TYNDP 2011-2020 & Infrastructure Investments

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Gas Infrastructure Investments

Infrastructure investments influenced by political goals

Single European gas market

EU: 2014

Development of Target Model

Development of European market rules

- Capacity allocation mechanisms
- Balancing
- Congestion management procedures
- Tariffs
- Interoperability

Security of supply

EU: no energy islands after 2015

SoS Regulation: high level of security of supply, bidirectional flow capabilities

Energy infrastructure package: infrastructure corridors

Future gas flows at cross-border points will require higher infrastructure flexibility.

Incentivizing regulatory framework is necessary to attract required investments.

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Ambitious goals require (acceptance of) large investments

The construction and operation of such infrastructure by TSOs must be sustainable from the long-term financial and regulatory perspective

- Flexibility to be determined by the market and its commitments
- SoS requirements determined as a policy choice to consider realistic gas supply potential and competitiveness of gas; public funding or guarantees may be necessary
- Criteria for the identification of Projects of Common Interest (PCIs) to avoid discrimination between competing projects
- Streamlining of permitting & planning procedures not to create a second league of infrastructure projects which could hamper real integration of the systems

National Regulation Plays Key Role

National regulation needs to truly embrace the objective of creating an internal market in gas within the whole Union so that it is possible to realize an integrated gas network supporting the long-term European vision for the energy market

- Real investment incentives to replace focus on squeezing operational costs
- Access of TSOs to financing is challenging
- Long-term regulatory view of network development to be aligned with the future network access design as well as the enhanced flexibility needs linked to the role of gas as the enabling fuel for variable electricity generation

TYNDP
Contribution to Development of Integrated European Network

TYNDP 2011-2020 -- Factsheet 1

Duration of development

- February 2010 - February 2011 (incl. approval process)

Data Collection

- Infrastructure projects: Through TSOs and other infrastructure developers through public call for information
- Demand outlooks: Through TSOs and from respected public sources (Commission, Eurogas, IEA)
- Supply outlooks: From different public, in particular governmental, sources and studies

Infrastructure Projects (FID + Non-FID)

- Transmission: 159 (62 + 97)
- Storage: 48 (26 + 22)
- LNG: 31 (11 + 20)

TYNDP 2011-2020 -- Factsheet 2

Scenarios

- 67 scenarios based on combination of multiple parameters settings (Year, Project Status, Climatic conditions, Disruption, UGS deliverability, Supply source mix) along three axes (Reference, SoS, Market integration)

5 Report Annexes

- Infrastructure Projects (Detailed information)
- Country Profiles (Current gas infrastructure + historical demand)
- Supply & Demand data
- Capacity data
- Modelling results

TYNDP 2011-2020 -- Factsheet 3

Publication

- 17 February 2011

TYNDP Workshop

- 17 March 2011

Public consultation

- 25 March - 25 June 2011
- 9 responses (EFET, Eurogas, EDF, Edison, Elengy, SMTFC, TAP, TGL, Wärtsilä)

ACER -related process

- Submission to ACER for opinion: 18 July 2011 (incl. the Corrigendum)
- ACER opinion: 16 September 2011

Presentation to MEPs (via EEF)

