



Energy Infrastructure Package and infrastructure financing

Directorate-General
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- **Infrastructure challenges**
- **From new European infrastructure priorities by 2020 to projects of common interest**
- **Implementation of projects of common interest**
 - » **Financing**
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 - » **Regulation**

Energy Infrastructure Package – Future TEN-E

November 2010

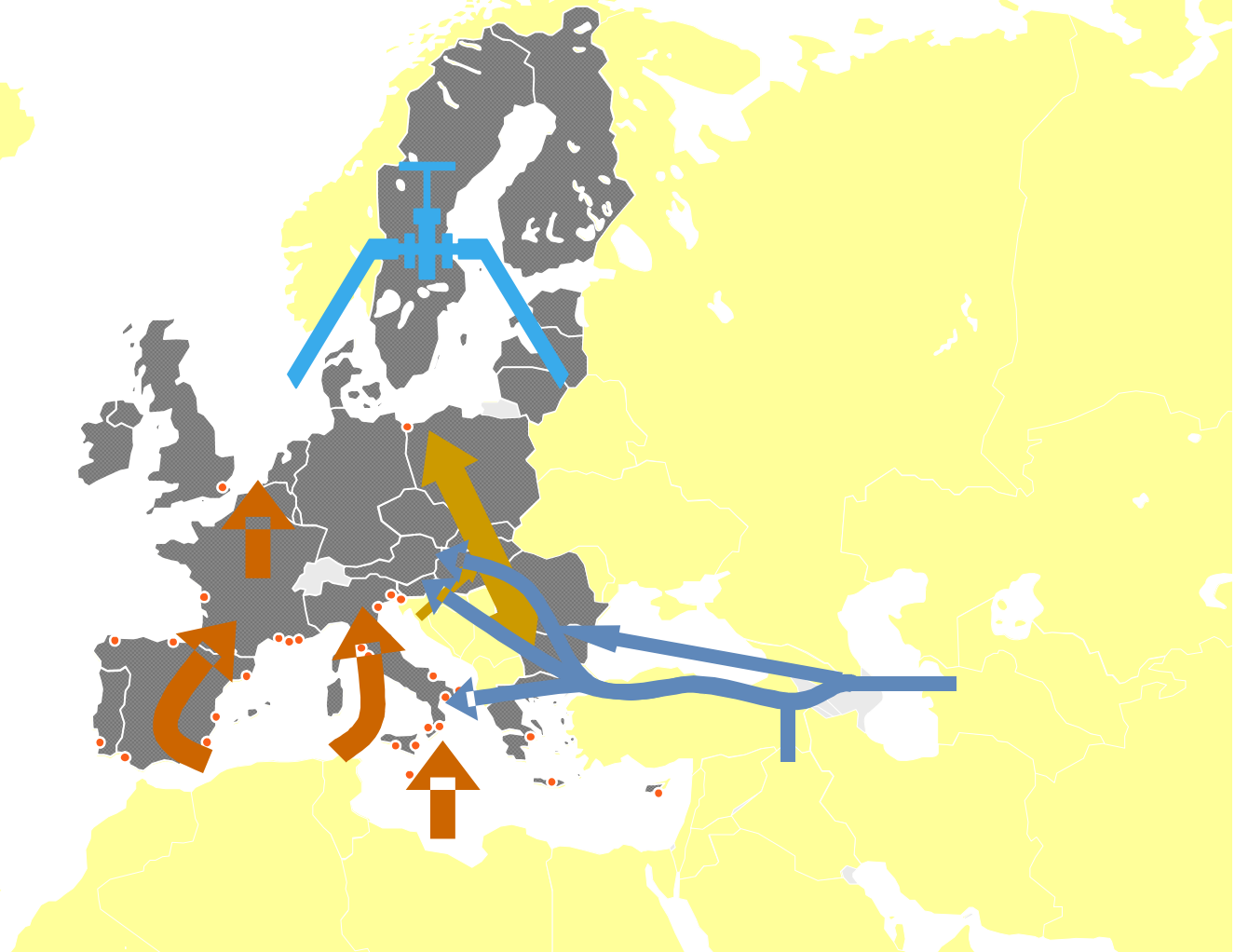
- Communication on **energy infrastructure development and priorities for 2020/2030 and beyond**
- Annex on **the priority infrastructure actions** and the tools necessary to implement them
- Impact Assessment Report

