

TYNDP 2015-2035

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What TYNDP is designed for?



A multi-task report

Initial objective under the 3rd Energy Package

- > Supply adequacy outlook on a 10-year range
- > Identification of possible investment gaps
- > Identification of barriers to possible remedies

Investment notification

- > Substituting to Member States notification of investments

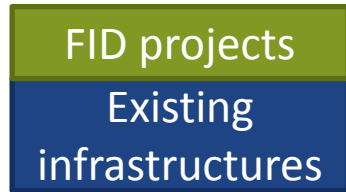
Support to the selection of Project of Common Interest

- > Gathering all possible PCI candidates
- > First step of the project specific assessment of PCI candidates

*ENTSOG's main objective is to meet stakeholders' expectations
(often contradictory) in an evolving environment*

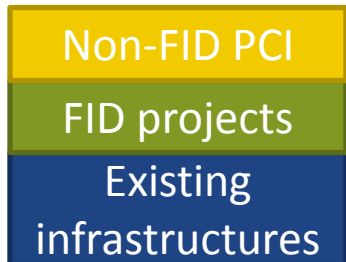


The different infrastructure scenarios



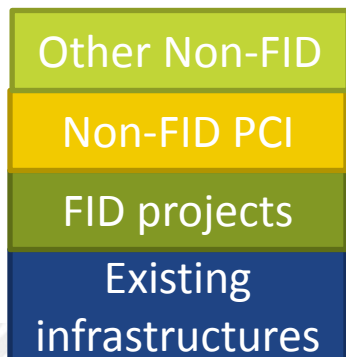
Low - Identification of missing infrastructures

- > In case no new project is decided
- > Used in Project-Specific CBA of PCI candidates



PCI - Overall impact of previous PCI list

- > Feedback loop of the previous list of PCI as project impacts are not additive



High - Is there sufficient infrastructure projects?

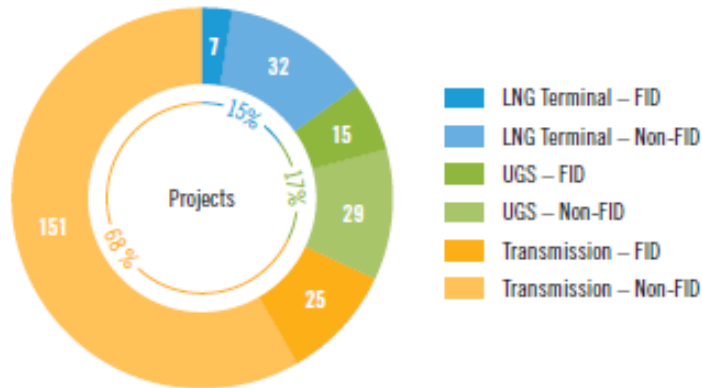
- > It is a theoretical case used to check that every “gap” can be remedied by at least one project
- > Used in Project-Specific CBA of PCI candidates



Focus on TYNDP 2015 key findings



The basic blocks: Infrastructures

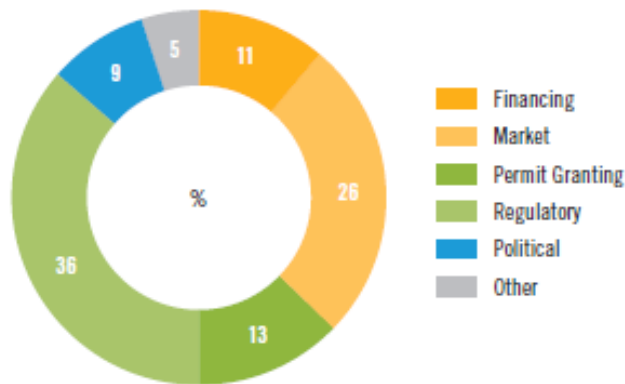


From projects to commissioned infrastructure

- > 259 projects (South Stream withdrawn) incl. 47 FID
- > A bit less projects than previous edition
- > Construction works are on time but FID are often delayed

Main barriers to investments

- > Based on project promoter feedback
- > Regulation is valuing too much tariff reduction over economic benefits of well-integrated markets
- > Market is not able to provide necessary investment signals due to:
 - economic situation
 - short term orientation given by regulation
 - lack of visibility on the role of gas in the EU energy mix





Exceptional call for projects (1-22 April)

- > Call launched at EC request from 1 to 22 April to mitigate the withdrawal of South Stream
- > All projects are PCI candidates
- > Addendum to Annex A published on 29 June (no update of the TYNDP assessment)

