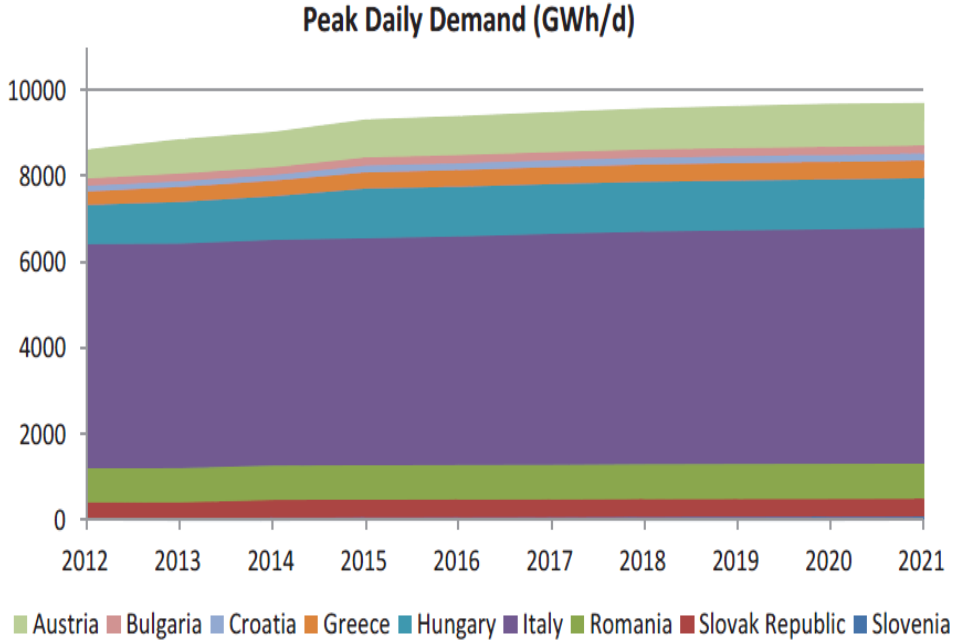
MINISTRY OF ENVIRONMENT ENERGY & CLIMATE CHANGE

Main characteristics of the region

- One of the most diverse regions regarding natural gas:
  - Countries with substantial production vs. countries relying on imports
  - Countries that joined the EC in 1957 vs. those that did so 50 years later
  - Important transit countries vs. those with no transit function
  - Countries with old gas industry vs. those that imported gas only in the 90's
- Most of the countries are concerned by the projects for gas transportation from Central Asia and possibly the M. East to Europe
- National production is expected to decline in absolute terms and as a percentage of regional demand from 18% in 2012 to 11% in 2021
- Daily peak demand is expected to grow as a result of both the increase in penetration in the residential sector (still low in SE Europe) and the increasing use of RES which will increase the intermittency of the gas-fired power stations use

National Production vs. Peak Daily Demand





DESFA
Hellenic Gas Transmission System Operator S.A.

WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

MINISTRY OF ENVIRONMENT ENERGY & CLIMATE CHANGE

Main characteristics of the projects

- Importance of 3rd party sponsored projects for transit of Eastern gas to Europe, many of them in competition with each other

- Many bi-directional, interconnection and reverse flow projects that will enhance market integration and security of supply.

- Projects creating new entry points in the region and providing flexibility

Projects by Country and Type

Austria

- **FID**
  - **A1 WAG expansion** **to 5,5 mcm/d** **2013**
  - **A2 TAG reverse flow** **37,5 mcm/d** **2011**

DESFA
Hellenic Gas Transmission System Operator S.A.

WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

MINISTRY OF ENVIRONMENT ENERGY & CLIMATE CHANGE

Projects by Country and Type

Bulgaria

- **FID**
  - B2 BG<->RO Interconnection 0,5-1,5 bcm/y 2012
- **Non FID**
  - B3 TR<->BG Interconnection 3 bcm/y 2013
    5,5-9 bcm/y 2017
  - Increase of transmission capacity to Greece 2016
  - B4 Offshore storage facility 600 mcm 2018
  - B5 UGS Chiren upgrade 450 -> 1.000 mcm 2017
  - B1 Varna CNG terminal 0,85 bcm/y 2015
    2,5 bcm/y 2017

DESFA
Hellenic Gas Transmission System Operator S.A.

WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

MINISTRY OF ENVIRONMENT ENERGY & CLIMATE CHANGE

Projects by Country and Type

Croatia

- **Non FID**
  - **C1 Floating LNG Regas. Vessel 1-2 to 4-6 bcm/y n/a**
  - **C2 LNG connection P/L 15 bcm/y n/a**
  - **C3 HR->SI Regional Interconnector 5 bcm/y n/a**
  - **C4 Offshore P/L to Italy 15 bcm/y n/a**
  - **C5 East West Transit P/L 3,5-10 bcm/y n/a**

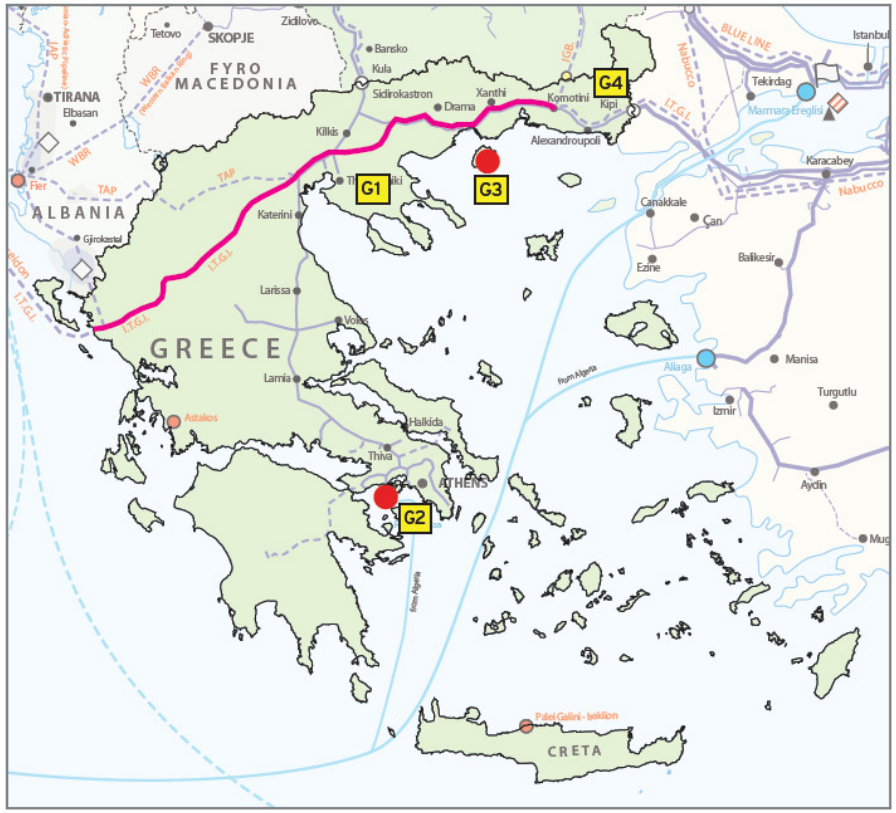
DESFA
Hellenic Gas Transmission System Operator S.A.

WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

Projects by Country and Type

Greece

- **FID**
  - **G2 2nd Upgrade of LNG terminal 0,5-1,5 bcm/y 2016**
    - **Storage capacity (3rd tank) 130 -> 225 th. cm**
    - **Send-out capacity 13,9 -> 19,5 mcm/d**
- **Non FID**
  - **G1 Onshore part of IGI P/L 16 bcm/y 2016**
  - **G3 UGS South Kavala 360 mcm – 720 mcm/y n/a**
  - **G4 Compressor station (C/S) at TR/GR border 29 MW 2018**



DESFA
Hellenic Gas Transmission System Operator S.A.

WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

MINISTRY OF ENVIRONMENT ENERGY & CLIMATE CHANGE

Projects by Country and Type

Hungary

- **Non FID**
  - H1 — Sections of an — 1,7-5 bcm/y — 2015
  - ~~H2~~ — interconnection — 7-11 bcm/y — 2014-17
  - ~~H3~~ — with Slovakia — 5 bcm/y — 2017
  - H4 RO->HU Reverse flow — 1,75 bcm/y — 2015
  - H5 HU<->SI Interconnection — 1,25 bcm/y — 2017

DESFA
Hellenic Gas Transmission System Operator S.A.

WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

Italy 1/2

Projects by Country and Type

- **FID**

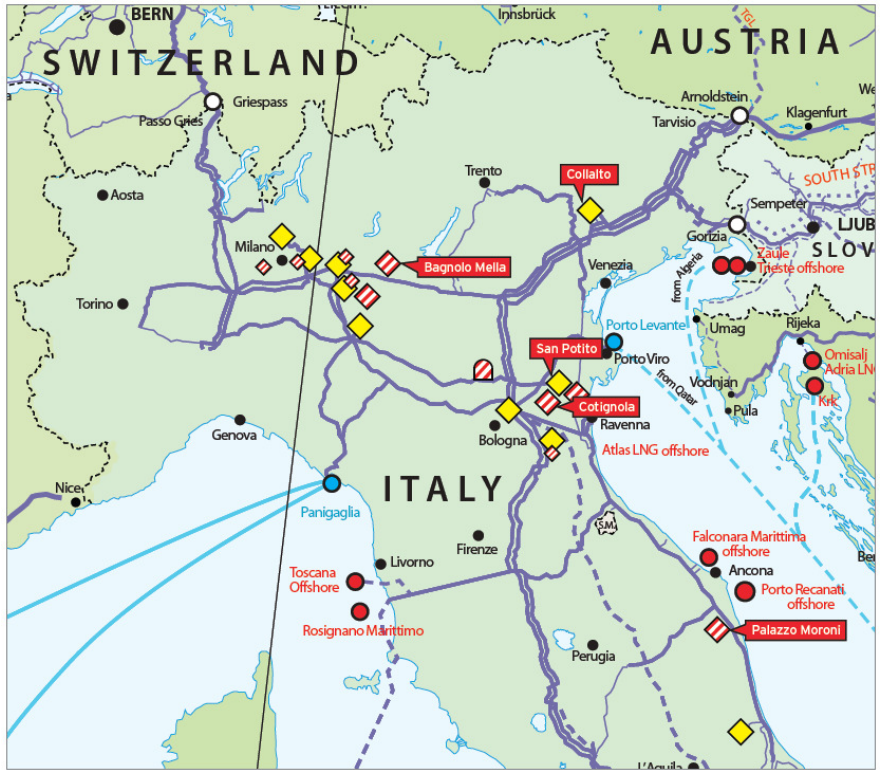
○ I1-2 Rete Adriatica	23,7 mcm/d (includes non-FID parts)	n/a
○ I3 AT->IT Tarvisio Reverse Flow	8,5-17,1 mcm/d (in 2 phases)	2011

DESFA
Hellenic Gas Transmission System Operator S.A.

WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

MINISTRY OF ENVIRONMENT ENERGY & CLIMATE CHANGE

Projects by Country and Type Italy 2/2



- **FID**
  - I4 Enhancement & new development
  - of various UGS 10.000 -> 12.800 mcm n/a
  - I5 UGS San Potito & Cotignola 840 mcm 2013
  - I6 UGS Collalto 550 mcm 2011

- **Non FID**
  - I7 UGS Palazzo Moroni 65 mcm 2014
  - I8 UGS Bagnolo Mella 80 mcm 2016

DESFA
Hellenic Gas Transmission System Operator S.A.

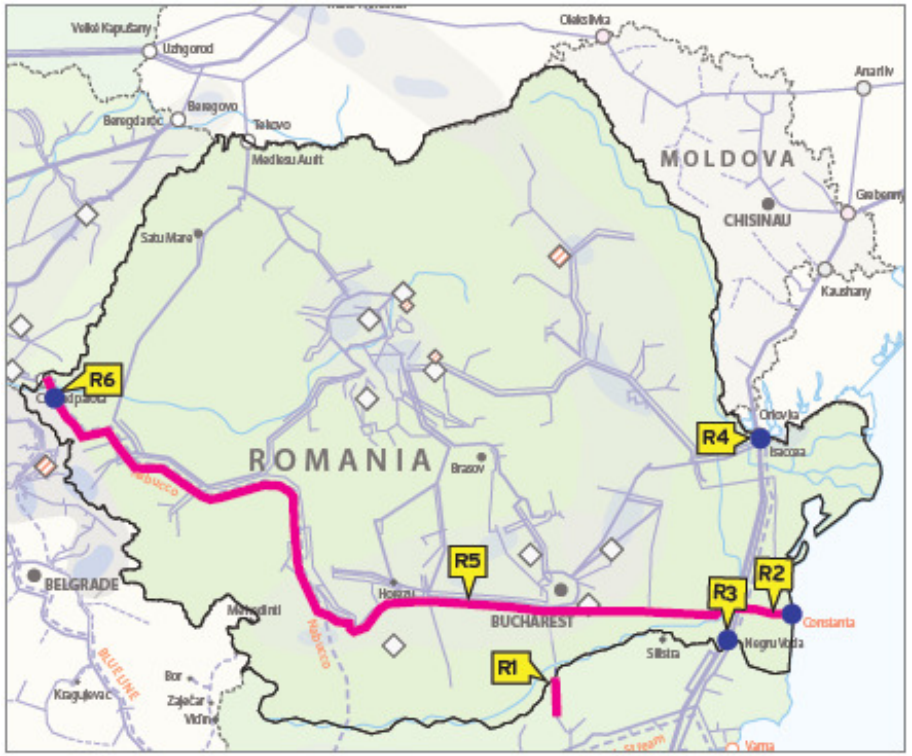
WITHIN THE JURISDICTION OF THE MINISTRY OF ENVIRONMENT ENERGY & CLIMATE CHANGE

MINISTRY OF ENVIRONMENT ENERGY & CLIMATE CHANGE

Projects by Country and Type

Romania

- **FID**
  - **R1 BG<->RO Interconnection 0,5-1,5 bcm/y 2012**
  - **R3 RO->BG Reverse flow**
    BMS Negru Vodă 5,3 bcm/y 2012
- **Non FID**
  - **R2 P/L to Constanța LNG terminal 3 bcm/y 2015**
  - **R4 UA->RO Reverse Flow Isaccea 5,3 bcm/y**
  - **R5 East – West P/L 8 bcm/y n/a**
    (depending on LNG terminal construction)
  - **R6 HU->RO Interconnector**
    Reverse flow 1,75 bcm/y 2013



DESFA
Hellenic Gas Transmission System Operator S.A.

WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

Projects by Country and Type

Slovakia

- **FID**
  - **SK1 SK<->HU Interconnection 13,8 mcm/d 2015**
  - **SK3 Network modernisation & upgrade - 2010-16**
  - **SK4 UGS connection P/L - 2011**
  - **SK5 SK->CZ Reverse flow 23,3 mcm/d 2017**
- **Non FID**
  - **SK2 SK<->PL Interconnection 13,7 mcm/d 2013**

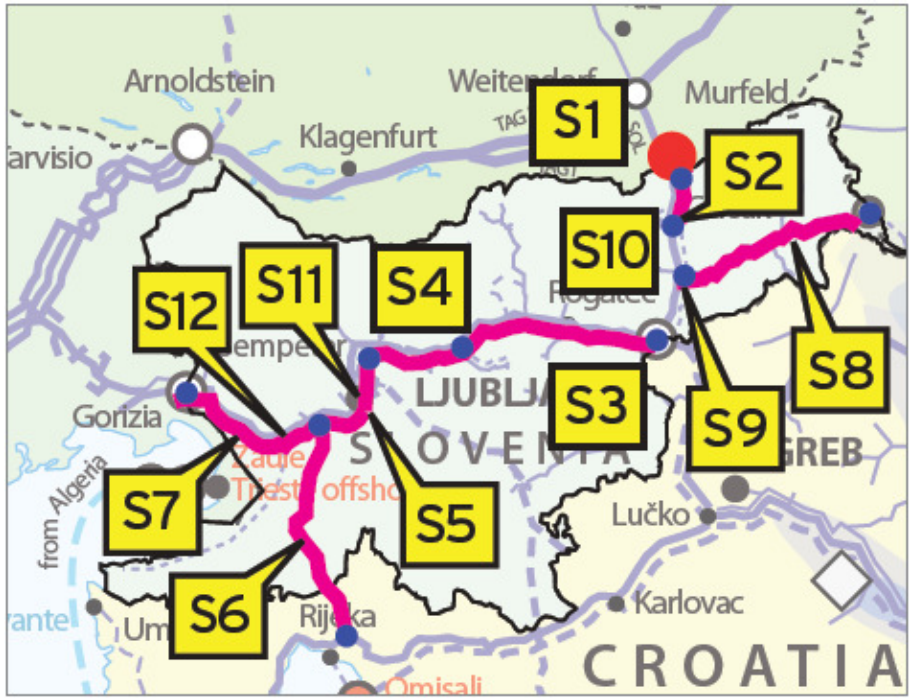
DESFA
Hellenic Gas Transmission System Operator S.A.

WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

Projects by Country and Type

Slovenia

- **FID**
  - S2 AT->SI P/L capacity increase 2,5 -> 8,4 bcm/y 2012
  - S3 P/L capacity increase by 5,1 bcm/y 2014
  - S4 P/L capacity increase by 5,1 bcm/y 2014
  - S9 C/S linked to above projects n/a
- **Non FID**
  - S1 AT->SI Xing capacity increase 2,5 -> 8,4 bcm/y n/a
  - S5 P/L capacity increase 3,4 bcm/y n/a
  - S6 HR->SI Interconnection 12,8 bcm/y n/a
  - S7 Reconstruction of P/L to Italy - n/a
  - S8 HU<->SI Interconnection 3,1 bcm/d n/a
  - S10 C/S (S9) extension (3rd unit) - n/a
  - S11 C/S Ajdovščina - n/a
  - S12 P/L capacity increase 10 bcm/y n/a



DESFA
Hellenic Gas Transmission System Operator S.A.

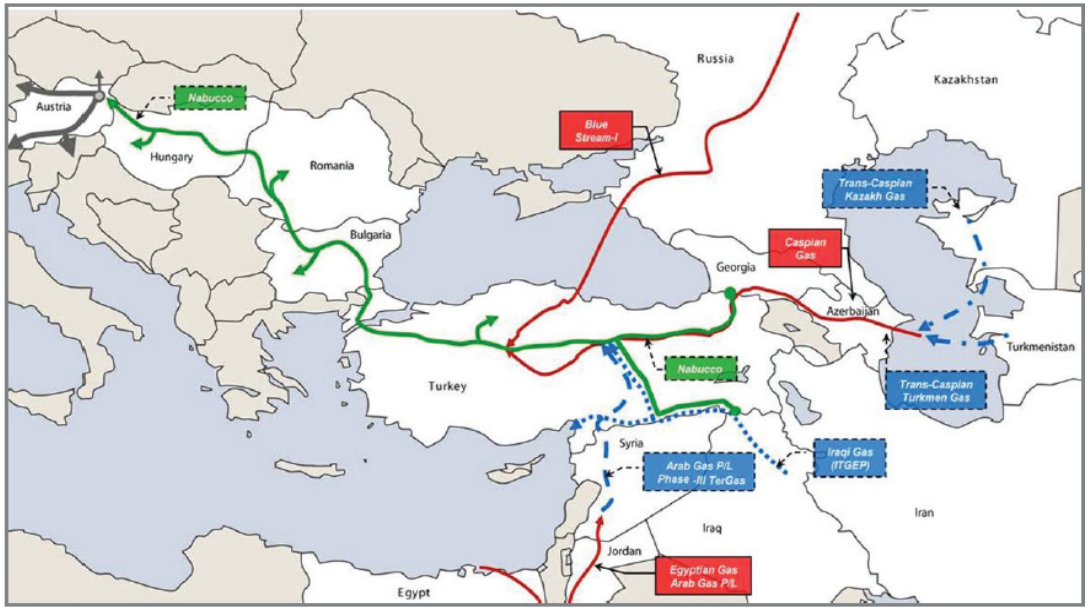
WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

Nabucco

Key data

Sponsors

OMV, RWE, FGSZ, Transgaz, BEH, BOTAŞ



Non-FID

- **Length:** ~ 4.000 km
- **Capacity:** 31 bcm/y
- **Commissioning:** 2015
- **FID:** end 2012
- **TPA exemption: granted up to 15 bcm/y**
- **Present stage: design & permitting in advanced stage**

DESFA
Hellenic Gas Transmission System Operator S.A.

WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

MINISTRY OF ENVIRONMENT ENERGY & CLIMATE CHANGE

Poseidon project

Sponsors: DEPA, Edison

Non-FID

- **Length: 210 km**
- **Capacity: ~10 bcm/y**
- **Commissioning: 2017**
- **FID: 2012**
- **TPA exemption: granted up to ~8 bcm/y**
- **Present stage:**
  - **FEED : ongoing**
  - **Italian EIA approval: obtained 5/2011**
  - **Greek EIA approval: preliminary obtained 9/2010**
    final ESIA under preparation

Key data

DESFA
Hellenic Gas Transmission System Operator S.A.

WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

Trans Adriatic Pipeline project

Key data

Non-FID

Sponsors: EGL, Statoil, Eon

- **Length:** ~800 km
- **Capacity:** 10 bcm/y, expandable to 20 bcm/y
- **Commissioning:** 2017
- **FID:** depending on SD II agreement and after TPA exemption
- **TPA exemption:** application submitted in 8/2011
- **Present stage:** Design & Permitting and Stakeholder consultation in progress, ESIA submission 5-6/2011

DESFA
Hellenic Gas Transmission System Operator S.A.

WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

MINISTRY OF ENVIRONMENT ENERGY & CLIMATE CHANGE

South Stream project
Key data

Sponsors:

Offshore

Gazprom, Eni, EdF, Wintershall

Onshore

7 J/Vs between Gazprom & local TSOs

Non-FID

- **FID:** 2012
- **Length:** 940 km offshore, 1.975 to 2.275 km onshore depending on route alternative
- **Capacity:** 58,7 bcm/y (entry of onshore part), 19-20 bcm/y (exit to IT and/or AT)
- **Commissioning:** end 2015
- **TPA exemption:** applications to be submitted
- **Present stage:** feasibility study completed in 2011

DESFA
Hellenic Gas Transmission System Operator S.A.

WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

MINISTRY OF ENVIRONMENT ENERGY & CLIMATE CHANGE

IGB project

Sponsors:

IGI Poseidon and

Bulgarian Energy Holding

Non-FID

- **Length: ~180 km**
- **Capacity: 3 – 5 bcm/y**
- **Commissioning: 2014**
- **FID: 2012**
- **TPA exemption: Market test procedure to be agreed with NRAs**
- **Present stage: Basic design and ESIA in progress.**

  Prequalification of pipe suppliers completed

Key data

DESFA
Hellenic Gas Transmission System Operator S.A.

WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

MINISTRY OF ENVIRONMENT ENERGY & CLIMATE CHANGE

TGL project

Key data

Sponsors:

Eon Ruhrgas (~48%) and
5 local gas companies

Non-FID

- **Length: 290 km**
- **Capacity: 11,4 bcm/y**
- **Commissioning: 2017**
- **FID: 2012**
- **TPA exemption: No application has been submitted yet**
- **Present stage: Design and Permitting in progress**

DESFA
Hellenic Gas Transmission System Operator S.A.

WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

Adria LNG terminal

Key data

Sponsors:

Eon Ruhrgas, OMV, Total, Geoplin

Non-FID

- **Storage: 1st phase 390 th m³**
  2nd phase 585 th m³
- **Send-out: 1st phase 1,55 mcm/d**
  2nd phase 2,34 mcm/d
- **Commissioning: ≥ 2017**
- **FID: ≥ 2013**
- **TPA exemption: No application has been submitted yet**
- **Present stage: Design & Permitting in advanced stage**

DESFA
Hellenic Gas Transmission System Operator S.A.

WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

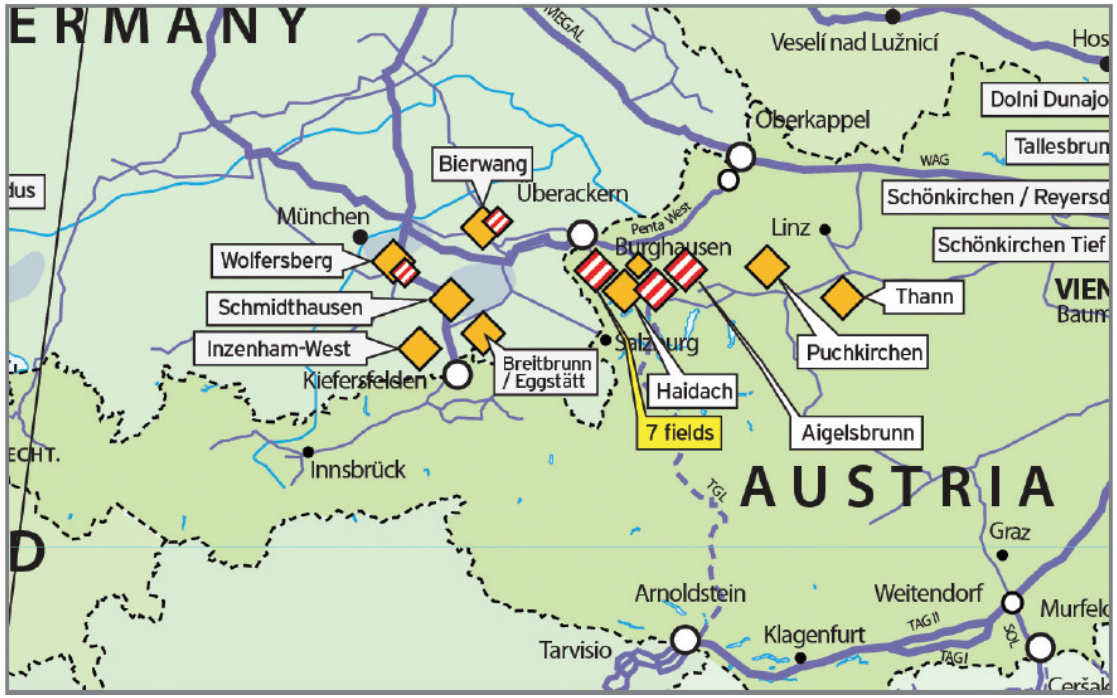
7 Fields Storage project

Key data

Sponsor: Eon Gas Storage

FID

Storage:	**1,608 mcm**
Deliverability:	**20 mcm/d**
Commissioning:	**2011-2014**
TPA exemption:	**No**
Present stage:	**under construction**



DESFA
Hellenic Gas Transmission System Operator S.A.

WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

MINISTRY OF ENVIRONMENT ENERGY & CLIMATE CHANGE

Compliance of 3rd party projects with Directive 2009/73

- All major pipeline projects would like to be exempted from TPA obligation (art. 32) and from having the transportation tariffs fixed or approved by the Regulator (art. 41).
- Nabucco and Poseidon have already been granted partial exemptions under the previous Directive 2003/55:
  - Nabucco for 15 bcm/y and 20 years
  - Poseidon for 8 bcm/y and 25 years
- TAP has requested an exemption, IGB, South Stream and Adria intend to do so as well.
- Moreover, in most, cases an exemption will be needed from the provisions of Art. 9 on unbundling

Compliance of 3rd party projects with Directive 2009/73

- **Art. 36 of the Directive allows such exemption, for "*major new gas infrastructure, i.e. interconnectors, LNG and storage facilities*" under the following conditions:**
  - **(a) the investment must enhance competition in gas supply and enhance security of supply;**
  - **(b) the level of risk attached to the investment must be such that the investment would not take place unless an exemption was granted;**
  - **(c) the infrastructure must be owned by a natural or legal person which is separate at least in terms of its legal form from the system operators in whose systems that infrastructure will be built;**
  - **(d) charges must be levied on users of that infrastructure; and**
  - **(e) the exemption must not be detrimental to competition or the effective functioning of the internal market in natural gas, or the efficient functioning of the regulated system to which the infrastructure is connected.**

Compliance of 3rd party projects with Directive 2009/73

- Exemptions are granted by the national regulators taking into account any advisory opinion by the Agency (ACER) and are approved by the Commission
- Exemptions are valid for a start of construction within 2 years and for a start of operation within 5 years.

SC GRIP: the way forward

- The Southern Corridor GRIP was published on the 4th of April 2012
- The GRIP provided a valuable platform for information exchange and cooperation between the TSOs of the Region
- The next issue of the SC GRIP will include a demand & supply analysis that will demonstrate the impact of the interconnection, reverse flow and storage projects:
  - on filling eventual infrastructure gaps,
  - on the security of supply and
  - on the market integration in the Region

Thank you for your attention

DESFA
Hellenic Gas Transmission System Operator S.A.

WITHIN THE JURISDICTION OF
THE MINISTRY OF ENVIRONMENT
ENERGY & CLIMATE CHANGE

MINISTRY OF ENVIRONMENT ENERGY & CLIMATE CHANGE

5. Infrastructure

- EIP: PCI identification in GRI SSE
  - » Presentation by European Commission

North-South Interconnections in Central and South-Eastern Europe (NSI East)

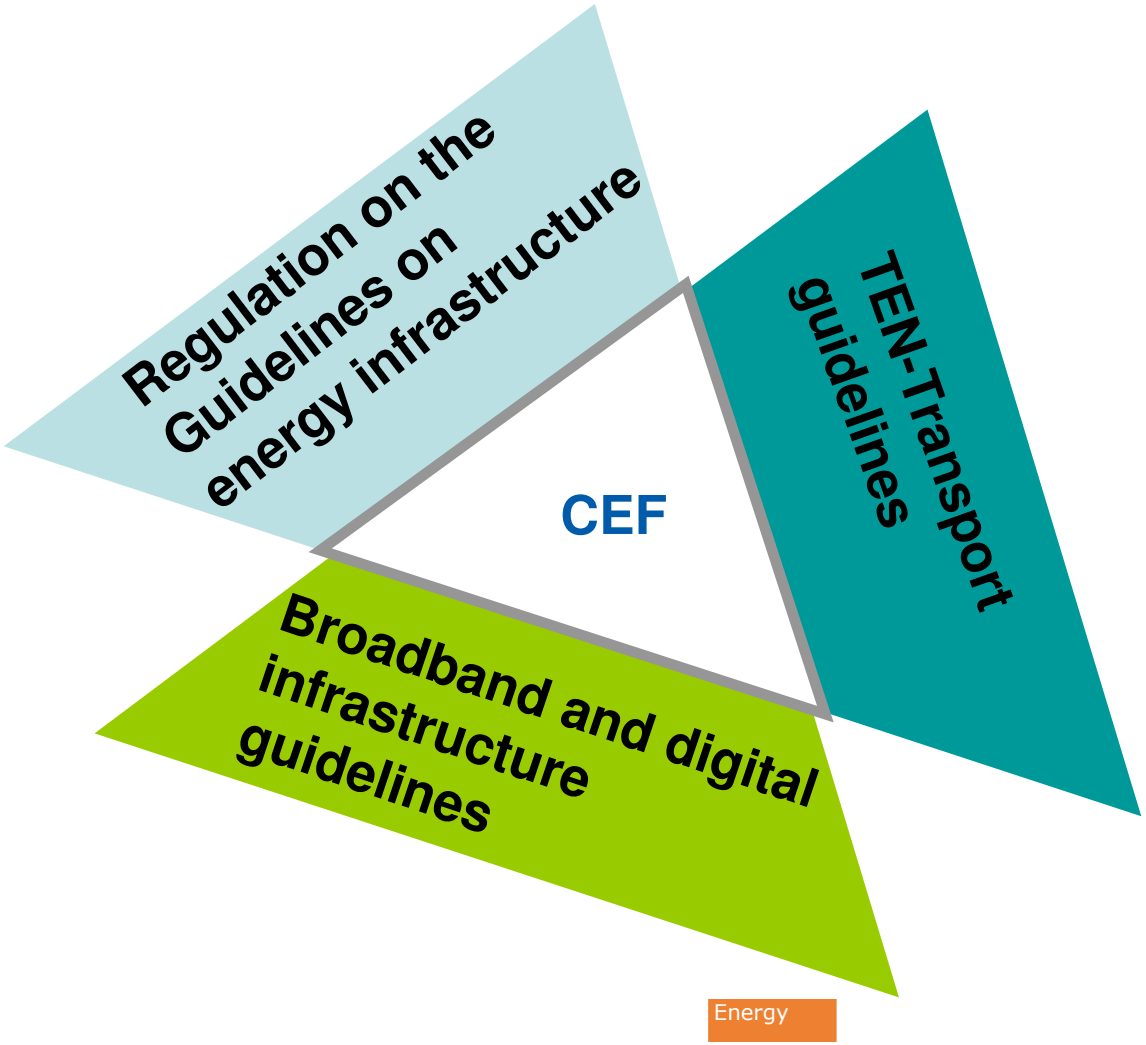
SEE GRI Stakeholder meeting

31st May 2012

European Commission, Energy
Internal Market I: Networks and Regional initiatives

31/05/2012

The legislative proposals of the package



Three sectorial infrastructure policy proposals

Connecting Europe Facility:

Budget EUR

Energy – 9.12bn

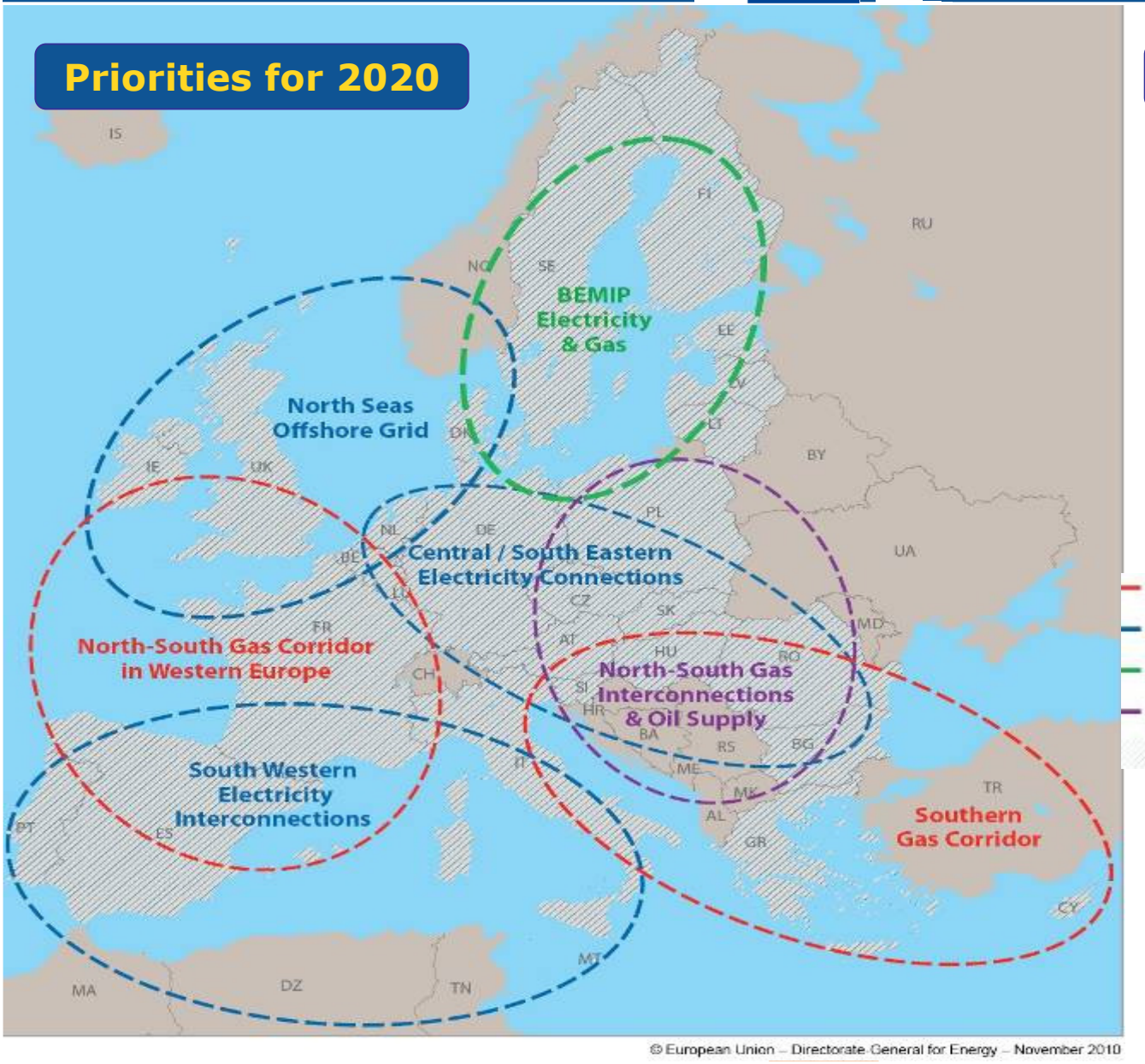
Transport – 30bn

ICT – 9.1bn

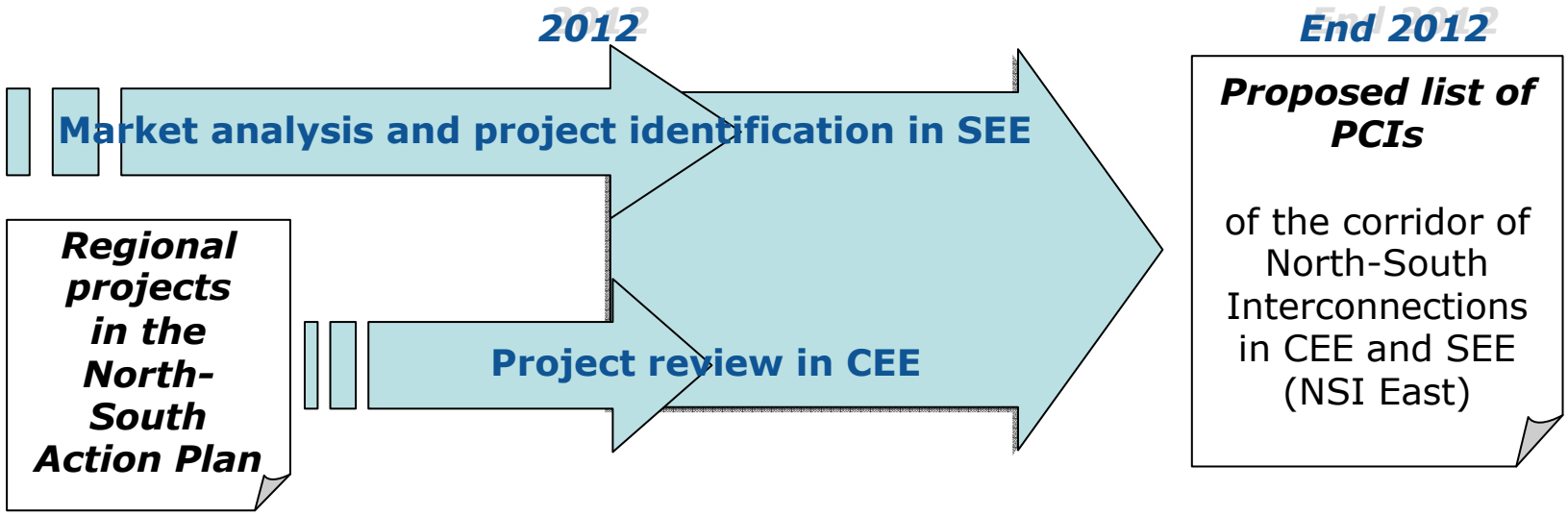
Regulation on guidelines for trans-European energy infrastructure

Implementation of 12 priority corridors/areas, necessary to meet EU's energy and climate policy goals by 2020 and beyond…

…by providing policy and regulatory certainty through a stable and appropriate regulatory framework to promote the necessary investments.