Autumn 2011

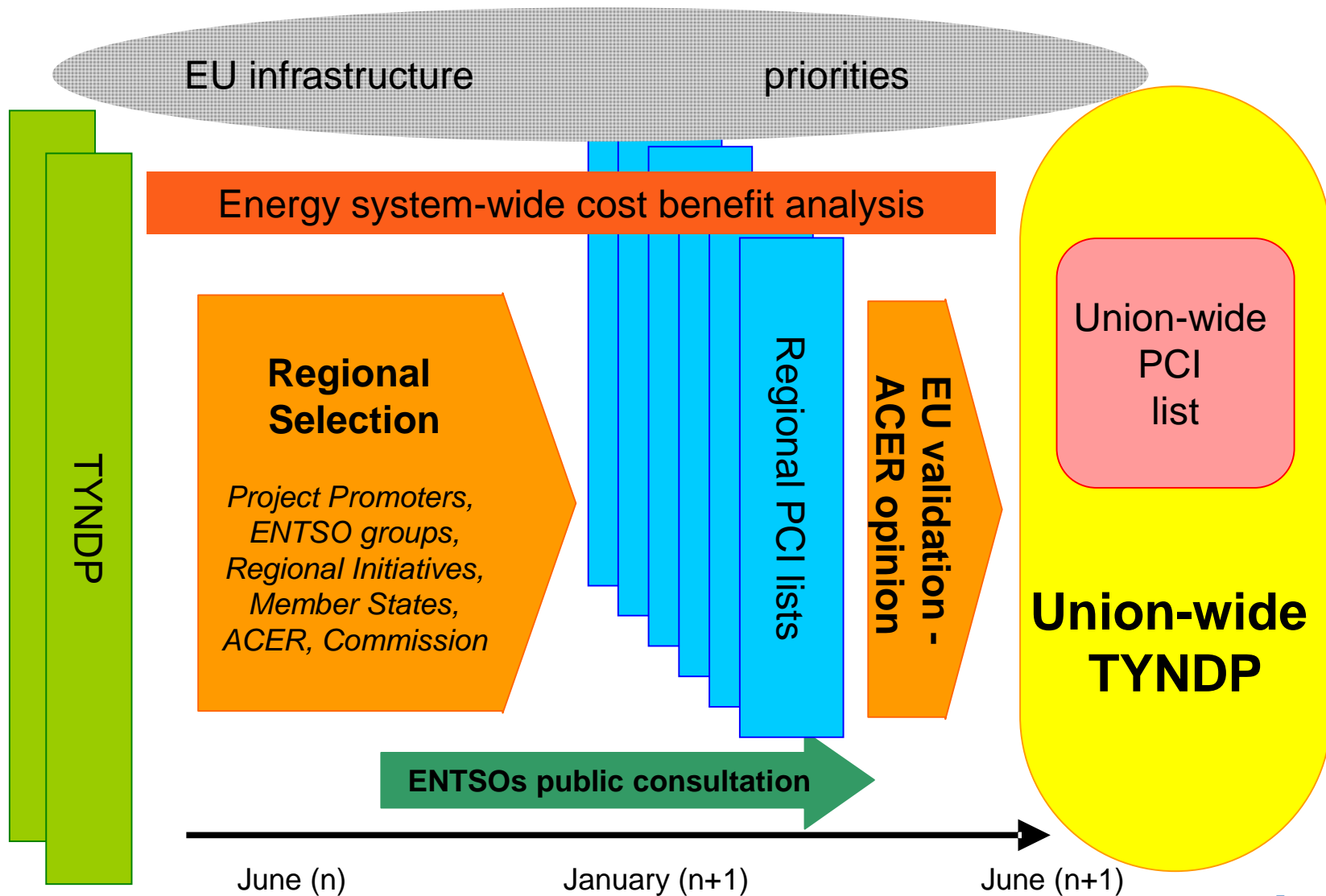
- **June 2011:** MFF Proposal for a **Connecting Europe Facility (CEF)** with €50bn for transport, ICT and €9.12 bn for energy
- **Financial Part:** Legislative proposal for a Regulation establishing the Connecting Europe Facility
- **Policy Part:** Legislative proposal for a Regulation on guidelines for the implementation of energy infrastructure priorities 2020
- Impact Assessment Report