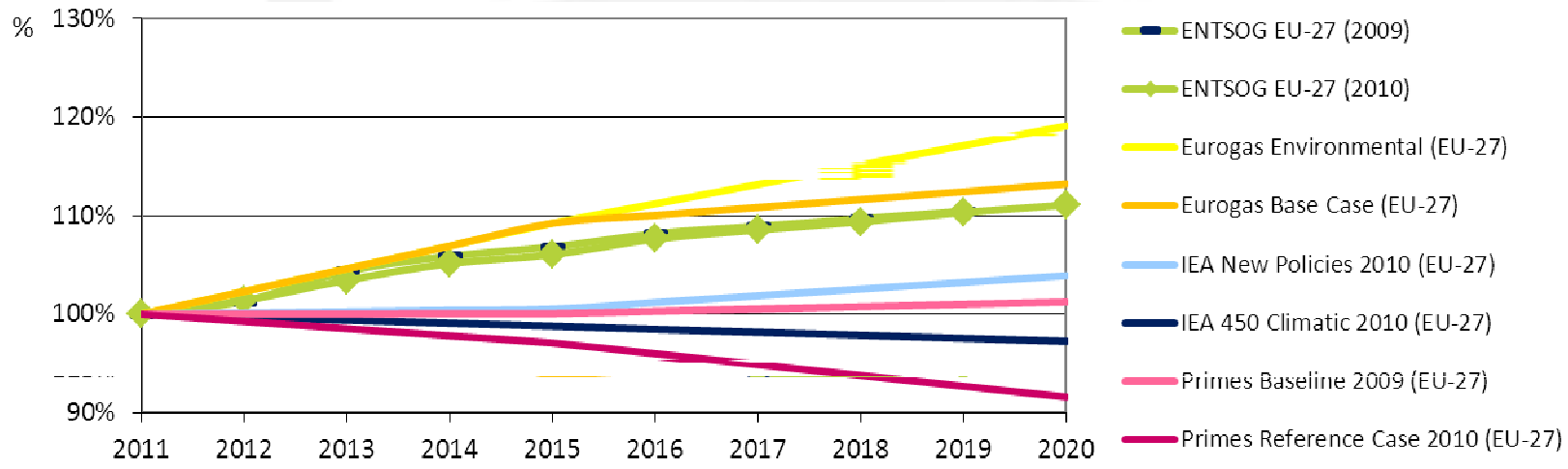
- 12 October 2011

Demand Outlook 2011-2020

(Growth trends (%), 2011 start)

Demand is a highly uncertain variable

- Forecasts range from a 9% decrease in demand to a 19% increase
  - in absolute numbers, the difference is equal to the combined consumption of Germany and Belgium
- This reflects differing assumptions on the role of gas in the future energy mix and makes it difficult for the TSOs to define the High Daily Demand* which is the basis for designing resilient networks

