

ITRE Workshop on “EU Energy Independence, Security of Supply and Diversification of Sources”

Contribution of gas infrastructure to enhance security of supply

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ENTSOG MEMBERS 2017



ENTSOG was created on 1 Dec 2009 and is now comprised of:

45 TSO Members and 2 Associated Partners from 26 European countries

4 Observers from EU affiliate countries:

GA-MA AD (FYROM)

Gassco AS (Norway)

Swissgas AS (Switzerland)

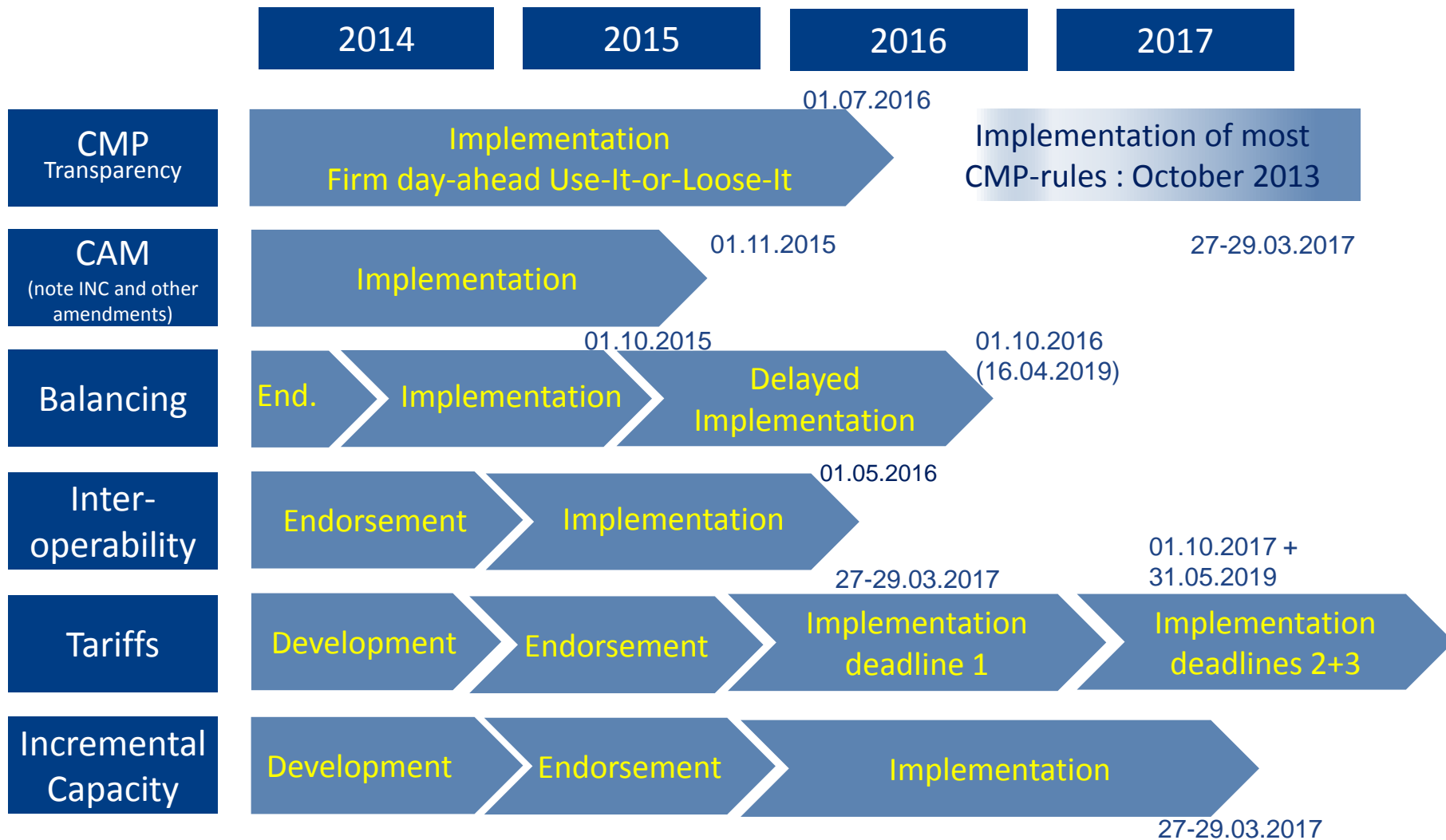
Ukrtransgaz (Ukraine)