From new European infrastructures priorities by 2020 for gas

- Southern gas corridor
- Baltic energy market inter-connection plan
- South-North gas interconnections in Western Europe
- North south gas & oil interconnections in Central & South East Europe



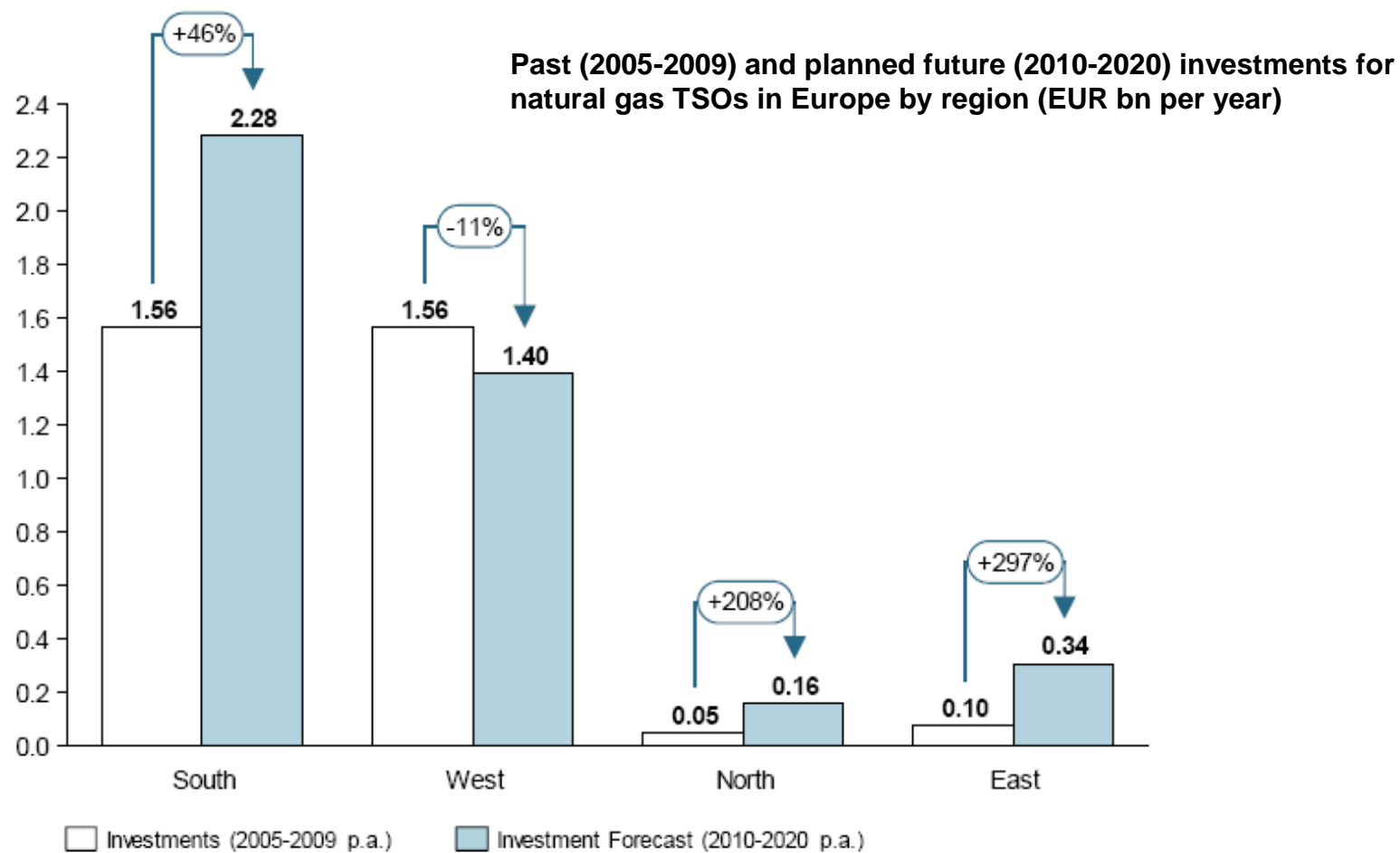
To projects of common interest (PCI)