PL-UA
Eastring
Tesla
TAP-Albania-FYROM
SK-HU
Renovation of the BG system
HU-UA

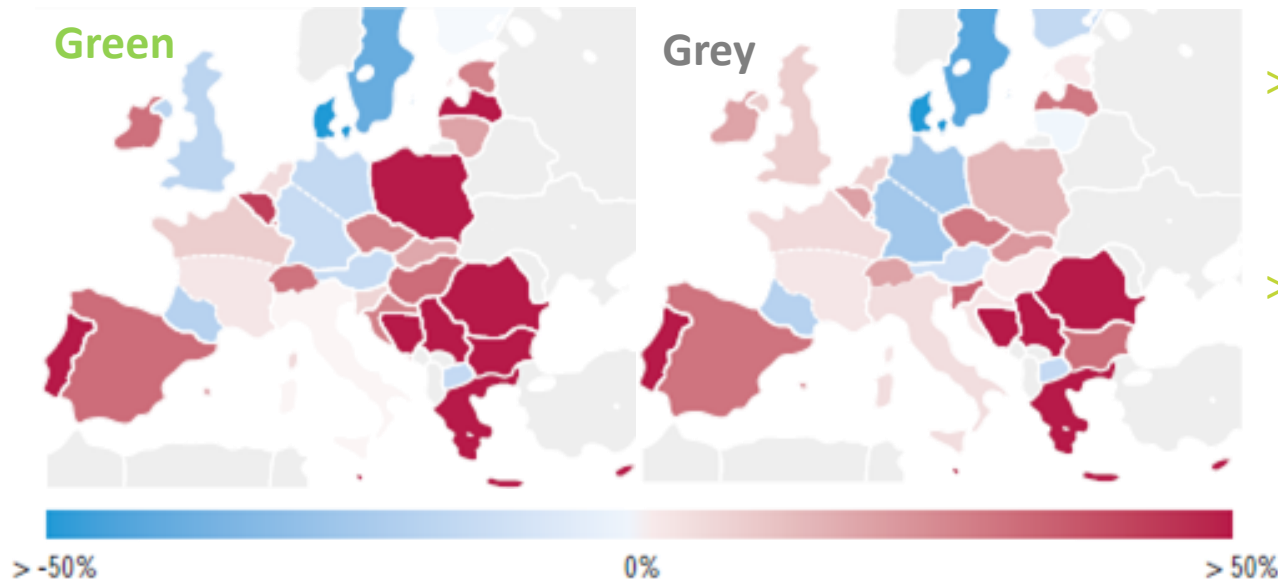


The basic blocks: Demand

Stable demand (+0.4% per annum) driven by power generation

- > Assessment based on one Green and one Grey bottom-up demand scenarios with different economic rationales and commodity (gas, coal and CO2) prices
- > ENTSO-E Vision 1 & 3 are respectively used in the Grey and Green scenarios
- > ENTSG scenarios in line with other outlooks (IEA 450 and “DG ENER trends to 2050” are the only lower scenarios)

Demand scenarios are very heterogeneous among Member States



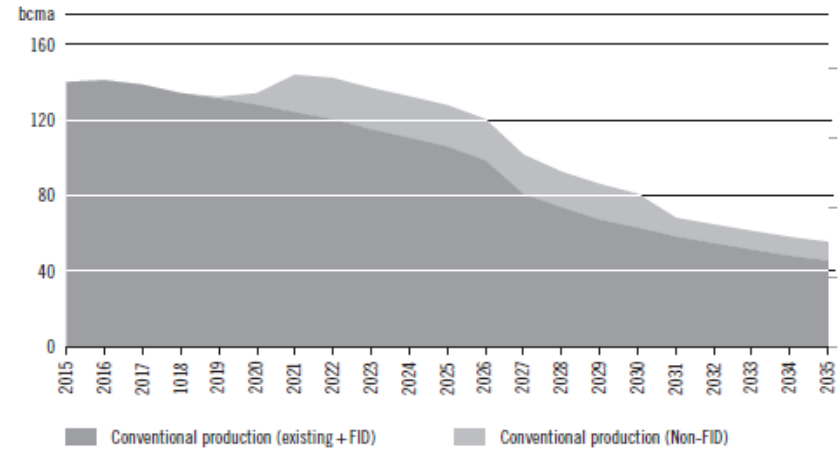
- > Evolution on the 2015-2035 period
- > Vision 3 of ENTSO-E having a rather high gas share in power generation



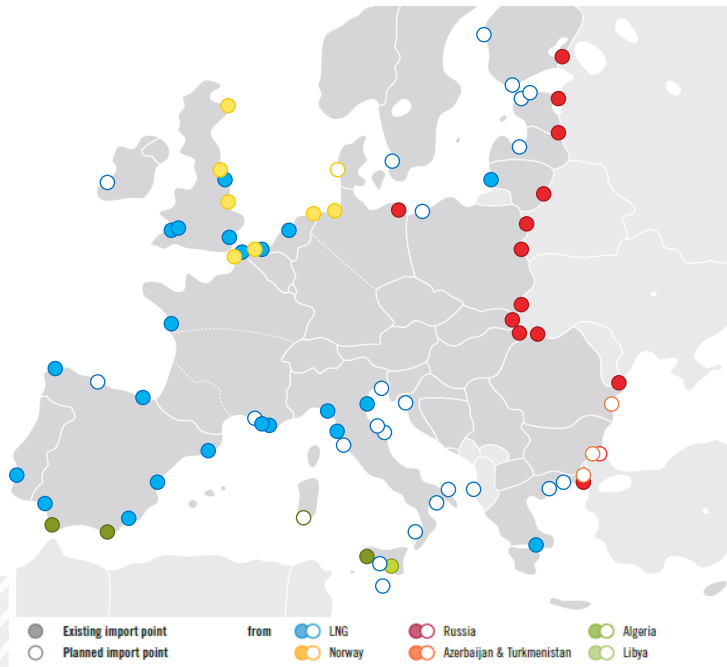
The basic blocks: Supply

Facing national production decline...