Priorities for 2020
Priorities beyond 2020
North Seas Offshore Grid
BEMIP Electricity & Gas
Central / South Eastern Electricity Connections
North-South Gas Corridor in Western Europe
North-South Gas Interconnections & Oil Supply
South Western Electricity Interconnections
Southern Gas Corridor
Electricity Highways
CO2 transport network
Gas
Electricity
Electricity and gas
Oil and gas
Smart Grids for Electricity in the EU
© European Union – Directorate General for Energy – November 2010

Project evaluation for North-South in CEE & SEE

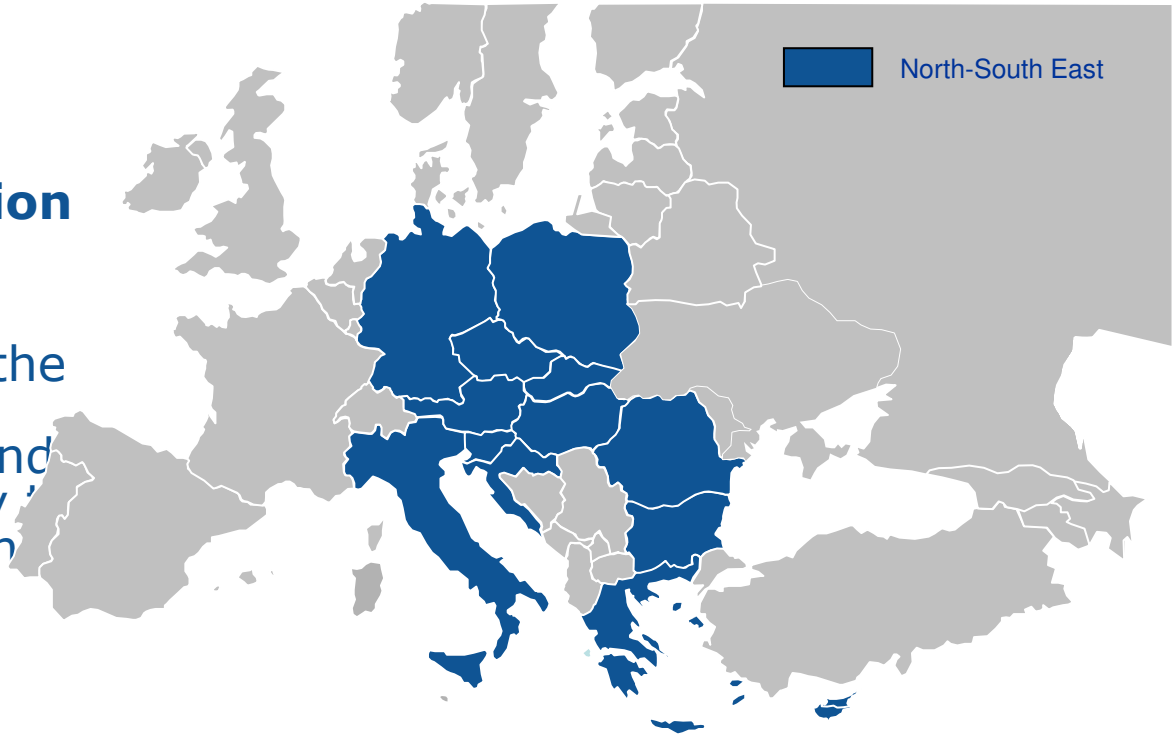


- Launch the SEE regional groups (March 2012)
- Review of CEE projects and evaluation of SEE projects
- Merging of the (sub)groups into one working group

North-South East corridor to link the Baltic, Adriatic, Black and Aegean Seas

Merge CEE project review process and SEE project evaluation

- Objective of the corridor: regional gas connections between the Baltic Sea region, the Adriatic and Aegean and the Black Sea, notably to enhance diversification and security of gas supply
- 13 countries



Terms of reference

- Reflect the comments received in all working groups (consolidated version)
- Reflect the tasks of the Working Groups
- Take into account the possibility of the changes in the legal text of the draft regulation

Tasks of the Working group

- Perform market analysis
- Identify project information relevant for project evaluation (project questionnaire)
- Project promoters shall submit project proposals, including an assessment of the projects' contribution to the priority corridor
- Co-ordination with gas working groups of North-South (NSI) West, Baltic Sea Region (BEMIP) Working Group and Southern Gas Corridor
- Public consultation on proposed projects
- Agree on weighting for project evaluation criteria
- Evaluation of submitted project proposals
- Agree on draft regional project list

The preparatory project identification process

TYNDP 2011

PCI identification process in SEE – PREPARATORY WORK 2012

2013 – Entry into force of the Regulation

ENTSO-G

TYNDP 2011 (WIP 2013?)

GRIPs 2012

non-TYNDP projects

Basis for PCI candi-dates, market analysis, data/ CBA

All representatives in ad hoc working group*

- Perform market analysis
- Determine data need for application of criteria (complementary to ENTSO-G)

**Assisted by Consultants*

Project promoters/ TSOs

- Propose candidate PCIs
- Submit complementary data for PCI candidates

All representatives in ad hoc working group*

- Evaluate submitted projects according to criteria, taking into account ACER/NRA opinions
- Group projects according to Art.4(4)
- Propose draft regional list

**Assisted by Consultants*

.....