On the basis of common criteria

- **Market integration:** new capacity offered by a project to the existing interconnection capacity, to the integration of market areas and price convergence, the interoperability and flexibility of the system, including the capacity level offered for reverse flows under various scenarios
- **Security of gas supply:** contribution to short and long-term resilience of the system to cope with supply disruptions under various scenarios
- **Competition and Diversification:** contribution to diversification, the facilitation of access to indigenous sources of supply, lowering import dependency, taking successively into account diversification of sources, counterparts and routes and the impact of new capacity on the HHI index
- **Sustainability:** contribution to innovative uses of gas networks, to support the back-up of renewable electricity generation or power-to-gas and biogas transportation.

The investment challenge



Energy system investment needs

Total investment needs in the electricity and gas sector
between 2010-20: over 1 trillion €

Power generation: ~ 500 bn

RES: ~ 310 – 370 bn

Transmission and distribution: ~ 600 bn

Distribution: ~ 400 bn

Transmission: ~ 200 bn

Electricity: ~ 140 bn
(interconnectors: 70, offshore
grid: 30; smart grid installations
in transmission: 40)

Gas: ~ 70 bn
(import pipelines,
interconnectors, reverse
flows, storages, LNG)

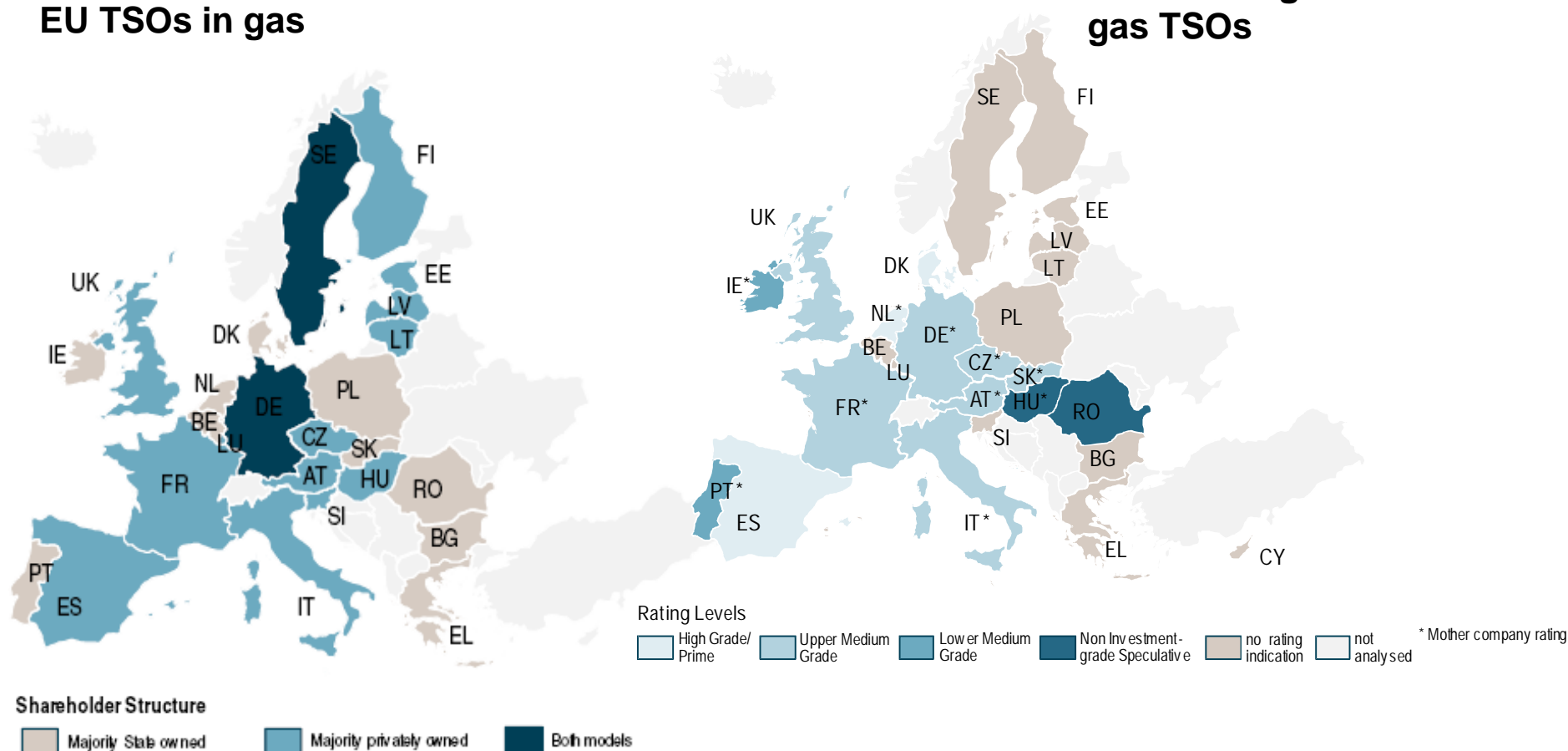
New ENTSG TYNDP
ENTSG - 89 bn Euro

*NB: approximative figures, mainly from DG
ENER calculations based on data from
PRIMES, ENTSGs, KEMA etc.*

The investment challenge

Ownership structure for EU TSOs in gas

Credit ratings of natural gas TSOs



(1) Financing challenges

- **Access to debt capital: financial crisis** limits access to long-term debt on favourable terms and higher country risks
- **Access to equity capital:** stable ratings for networks, but lack of credit ratings for many TSOs and ownership structure
- **Difficulties to attract new institutional investors**
- **Lack of adapted funding instruments and sufficient envelopes:** TEN-E programme has limited budget, inflexibility, no risk mitigation instruments, no funding outside the EU, insufficient synergies with other EU funds, limited to grants

(2) Regulatory framework for investment Challenges

- **Asymmetry of costs and benefits**
 - » Increasing interdependencies of the grids bring asymmetric benefits
 - » Narrow cost-benefit analysis (CBA) does not sufficiently take into account externalities and wider regional/EU impacts