AUSTRIA AND GERMANY



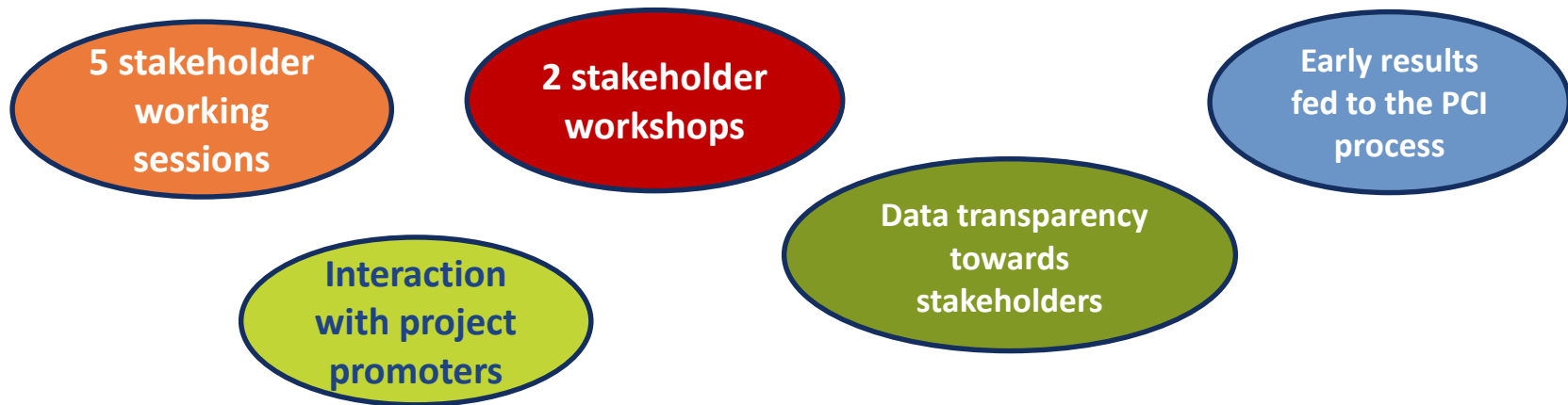
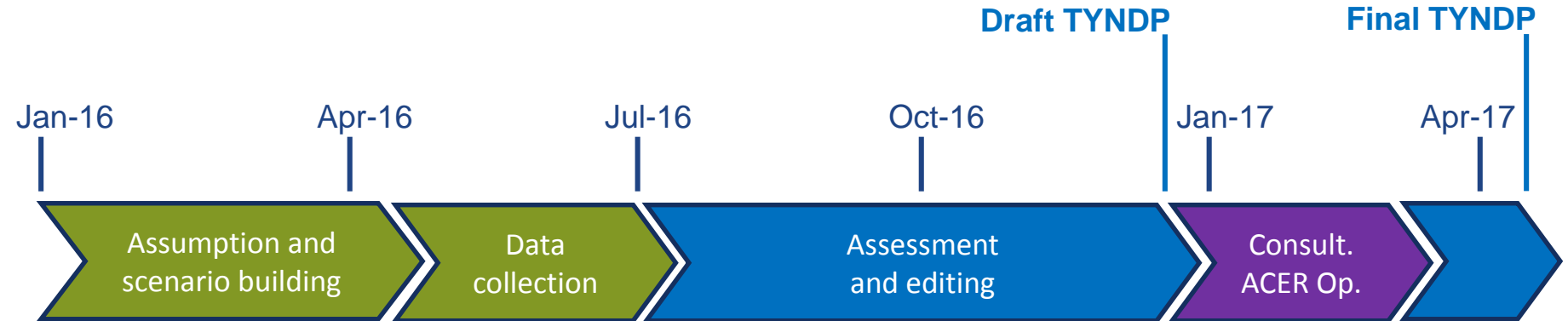
ENTSOG develops Network Codes, Transparency Platform, RCSG, TYNDPs, Winter/Summer Outlooks etc.

Status on the Network Codes



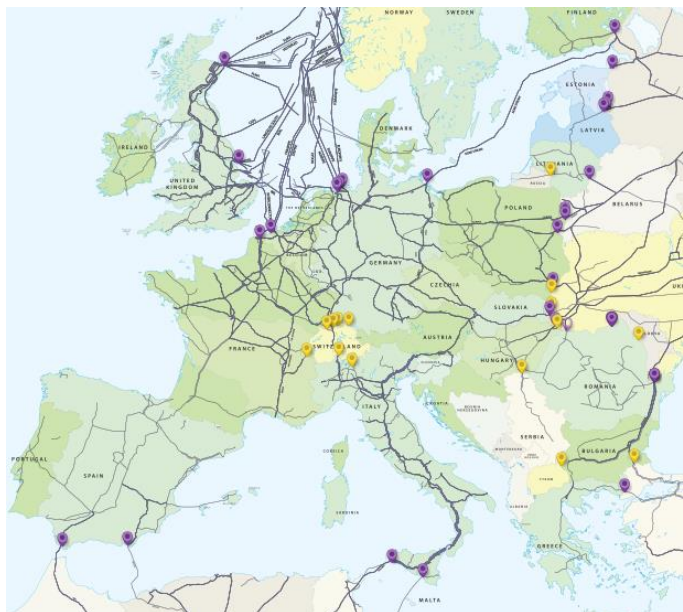


TYNDP 2017 - Stakeholder Involvement



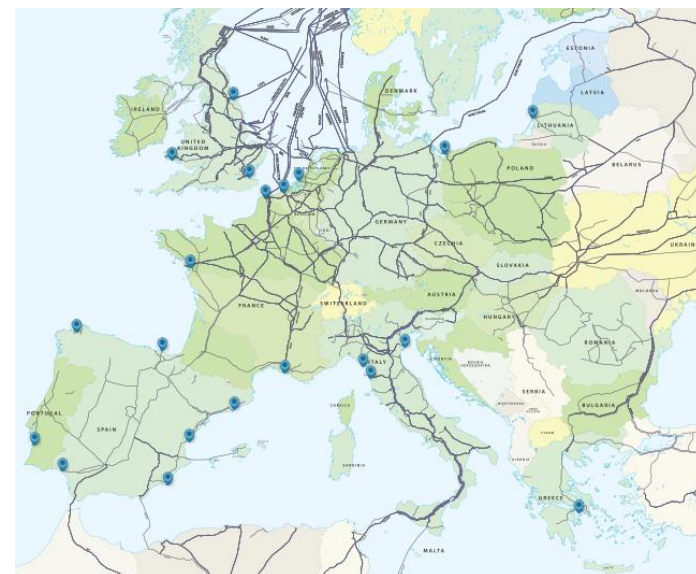
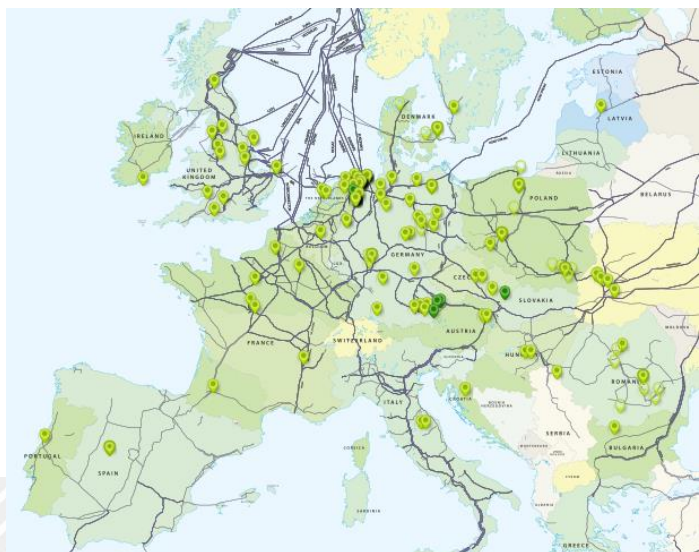
TYNDP is a highly inclusive and transparent process

