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The integration of the Internal Energy Market in the European Union: recent developments and future challenges

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Harvard Kennedy School
Cambridge, MA, 14 April 2015

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The Third Package
Towards the Single Energy Market

1st Package
"First common rules for the internal market and liberalisation"

Partial liberalisation

2nd Package
"Speeding up liberalisation and market integration"

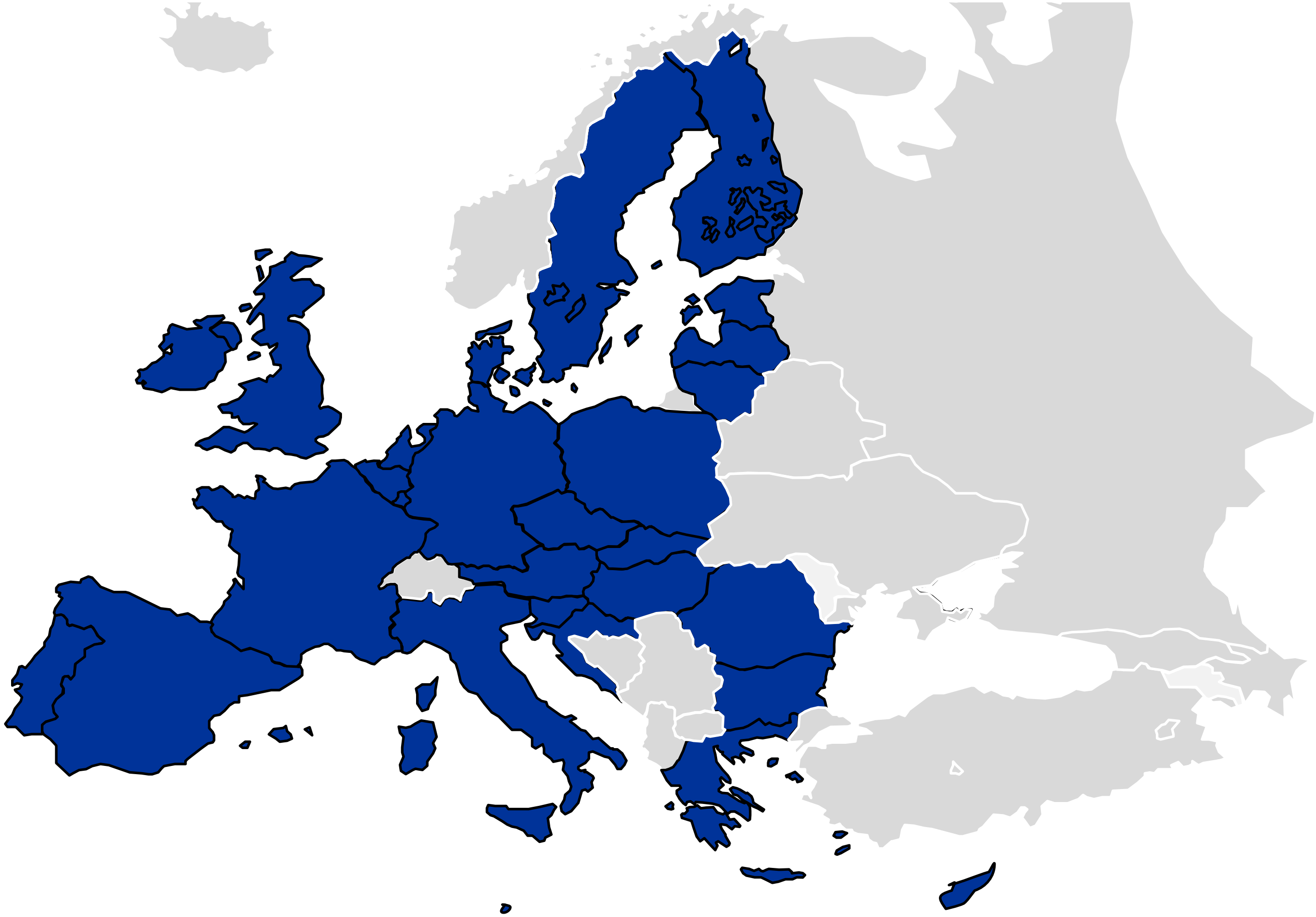
Full market opening; obligation for MSs to establish NRAs independent from industry; legal & functional unbundling