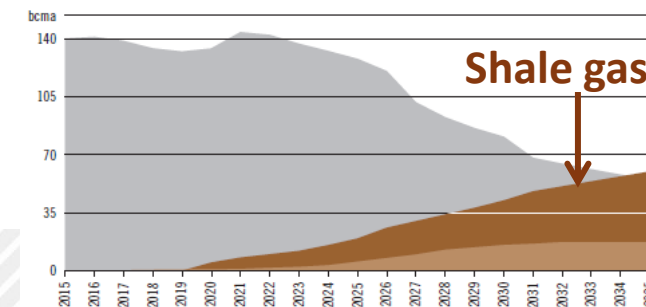
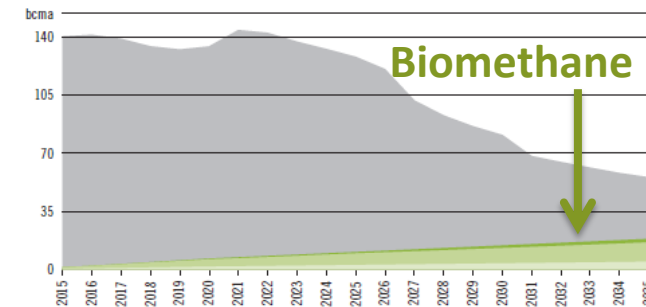
- > Connection of Romanian Black Sea and Cyprus fields would mitigate the decrease



... Europe will have to develop new imports and indigenous production



This can materialize through the implementation of many projects of different sizes

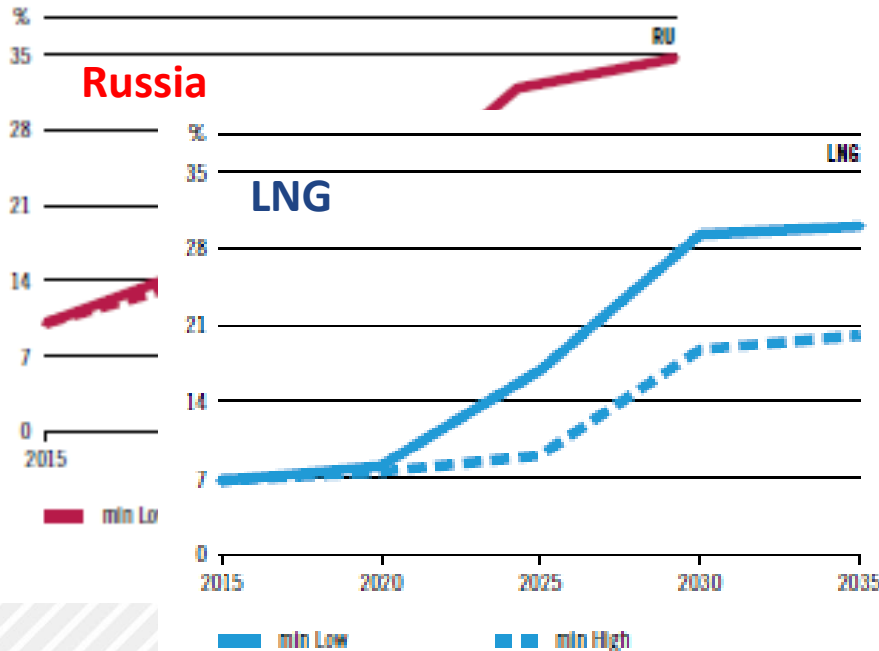
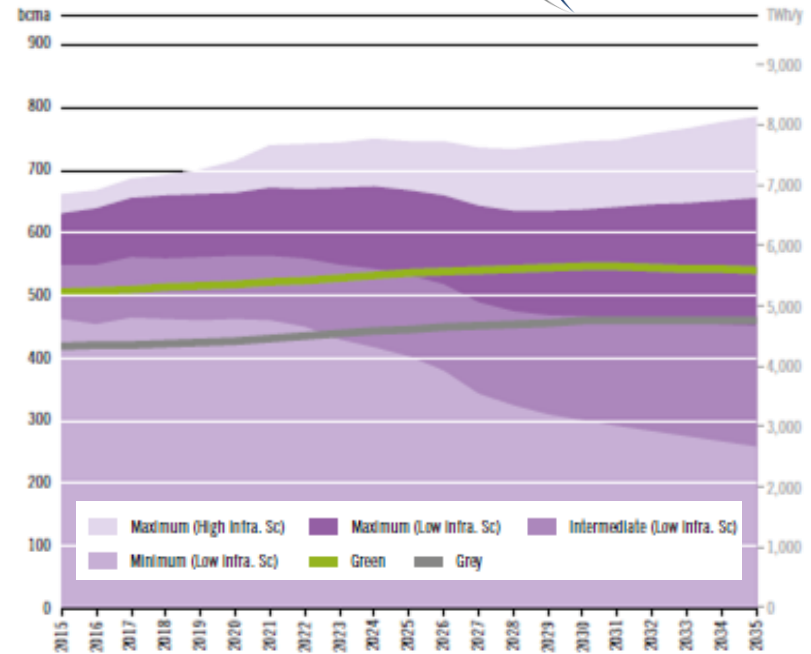