Existing EU Gas Infrastructure



- *Well-developed EU transmission network*
- *Diversified pipeline imports*

55 projects
commissioned
since first
TYNDP

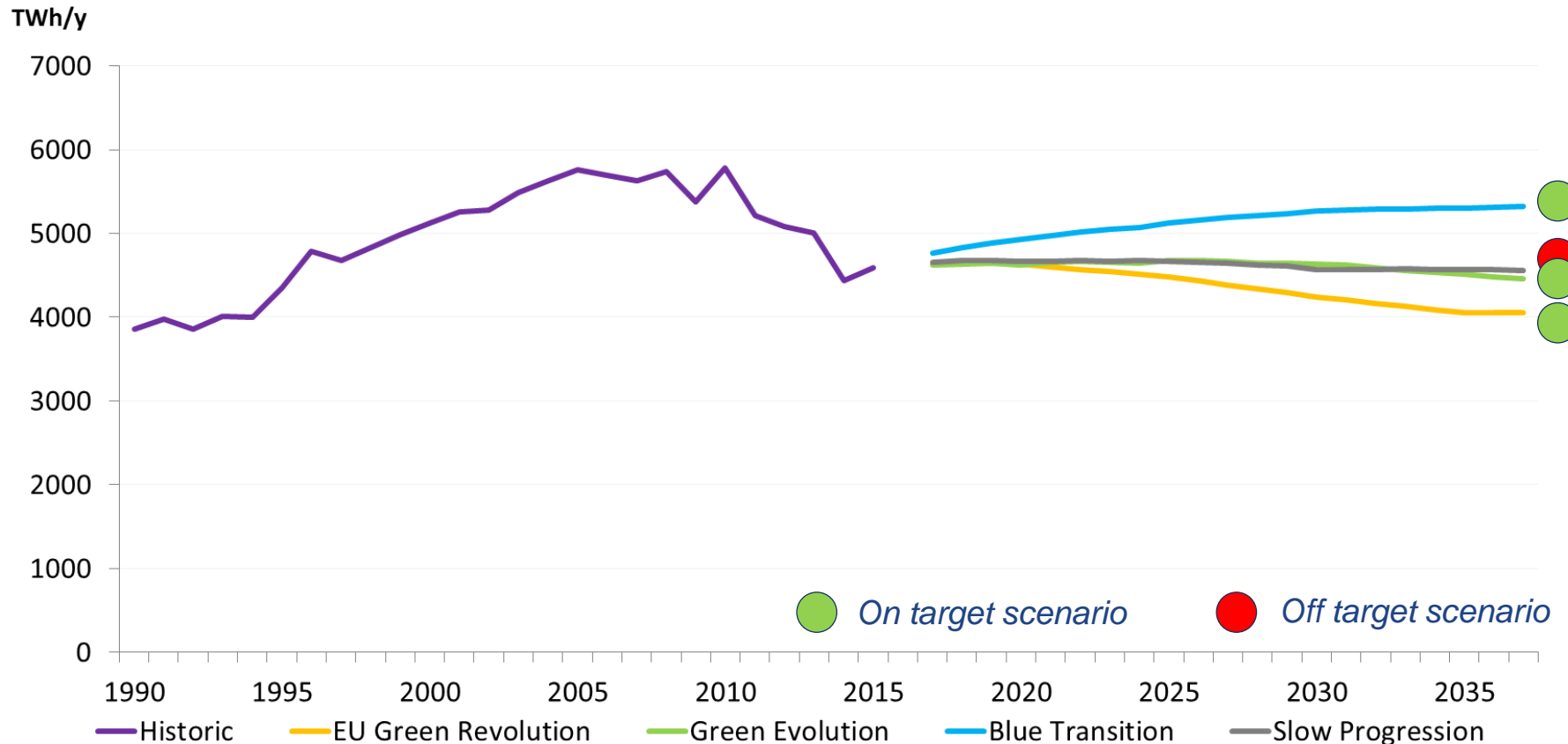


- *LNG terminals*
- *Underground storages in most EU countries*



Gas Demand – Historic & Scenarios