3rd Package
"EU-wide Institutional and Regulatory Framework"

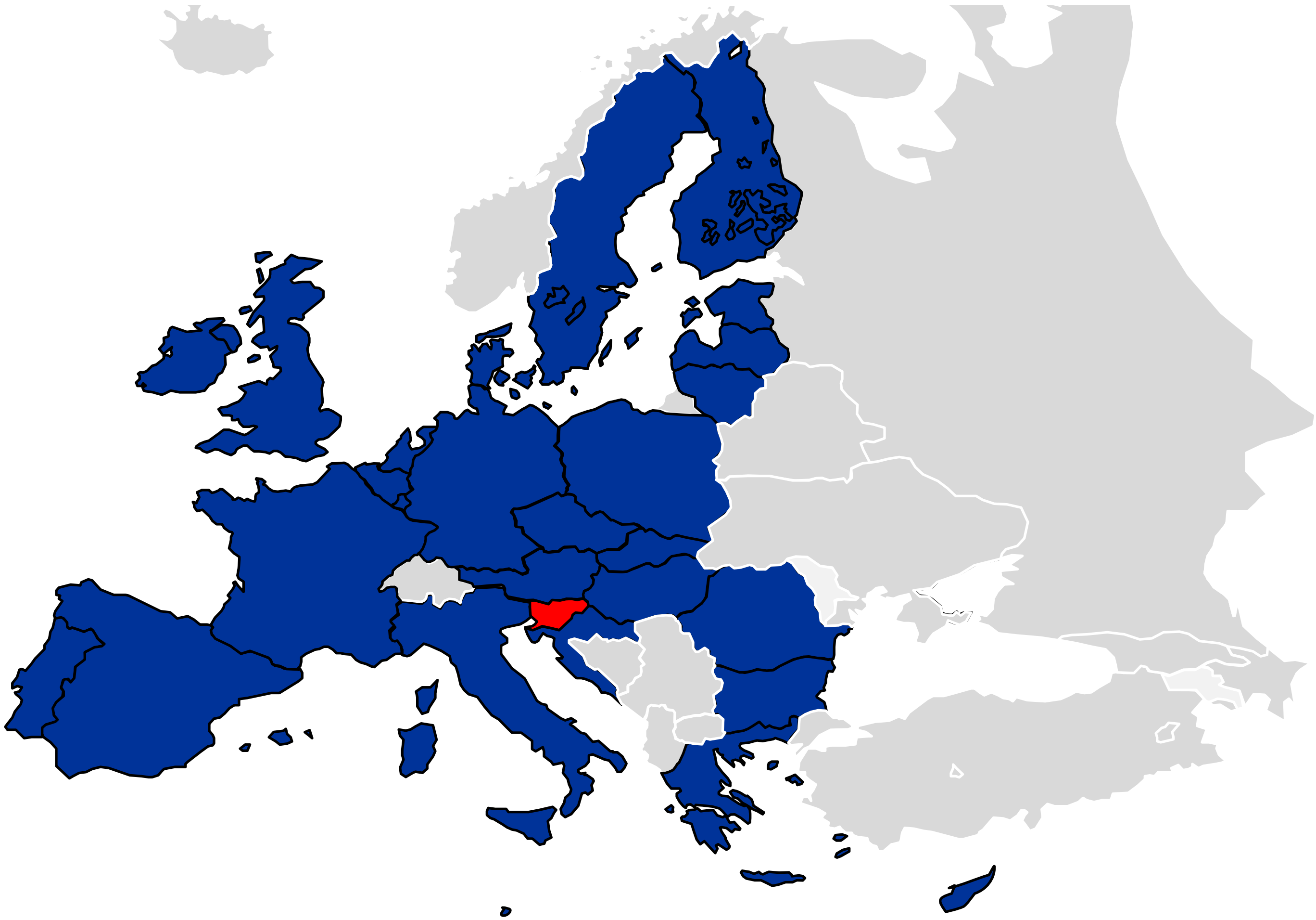
Reinforcing unbundling (including ownership); harmonised cross-border rules; strengthened NRA independence and powers; establishment of ACER & ENTSOs