 - » Lack of common CBA tools at regional/EU level
- **Lack of coordination of cross-border investments approval process**
 - » Cross-border investment decisions are complex and require to match two (or more) regulatory systems on a case-by-case basis
 - » Delays and lengthy negotiations or failures in case NRAs do not agree
 - » Lack of cross-border cost allocation
- **Lack of incentives to meet EU climate & energy priorities**
 - » NRA have role to give incentives for both the short and the long term
 - » Assessment of best practices among NRAs

(2) Regulatory framework and financing

à Ensuring complementarity between regulatory and public funding instruments

Enabling investments with cross-border impact:

- EU energy system wide cost-benefit analysis
- Agreement between NRAs upon joint proposal by TSOs
- ACER as mediator

Long-term incentives for investment:

- Risks related incentives through tariffs on the basis of the CBA
- Rules for anticipatory investments, additional return or early recognition of incurred costs before commissioning and others

CEF EU financial support by leveraging private investments:

- Reduction of risks through innovative financial instruments (loan guarantees, equity participations, project bonds) developed with IFIs
- Ø Grants for works and studies

(3) Permit granting procedures Challenges

- **Delays: more than ten years** from first planning until final commissioning
- **Opposition of affected population**

Underlying causes

- Unclearity about the necessity and benefits of the project
- Negative perception about impacts on environment and landscape, health and safety (NIMBY or BANANA!)
- Late and lack of involvement of the public and stakeholders
- **Inefficient administrative procedures**
 - » Complex and fragmented process
 - » Lack of upfront planning and coordination
 - » Lack of time limits

(3) Permit granting and public consultation Solutions

- Priority status for projects of common interest
- One-stop shop at national level for all projects of common interest
- Cross-border cooperation and coordination between authorities
- Permit granting schedule detailing each step in the process → joint schedule for cross-border projects
- Time limit for planning and permit granting procedure (excluding legal recourse) while ensuring highest standards of environment protection and consultation
- Early and effective involvement of stakeholders



Thank you for your attention!