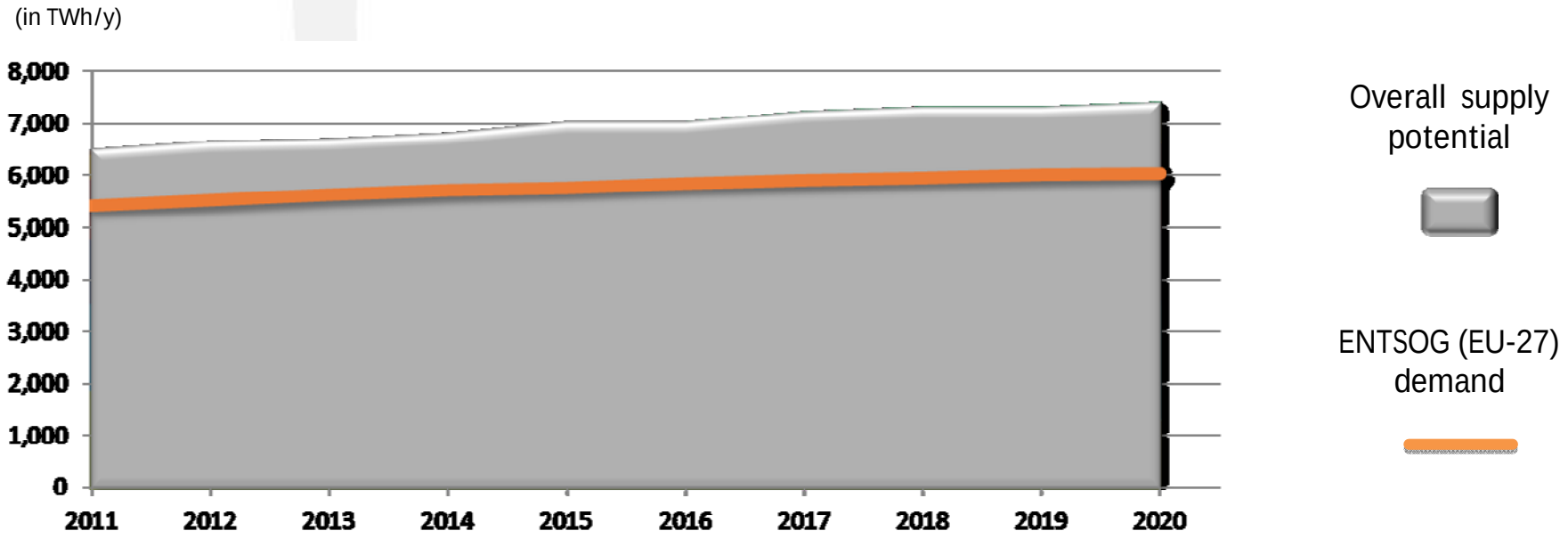


*HDD is to be understood as demand outlook for extreme climatic conditions occurring statistically at low frequency

Annual Supply Demand Balance

The supply potential for Europe seems robust enough to meet all presented demand outlooks while allowing also for additional flexibility

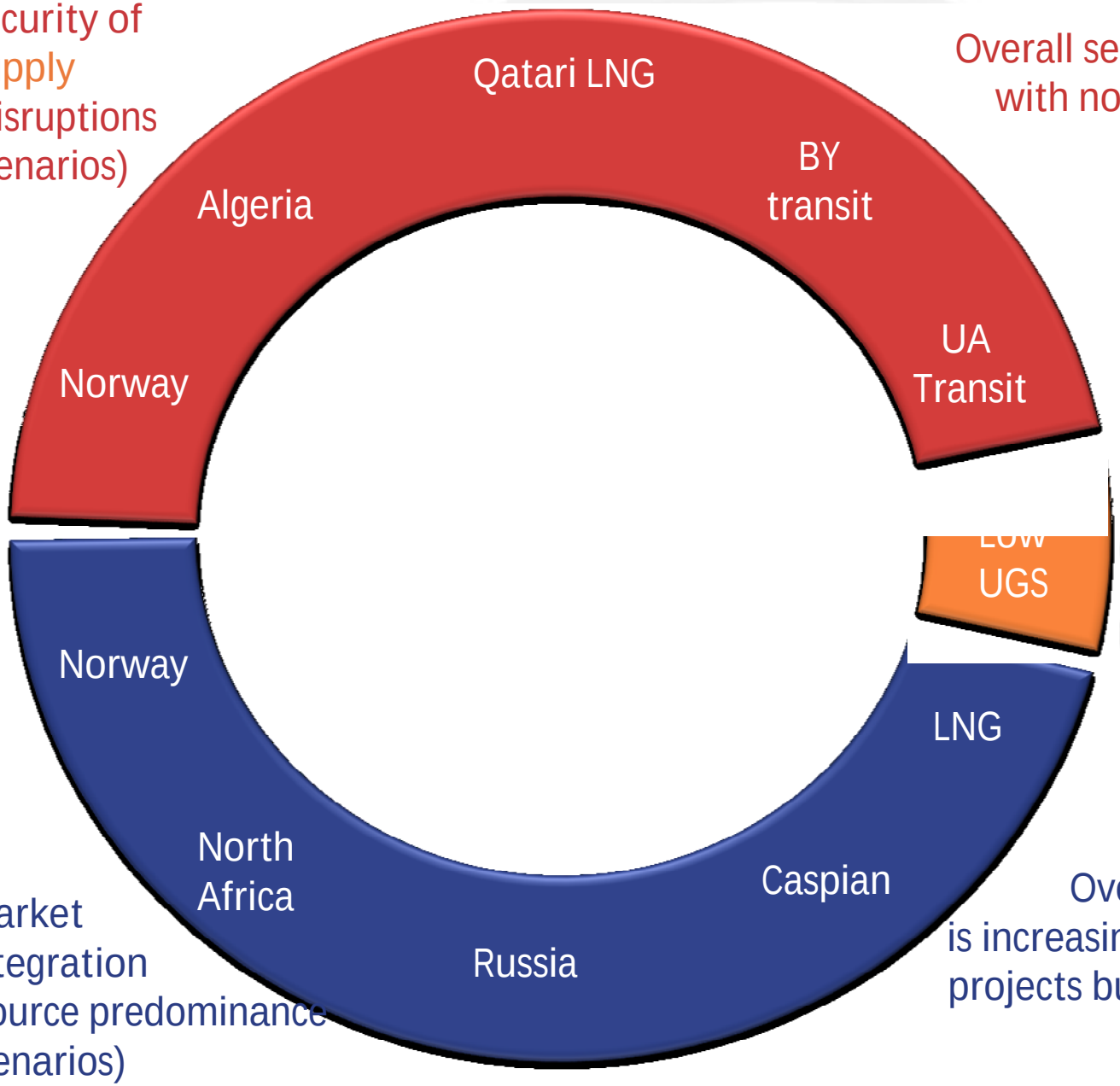
- Geo-political developments as well as demand growth in producing countries to be continuously analysed to confirm this outlook