Supply adequacy outlook

Challenges ahead

- > 2015-2025: under Grey scenario midstreamers may face issues in meeting ToP clausis
- > 2025-2035: supply situation becomes tighter



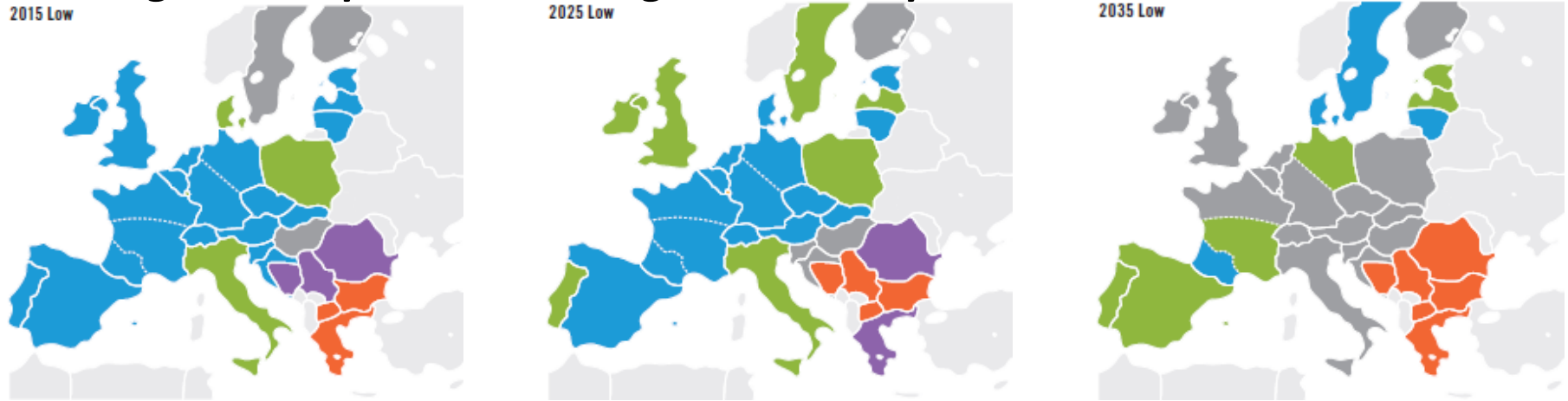
Europe needs to enlarge its supply portfolio

- > Without new supply and related infrastructure projects, Europe supply diversification will be put at risk
- > Minimum share of Russian gas together with LNG could represent 65% of total gas supply

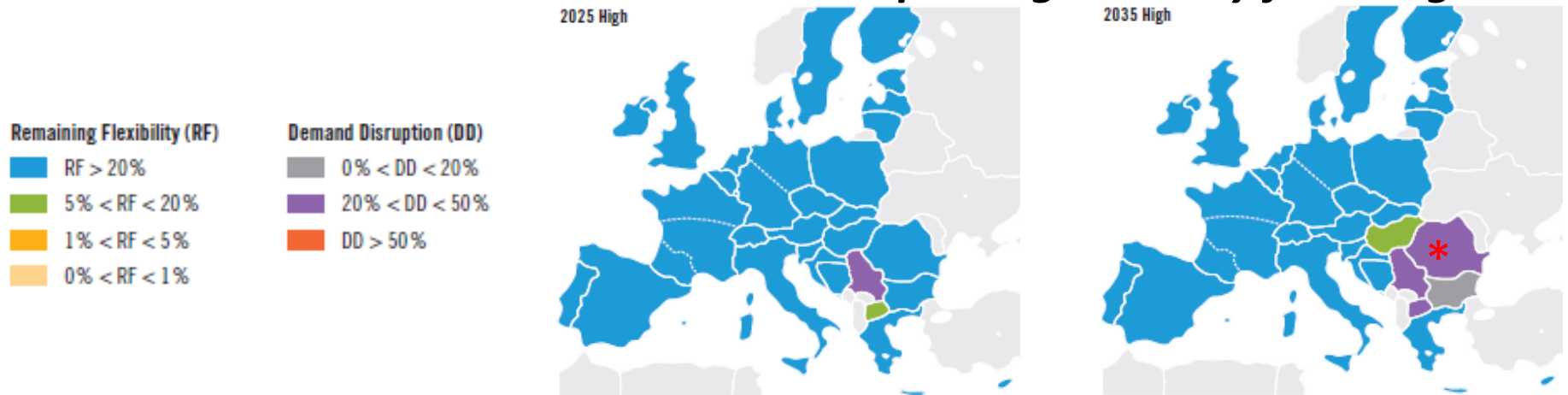


UA transit disruption during a peak day

A regional impact worsening into a European one...