Scenarios set the range of possible futures

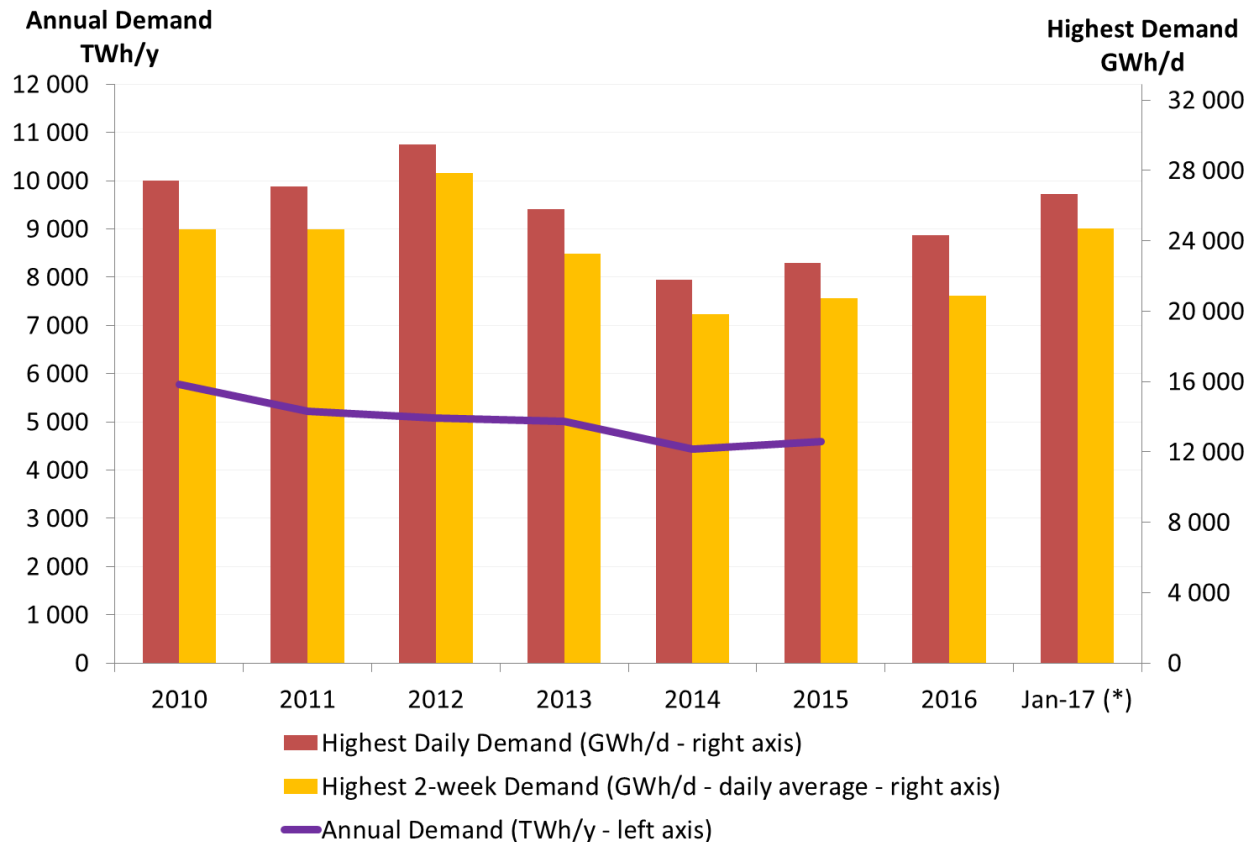


Scenario data is country specific and builds on national input and expertise



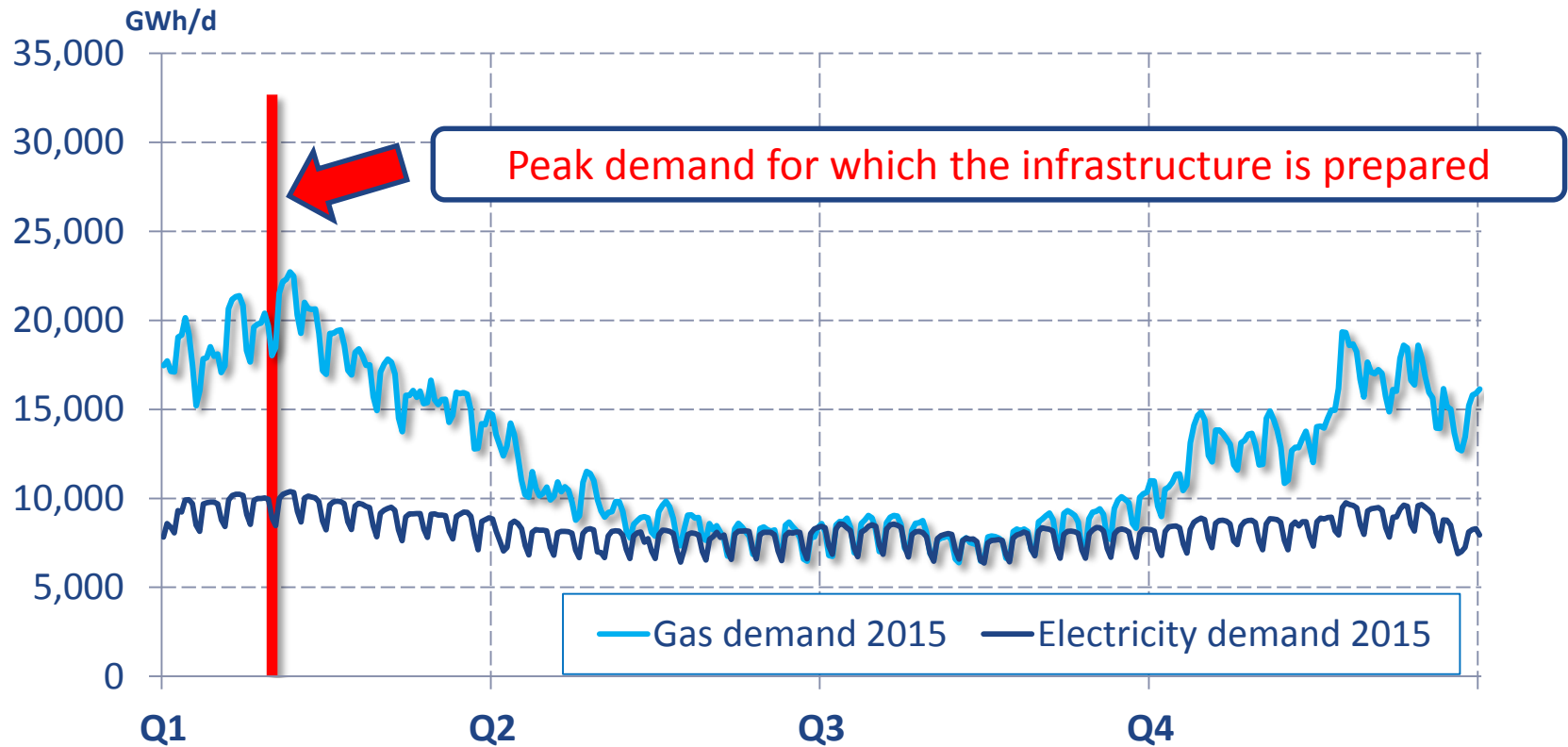
Gas Consumption & Peak Demands

The gas infrastructure is designed to cope with peak demand situations.