Network Resilience Scenarios

Security of Supply (disruptions scenarios)

Overall security will only improve with non-FID projects with few exceptions

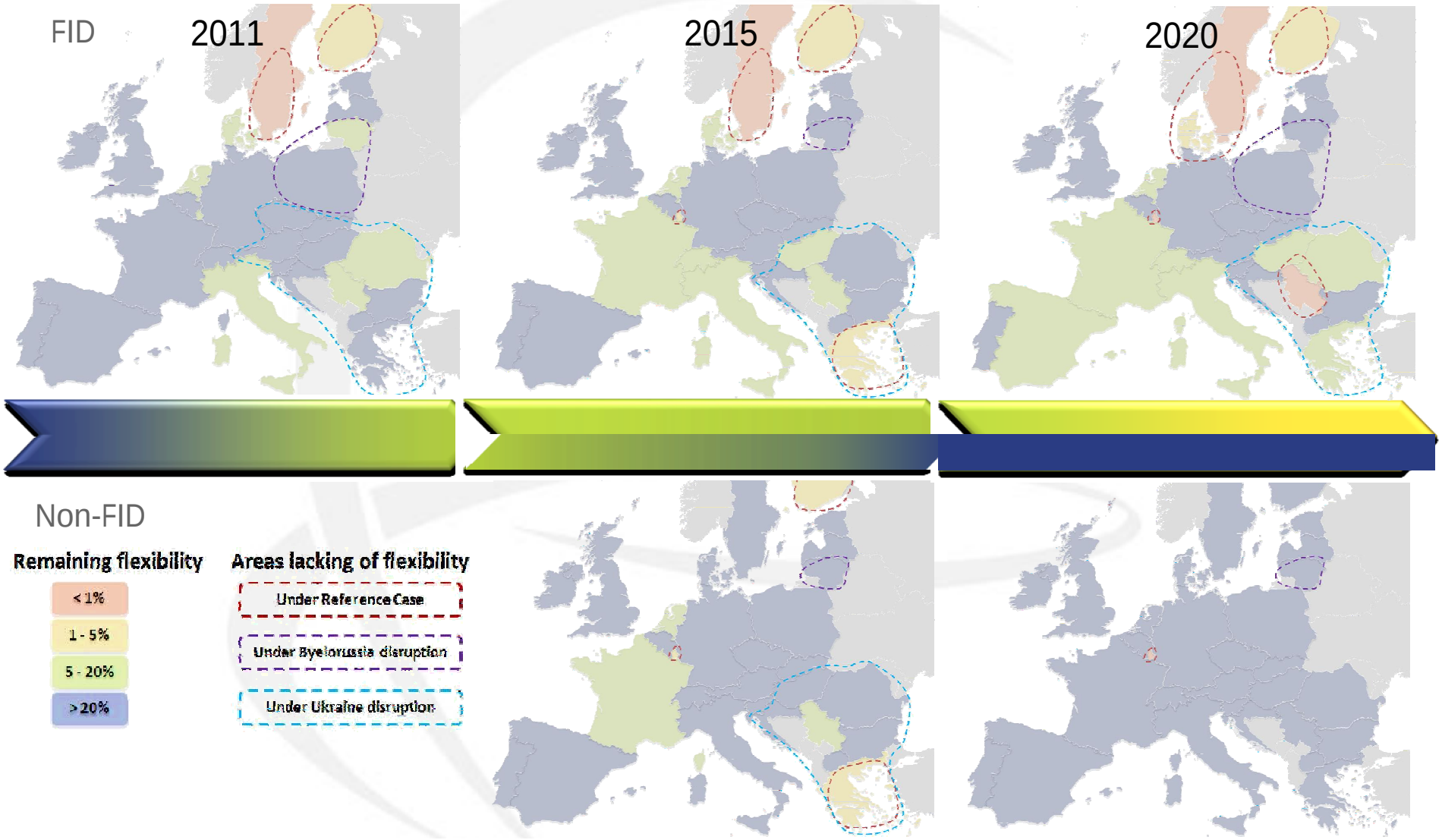


With only FID, storage deliverability in winter remains a key requirement

Market Integration (source predominance scenarios)

Overall market integration is increasing due to FID & non-FID projects but spread width will still differ

Evolution of remaining flexibility (1-in-20 day)



New investment decisions are crucial in order not only to maintain but also to increase European security of supply (FID projects will not be sufficient)

TYNDP 2011-2020 -- Key Findings

Security of Supply scenarios

- A quite high overall resilience
- Some regions could still be negatively impacted by disruptions
- Storage flexibility will depend on new project development (non-FID projects)

Market Integration scenarios

- Heterogeneous situations
- Availability of additional supply will have to be assessed
  - Additional supply may require additional and geographically diversified import routes and pipes to bring gas into the centre of European gas network

TYNDP findings give a European panoramic view. They need to be interpreted under the selected scenarios and further detailed analysis is necessary to draw more concrete conclusions. It will also be necessary to assess the impact of new TPA arrangements on the need for new infrastructure investments, in particular for flexibility.

TYNDP is a continuous and challenging process...

The assessment of future developments is bound to the actual moment of analysis; certain continuity nevertheless needs to be ensured due to the long lead times for infrastructure development and its long-term character

- The involvement of ALL stakeholders is key for the quality of the document
- Challenges are multiple
  - Collection of detailed data for the analysis and scenario building
  - Developing of a realistic (NOT theoretical) modelling tool
  - Avoiding of discrimination between competing projects
  - Considering of the uncertainties about future development of the gas market in Europe, incl. the role of gas in renewable future