...or improving to nearly full mitigation



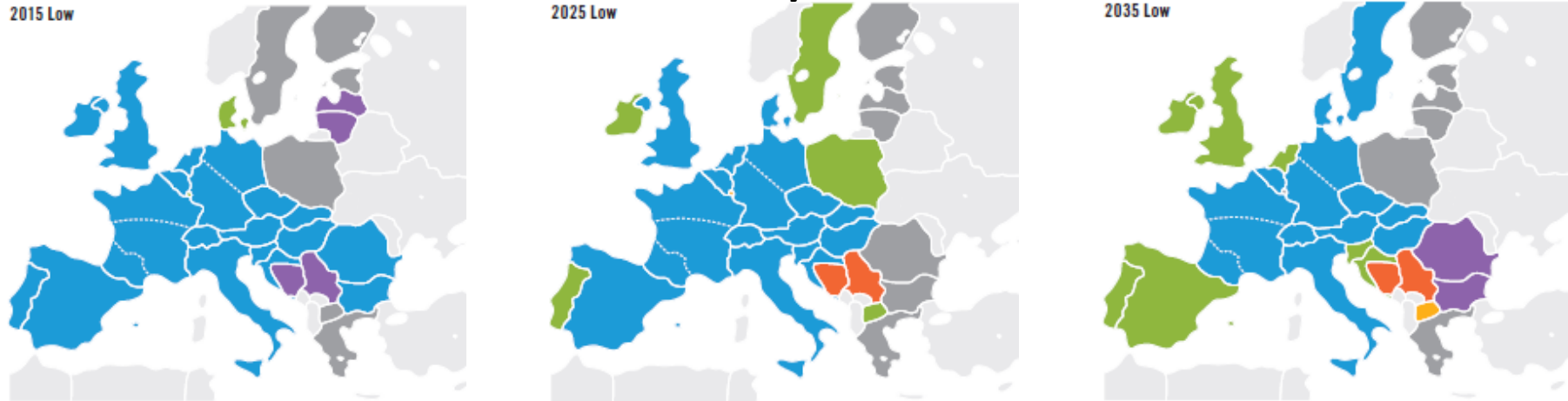
Reader should refer to TYNDP 2015 normal situation to identify the specific impact of transit disruption

(*) Potential of Romanian Black Sea not considered beyond 2032 (expiration of existing licenses)



BY transit disruption during a peak day

To be maintained medium term improvements...



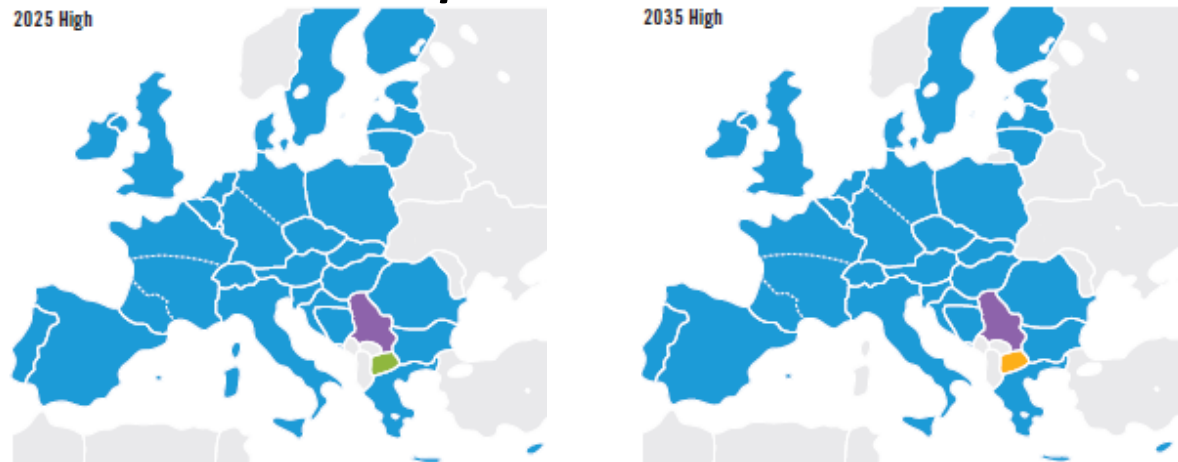
...will require new investment decisions

Remaining Flexibility (RF)

- RF > 20%
- 5% < RF < 20%
- 1% < RF < 5%
- 0% < RF < 1%

Demand Disruption (DD)

- 0% < DD < 20%
- 20% < DD < 50%
- DD > 50%





Physical dependence

Comparison of cooperative and uncooperative approaches

- > In both approaches, gas flows from low to high price areas
- > In the uncooperative approach exit flow only occurs when upstream system is able to balance its whole gas demand
- > Only cooperative approach is mentioned in the main body of the report but both approaches are used in TYNDP 2015 Annex and Project-Specific assessment