* January 2017 up to 18th January

Coping with Peak Demand

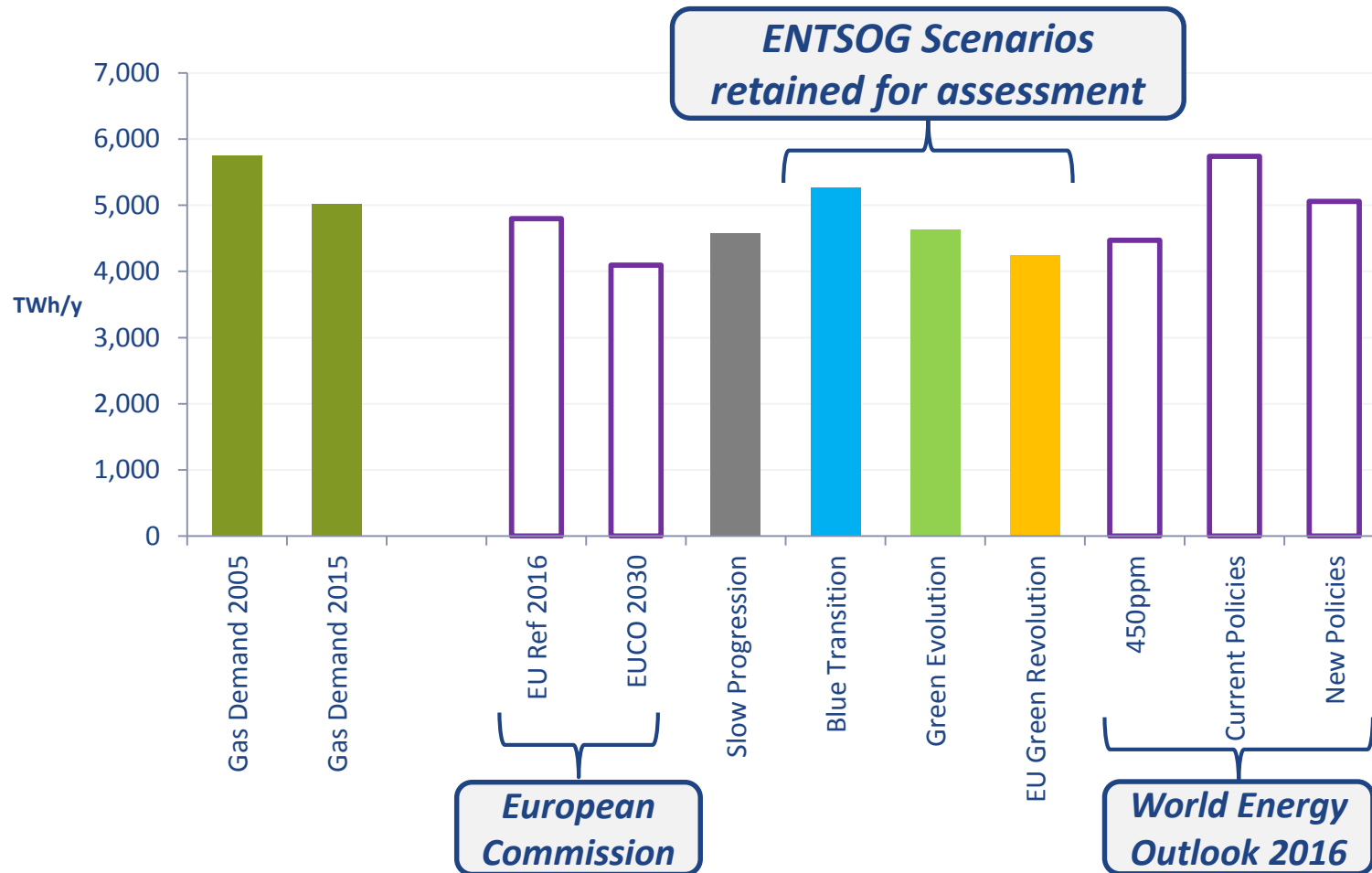


Peak demand is a main criteria for gas infrastructure design



Gas demand – Scenarios 2030

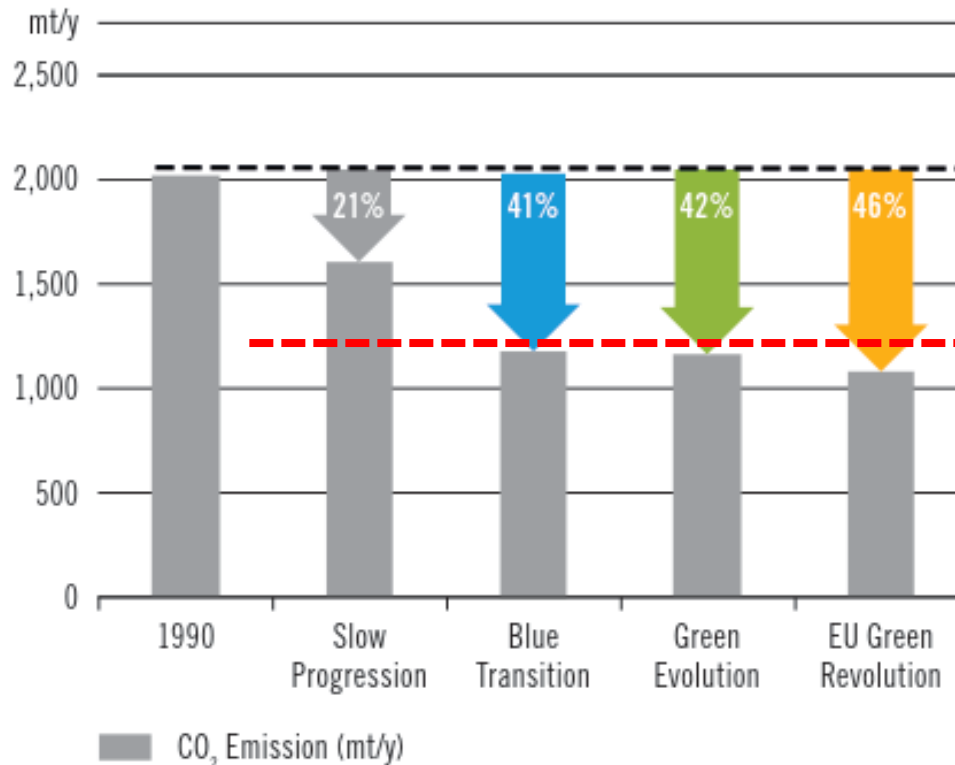
ENTSOG Scenarios compare to other scenario sources