TYNDP 2011-2020 Public Consultation

Responses -- General Remarks

General

- TYNDP 2011-2020 is considered as a big step forward
- Consistent dialogue with stakeholders

Supply & Demand

- Underlying assumptions for TSOs' demand forecasts should be added
- Yearly scenarios are insufficient to capture seasonal dynamics
- LNG specificity is not sufficiently considered

Scenarios

- Meaningful SoS assessment
- Incomplete Market Integration assessment

Responses -- Key Suggestions For Improvement

General

- Thematic public working sessions could be included in the process

Supply & Demand

- Analysis of the impact of power generation mix on gas demand
- Better transparency and consistency between TSOs' demand forecasts
- Wider range of supply scenarios

Scenarios

- Improvement of the market integration resilience test methodology
- More infrastructure scenarios but keeping non-discriminatory criteria

Meaningful demand analysis requires a better understanding of the power generation mix impact on the resilience of the European gas network. Closer cooperation with ENTSO-E will help achieve such improvement.

Conclusions

Conclusions

Challenges for gas infrastructure development are multiple

- The role of gas in Europe in the future and the flexibility required in the gas system considering the variable power generation from renewables and the future energy mix
- Determination of infrastructure needs and the 'who-pays' principle for projects supporting different targets: Security of Supply, Market Integration and Sustainability
- Avoidance of discrimination between competing projects through criteria for PCIs
- Long-term sustainability of the construction and operation of gas infrastructure
- Lack of European vision in national regulation
- Full and proper implementation of 3rd energy package principles

Ten-Year Network Development Plan contribution

- TYNDP will support the process leading to an adequate integrated European network
- Involvement of all stakeholders in its development is key to achieve such goal

Thank You for Your Attention

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