**Uncooperative
approach**



**Cooperative
approach**

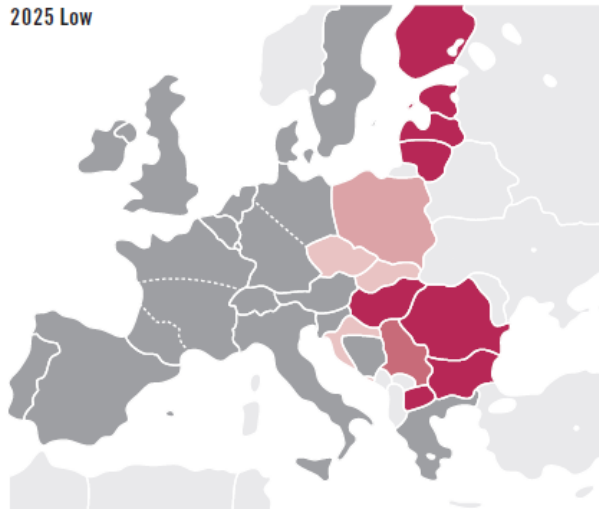




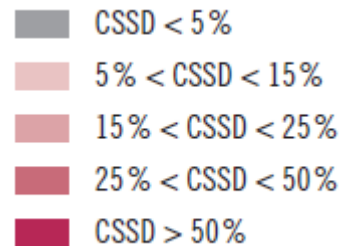
Focus on cooperative approach

New projects may mitigate the dependence on Russian gas and LNG

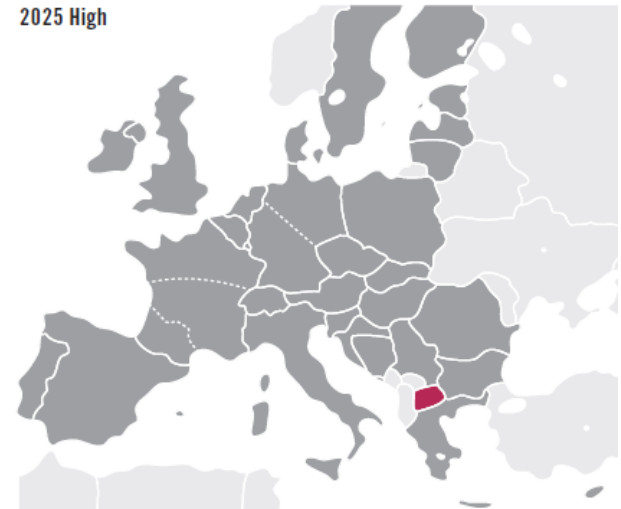
2025 Low



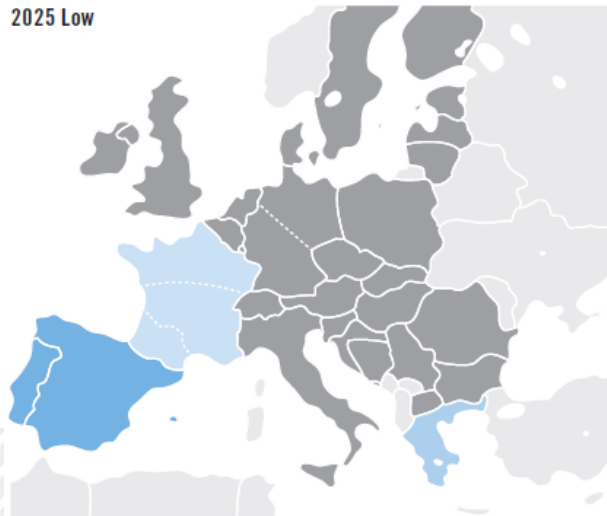
Russia



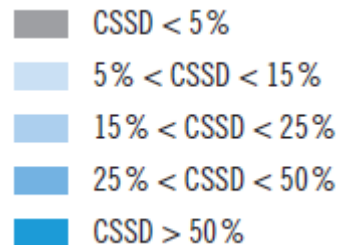
2025 High



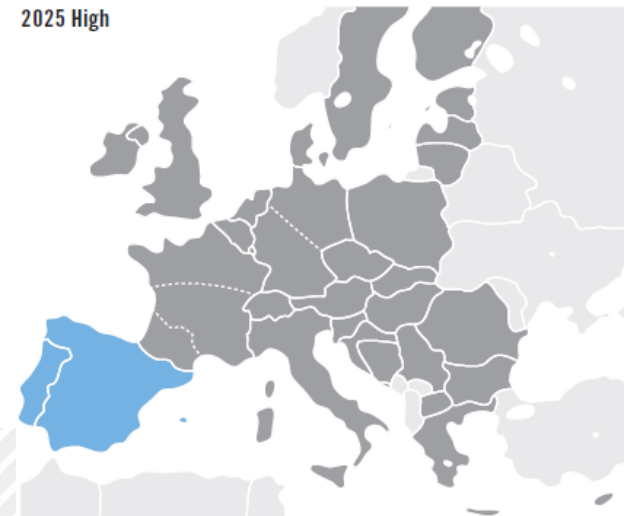
2025 Low



LNG



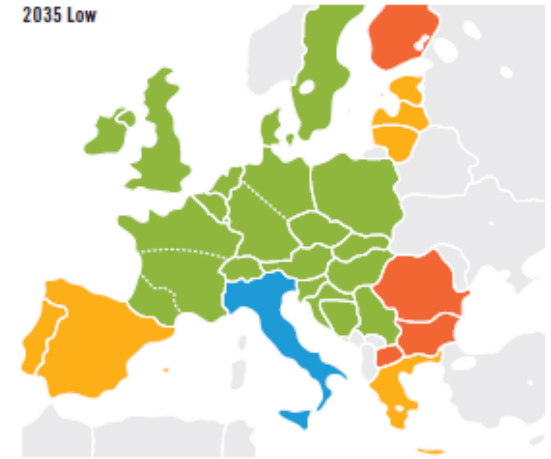