TYNDP 2017 - CO₂ Reductions

Gas displacing coal strongly improve CO₂ Reductions



**EU CO₂ targets
= 40% reductions**

CO₂ savings in 2030 – overall power sector and gas end-user demand

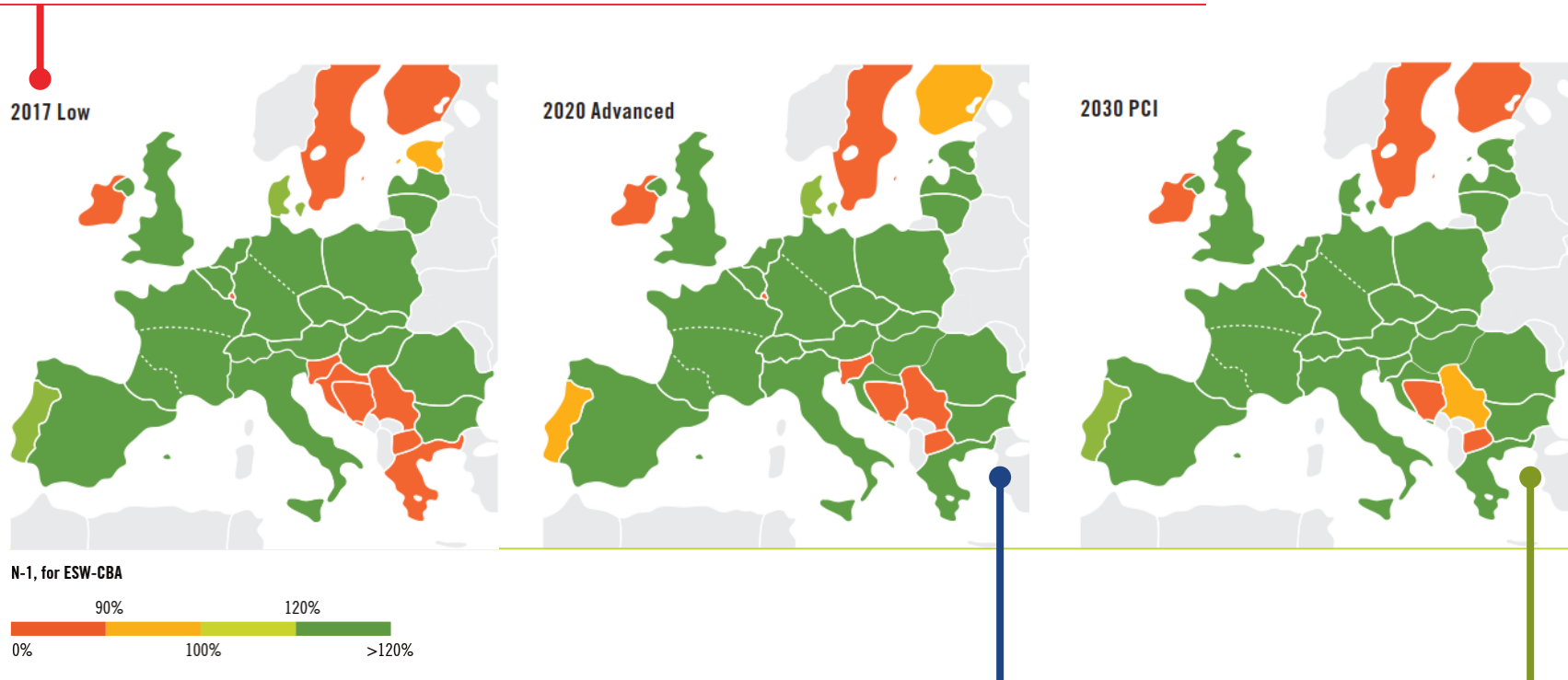


Security of supply – N-1

Unavailability of largest national infrastructure

Peak demand situation

Countries with N-1 < 100% may face demand curtailment



FID and Advanced projects partly mitigate the situation by 2020

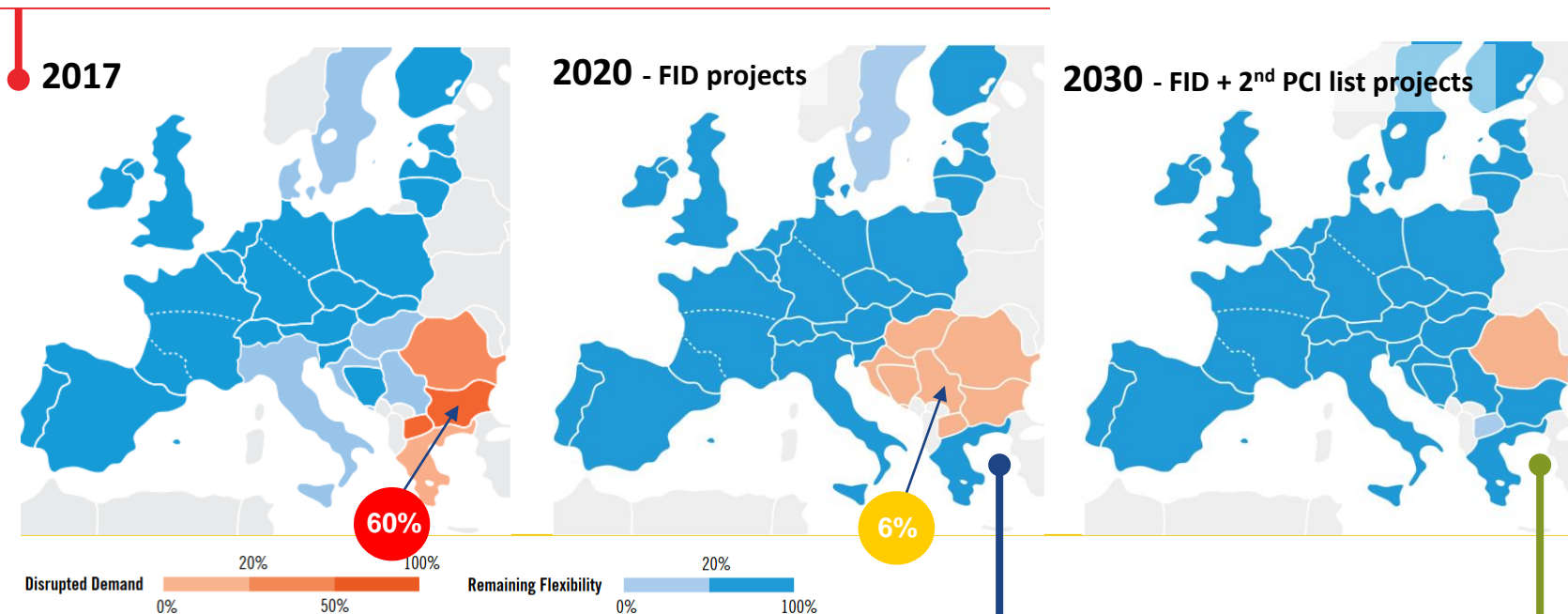
Further mitigation requires projects from the 2nd PCI list

Security of supply – SSE Situation