EU-wide PCI list

March 2012

By May 2012

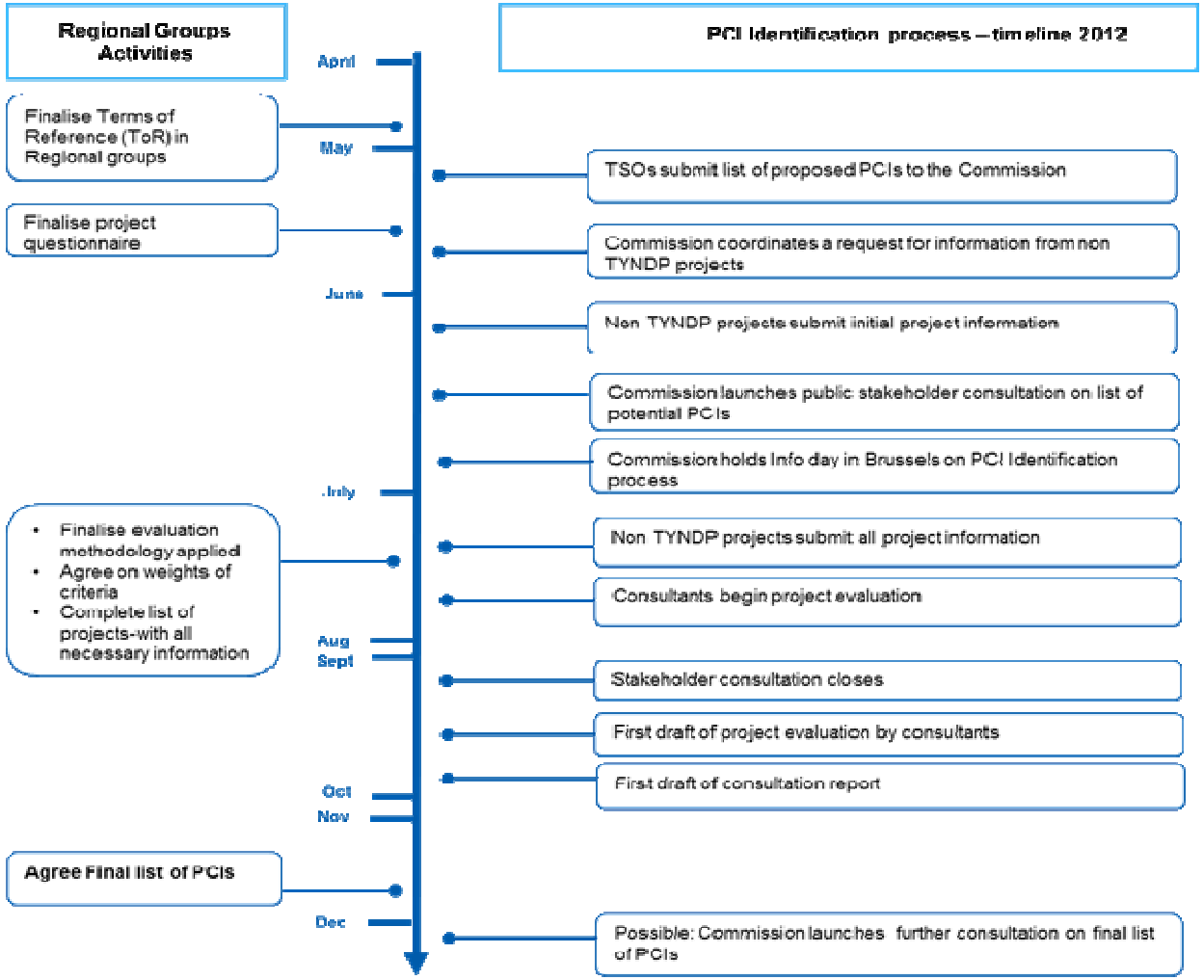
By June/July 2012

By end 2012

2013

European Commission

Work plan / timeline



European Commission

Thank you for your attention

Energy

6. Any other Business

- **Security of Supply**
  - State of Play of preventive action plan development
  - Consultation of preventive action plans in the region?
  - Oral updates from member states

Security of Gas Supply
Preventive Action Plan
Emergency Plan

12th GRI SSE, Vienna, May 31st

Jiri Filippi
Department of Gas and Liquid Fuels
Ministry of Industry and Trade
Czech Republic

MINISTERSTVO
PRŮMYSLU A OBCHODU

Security of Gas Supply

- **"The steady availability of energy supplies in a way that ensures economic growth in both producing and consuming countries with the lowest social cost and the least price volatility."** (A. Alhajji, Northern University Ohio 2008)

- **„Gas supply security refers to the ability of the energy system to meet contracted energy demand under a gas supply disruption."** (Pierre Noël, University of Cambridge 2010)

- **Security of gas supply is a shared responsibility of natural gas undertakings, Member States and the Commission and as such requires a high degree of cooperation between them.** (Regulation 994/2010)

Risk Analysis

- Regulation 994/2010 Art. 9
  - Infrastructure standard n - 1
  - Supply standard
  - All relevant national and regional circumstances
  - Possible reverse flows
  - Key scenarios causing significant risks
- TYNDP
- Regular maintenance reports
- Annual report on security of gas supply
- GRIP

Risk Analysis in the Czech Republic

- Standard for infrastructure n-1=288 (2012)
- Supply standard
  - Extreme temperature, 7-days peak = 47,9 mcm/d (-14°C)
  - 30days exceptionally high demand = 27,8 mcm/d (-5°C)
- Important domestic factors
  - Gas consumption 8,9 Bcm (2010)
  - UGS capacity 3,5 Bcm (2012), withdrawal peak 54 mcm/d
  - Average daily winter consumption = 34,3 mcm/d
  - Max. daily winter consumption = 67,6 mcm (23.1.2006)
- Reverse flow 25 mcm/d

Preventive Action Plan

- **Preventive Action Plan shall contain measures needed to remove or mitigate the risks identified, Art. 4, 5**
- Assessment of options from Risk Analysis
- **Preventive measures – reduction of probability**
- **Protective measures – reduction of severity**
  - **Key scenarios, priorities to reduce risk, design of strategy for scenario**
  - **Assessment of strategy efectiveness, perform CBA, residual risk ?**
  - **Infrastructure and supply standards (RA), regular maintenance**
- **Interaction and correlation with other MS**
- **Joint Regional PAP?**

Preventive Action Plan in the Czech Republic

- **Obligations of gas market stakeholders**
  - Energy Act
  - Decree on dispatching control of gas network
  - Decree on states of emergency in gas industry
  - Network code
- **Preventive measures**
  - Diversification of gas routes (East/West)
  - Diversification of supply sources (RF 65%, EU 23%, Norway)
  - Interconnections with neighbouring countries (SK, DE, PL)
  - Reverse flow obligation
- **Public service obligation**

Emergency Plan

- **Regulation No. 994/2010 of the EP and Council**
  - Art 4. – measures to mitigate or remove the impact of gas supply disruption
  - Art. 10 – Content of Emergency plans and crisis levels
- **Crisis levels**
  - **Early warning**
  - **Alert**
  - **Emergency**
- **Emergency plans of gas market stakeholders**

Emergency Plan in the Czech Republic

- Roles and responsibilities – done by Energy Act
  - Competent authority, Protected customers
  - Stakeholders - TSO, DSO's, SSO's, Gas Traders
- Emergency measures – Energy Act + Decree on states of emergency in gas industry
  - Early warning + alert levels - Market driven
  - Emergency - Sequential restriction of consumption
    - - Gradual disconnection of customers
- Crisis management committee
- Contingency plan for key scenarios to take an effective action
- Recovery plan to return to normal operation

Measures for security of supply

- **Market measures on supply and demand side**
  - Diversification of sources and transportation routes
  - Import flexibility,
  - Storage withdrawal,
  - Reverse flow,
  - Interruptible contracts

- **Non-market measures – mainly demand side**
  - Obligatory withdrawal from storage facilities
  - Restriction of consumption,
  - Gradual disconnection

Remaining issues

- Consultation of PAP and EP with neighbouring countries
- Compensation mechanism for emergency situations
- Mechanism for co-operation with neighbouring countries in all crisis levels
- Joint Regional PAP ?
- Joint Regional Emergency Plan ?

Conclusion

- Level of Security of Supply in the Czech Republic is due to
  - Robust and well maintained network
  - High infrastructure standard, (n-1 = 288)
  - Diversification of sources
  - Diversification of transportation routes
  - Large capacity of gas storage facilities
  - Reverse flow on main transportation infrastructure
- Sufficient and fully in agreement with Regulation 994/2010

Thank you for your attention

Ministry of Industry and Trade
Czech Republic
filippi@mpo.cz

MINISTERSTVO
PRŮMYSLU A OBCHODU

6. Any other Business

- Next meetings

Stakeholder Group Meetings (back-to-back with RCC and SAP meetings)	Implementation Group Meetings
6 December 2011	Parties involved in the different implementation groups should agree on the dates of their meetings.
31 May 2012	
4 December 2012	
7 May 2013	
3 December 2013	