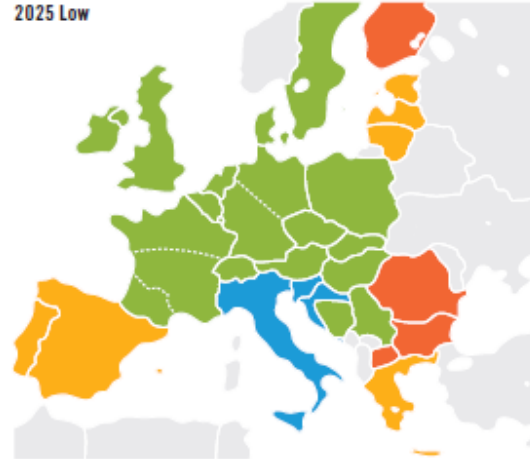
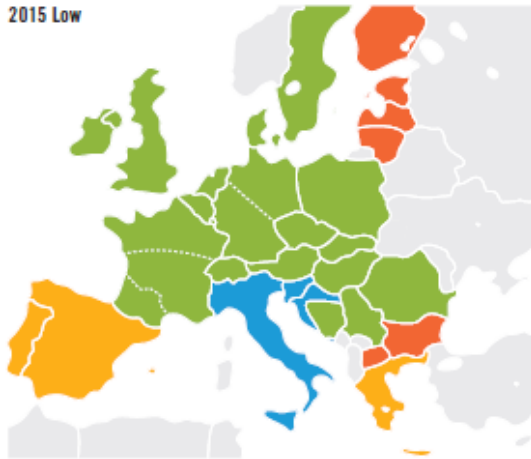
2025 High





Price diversification

Some regions are still lacking of integration ...

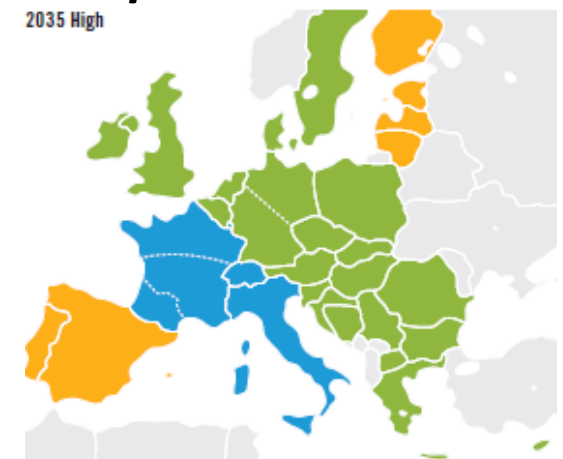
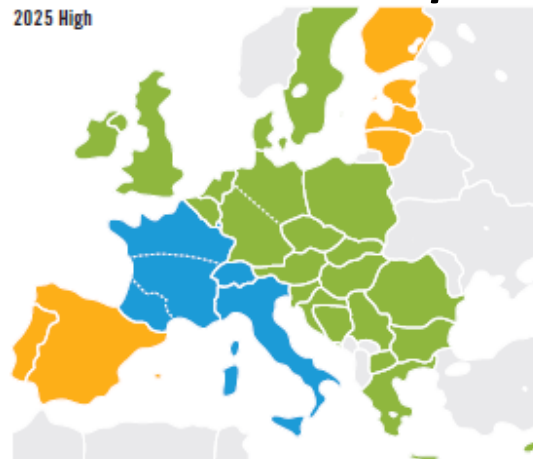


...but improvement is possible

Number of import sources including at least 20% SSPDi reaction

- 1
- 2
- 3
- 4

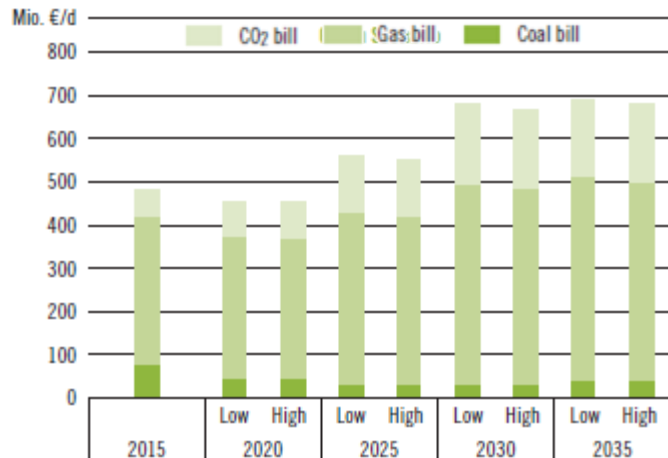
The assumption of well-functioning markets across Europe may give a picture more positive than currently perceived