Case of Ukraine route disruption

Peak demand
situation

South-East Europe to face demand curtailment



FID projects significantly mitigate the situation by 2020

Further mitigation requires projects from the 2nd PCI list

Already achieved:

- *Resilience to extreme temperatures*
- *Resilience to disruption of Algerian, Libyan and Norwegian supply sources*

Further infrastructure needs:

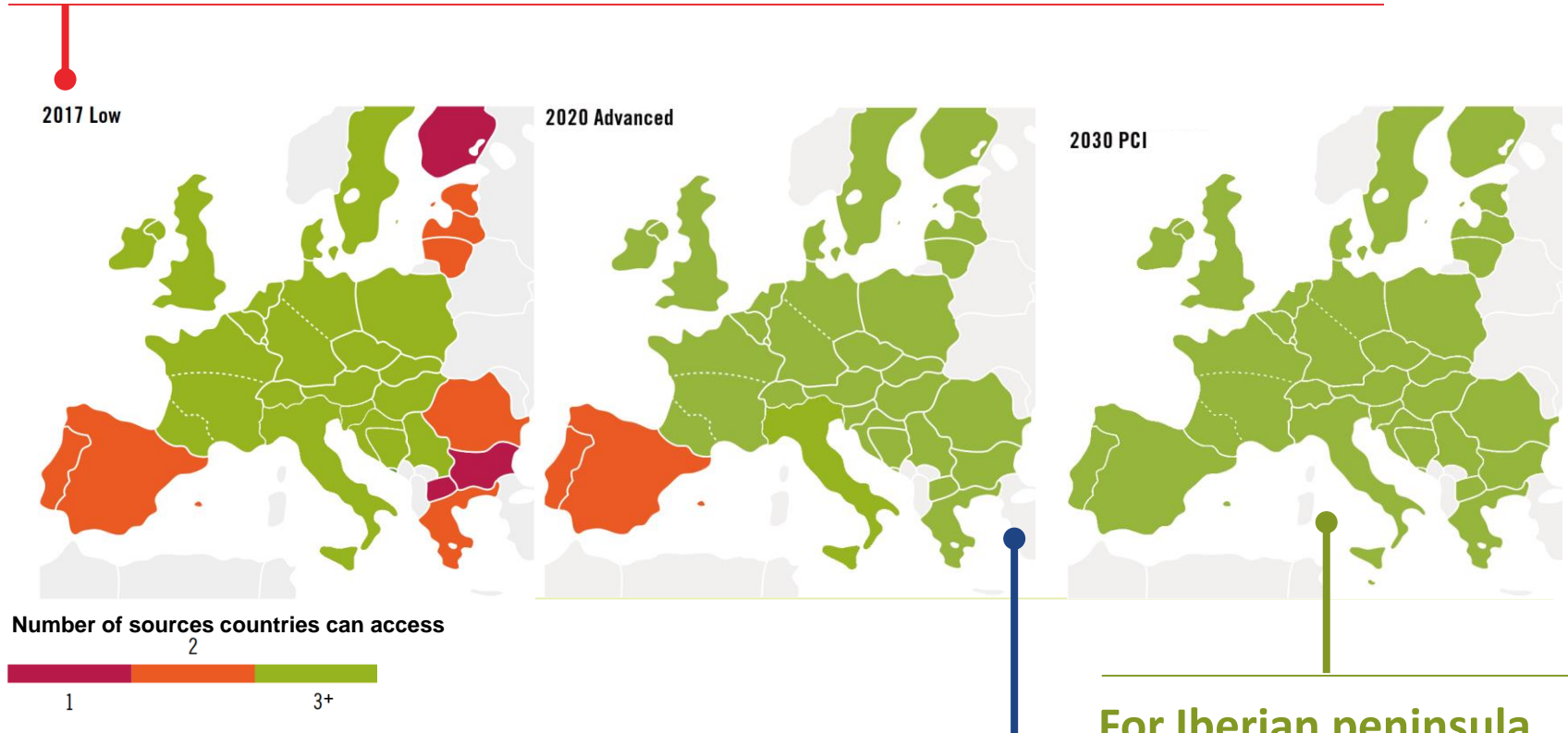
- *To mitigate Belarus route disruption risk in North-East Europe*
- *To mitigate Ukrainian route disruption in South-East Europe*
- *To mitigate N-1 risk in specific countries*



Market Situation

Supply diversification

Several areas have a significant access to only 1 or 2 supply sources



FID and Advanced projects ensure access to at least 3 supply sources in Baltics and South-East EU

**For Iberian peninsula
2nd PCI list projects allow
further diversification**



Market Development



Already achieved

- *Most of Europe has access diversified supply sources*
- *Hub price convergence most of the time - especially in Western Europe*

Further infrastructure needs

- *To ensure more diversified access to supply sources in the Baltics, South-East Europe and Iberian Peninsula*
- *To mitigate high dependence of one specific supply source*

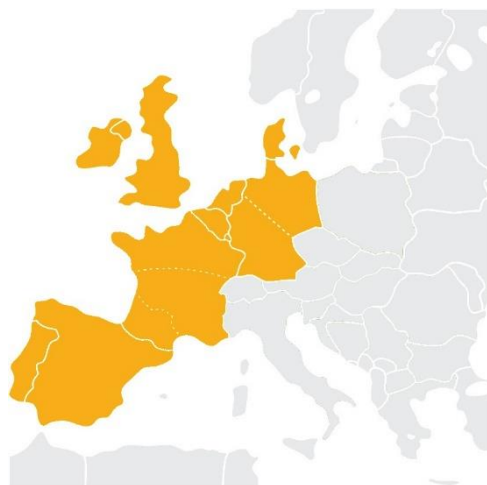


Potential Projects Included in TYNDP 2017



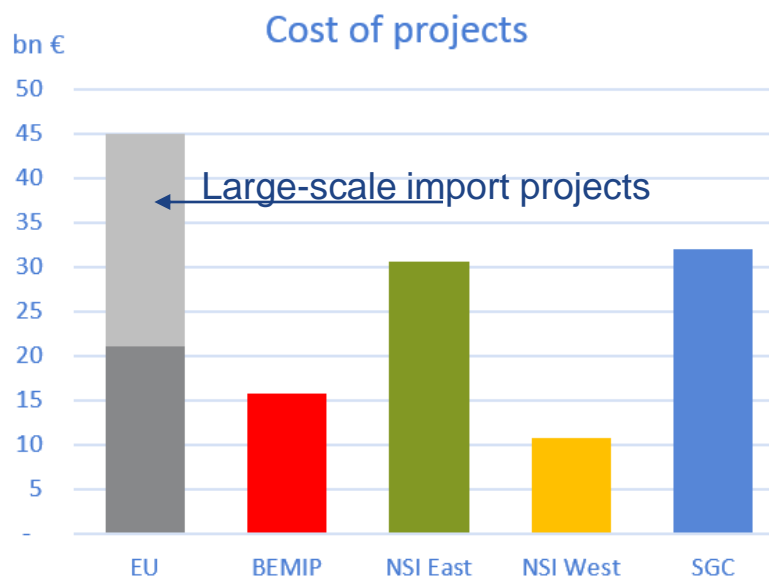
BEMIP

Southern Gas Corridor (SGC)



NSI West

NSI East



Total potential investments: 45 bn€ (FID and Advanced)

- Of which large-scale import projects (TANAP, TAP and Nord Stream 2): approx. 24 bn€

Gas Infrastructure - Summary

The EU gas infrastructure is well developed

- *Transports large energy volumes across EU*
- *Capable of handling high peak demands*
- *Supports free flow of gas and competition*
- *Resilient to supply interruptions*
- *Close to achieving EU internal gas market goals*
- *Ready to support a low-carbon future*

Assessing need for further infrastructure requires energy scenarios covering a range of possible futures

The supply situation is not the same all over Europe

- *In specific areas, further infrastructure is still needed – to ensure energy supplies, security of supply and competition*
- *Necessary projects are to be commissioned in the coming years*



EC Winter Package – ACER & Electricity Regulation - also impacting gas sector

2016 Proposals

Recast Electricity
Market Directive

Recast Electricity
Market Regulation

Risk preparedness
Regulation

Regulation on the
Energy Union
Governance

Recast ACER
Regulation

Impacting

Mirroring

Interlinking



2017 Proposals?

Recast Gas
Market
Directive

Recast Gas
Market
Regulation

Revised Regulation on
Security of Gas Supply
– to be discussed in
Council



EC Winter package – Views on Gas Related Issues

Direct as well as potential indirect consequences (mirroring)

> Changing network code development & amendment process?

- *Extensive involvement of EU institutions, gas TSOs, stakeholders etc. is already established*
- *Maybe need to consider strengthening ACER's coordination and alignment of the NRAs*
- *Avoid “last word” to ACER in Network Codes processes*
- *Consider proper stakeholder and ENTSO involvement in process for amendments*

> Changing mission statement for ENTSOs to emphasize the European perspective?

- *ENTSOs mission statement already includes a European mandate*
- *Achievements of ENTSG confirm the commitment of the gas TSOs to the European agenda*
- *A codified mission statement may have unforeseen consequences – i.e. regarding ENTSGs staffing secondment principle as well as on TSO commitment in general*

> Additional transparency requirements?

- *ENTSG ready to consider further transparency – carefully balancing to the efficient and pragmatic organization of the work in the association*

ENTSG is ready to further contribute to the debate on these topics



Thank You for Your Attention

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