This assessment focuses on import sources and are not considering European production

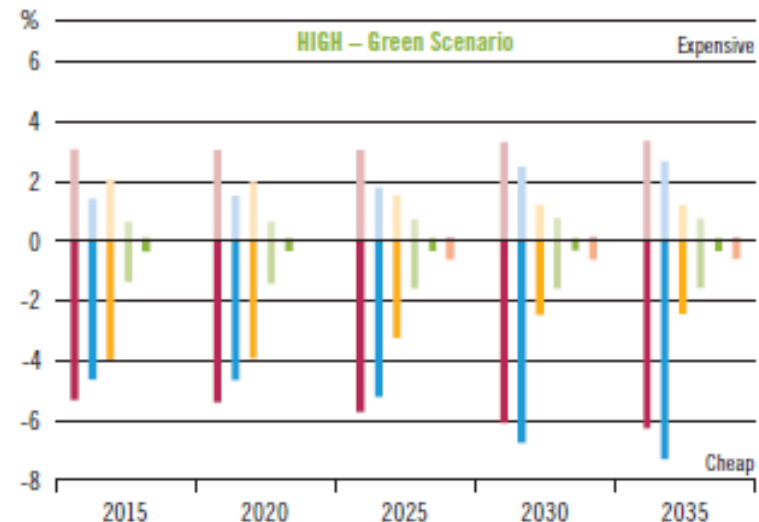
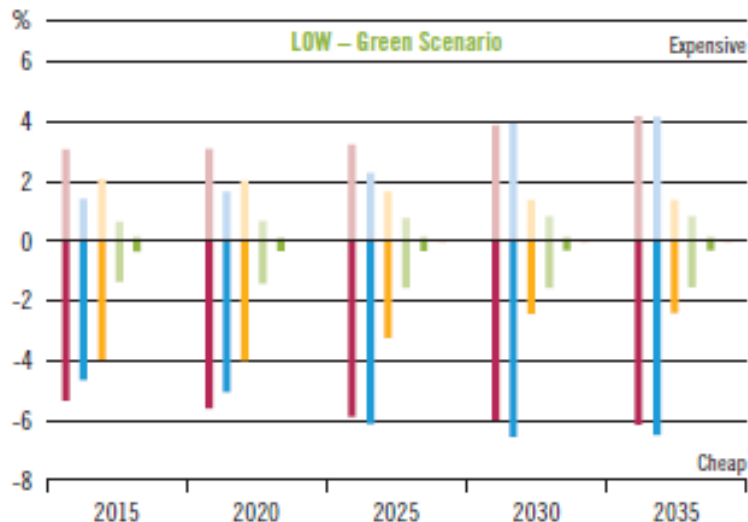


Total EU bill (Gas, coal and CO2)



Largely under global and political influence

- > Coal and CO₂ emission components are independent from the commissioning of new infrastructures (except for connection of new areas)
- > New investment decision for infrastructure and supply projects will enable Europe to benefit from competitive gas price





Additional perspectives within the report

Capacity-based indicators

- > N-1 for ESW-CBA
- > Import Route Diversification

Modelling-based indicators

- > Supply Source Price Dependence
- > Price Convergence
- > Gas Price Index as a proxy for each country gas bill

The importance of cross-reading

- > Each part of the assessment illustrates a different perspective even if common drivers explain some similarity
- > It also supports a better understanding of differences between perceived current situation and modelling results (e.g. impact of the single price curve per source on countries dependent from a predominant source...)



What TYNDP does not provide

There is no identification of investment gap as such

- > A part the ability to cover peak demand there is no clear threshold:
 - To how many sources a country should have access?
 - What access does mean?
- > The lack of threshold may be preferable to administrative targets such as in electricity which could lead to inefficient investments
- > In a European market depending on imports and global factors there is no definition of the best supply mix

An actual extension of stress in time

- > Disruption scenarios only cover:
 - Individual infrastructure or transit route
 - On a peak day or 2-week cold spell
- > Nevertheless Uncooperative and Cooperative Supply Source Dependence indicators give an idea of the physical independence of supply source on a whole year (in such case UGS does not provide a significant help)



Way forward



Working towards TYNDP 2017-2037

Adequacy with stakeholders' expectations

- > Positive feedback during workshops and other fora
- > Few answers to the public consultation (31 March – 5 June) acknowledging the progress since last report but asking a more simple and result-oriented report and further work on the supply scenarios

Formal submission to institutions in July

- > To ACER for opinion under the Regulation 715/2009
- > To EC for notification of investment

Autumn public workshop

- > Presentation of the identified directions for improvement
- > Presentation of the stakeholder engagement process



Thank You for Your Attention

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