1996 1998 2003 2005 2009

The European Union

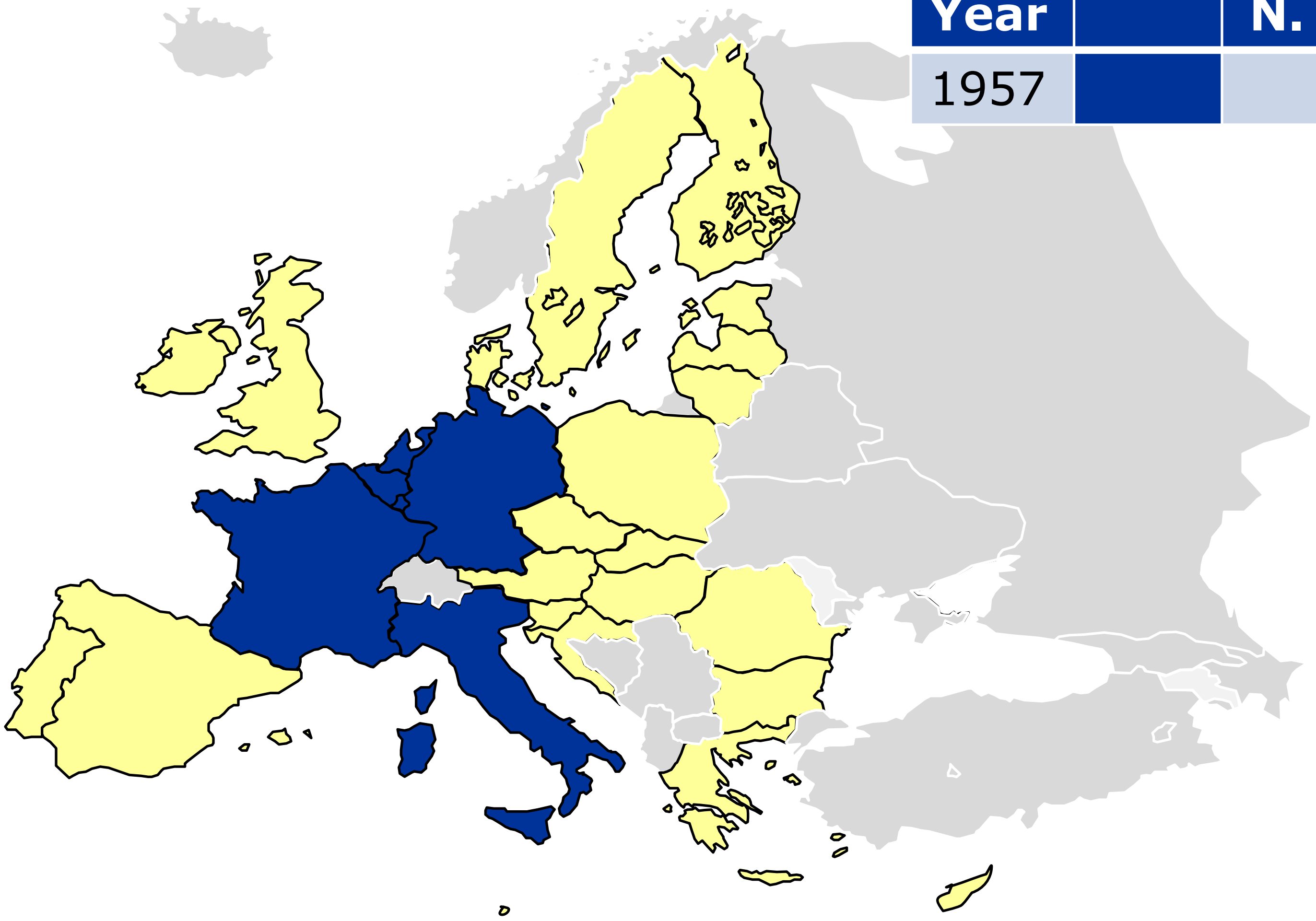


The European Union

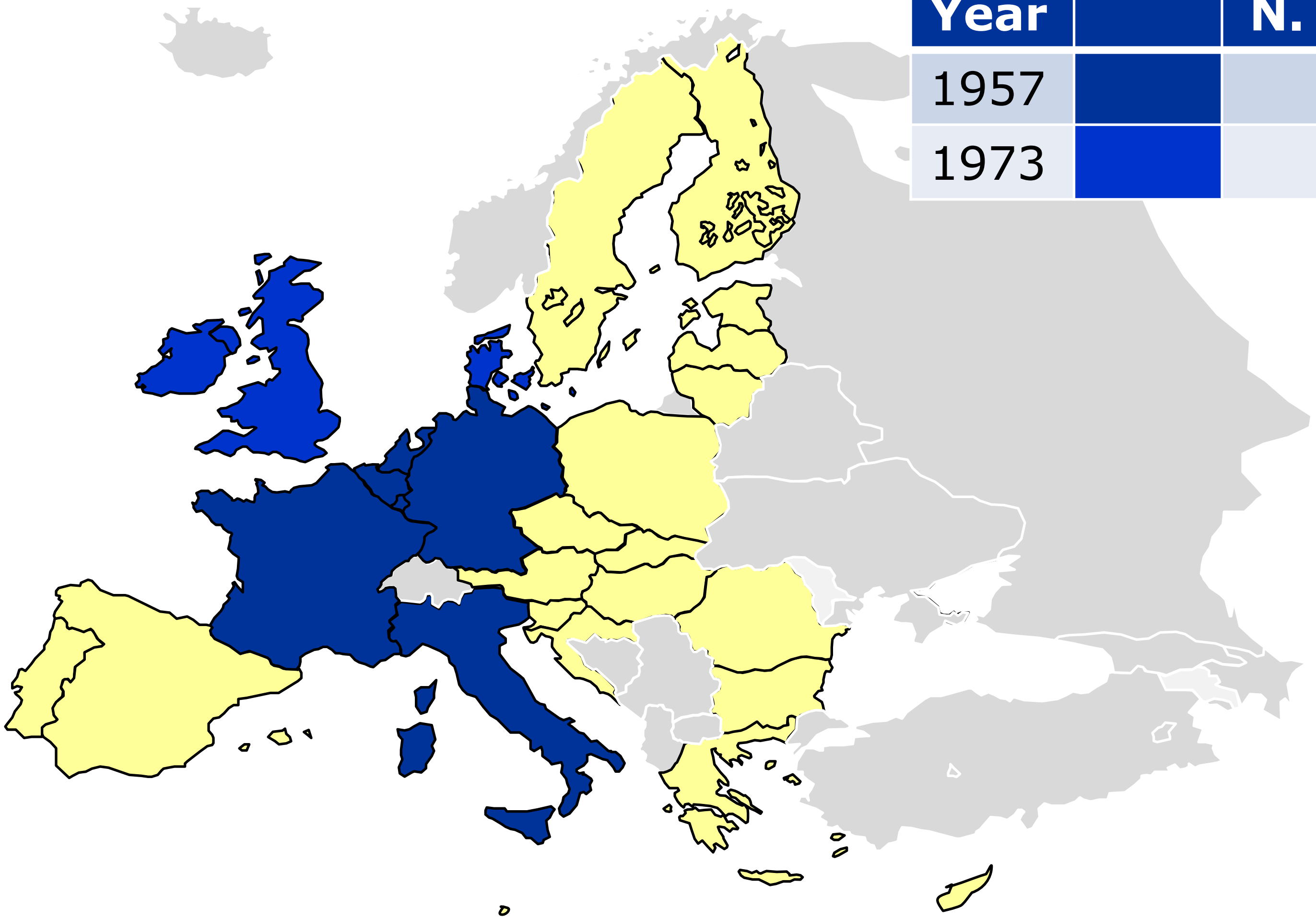


The European Union

Year		N. of MSs
1957		6



The European Union



Year		N. of MSs
1957		6
1973		9

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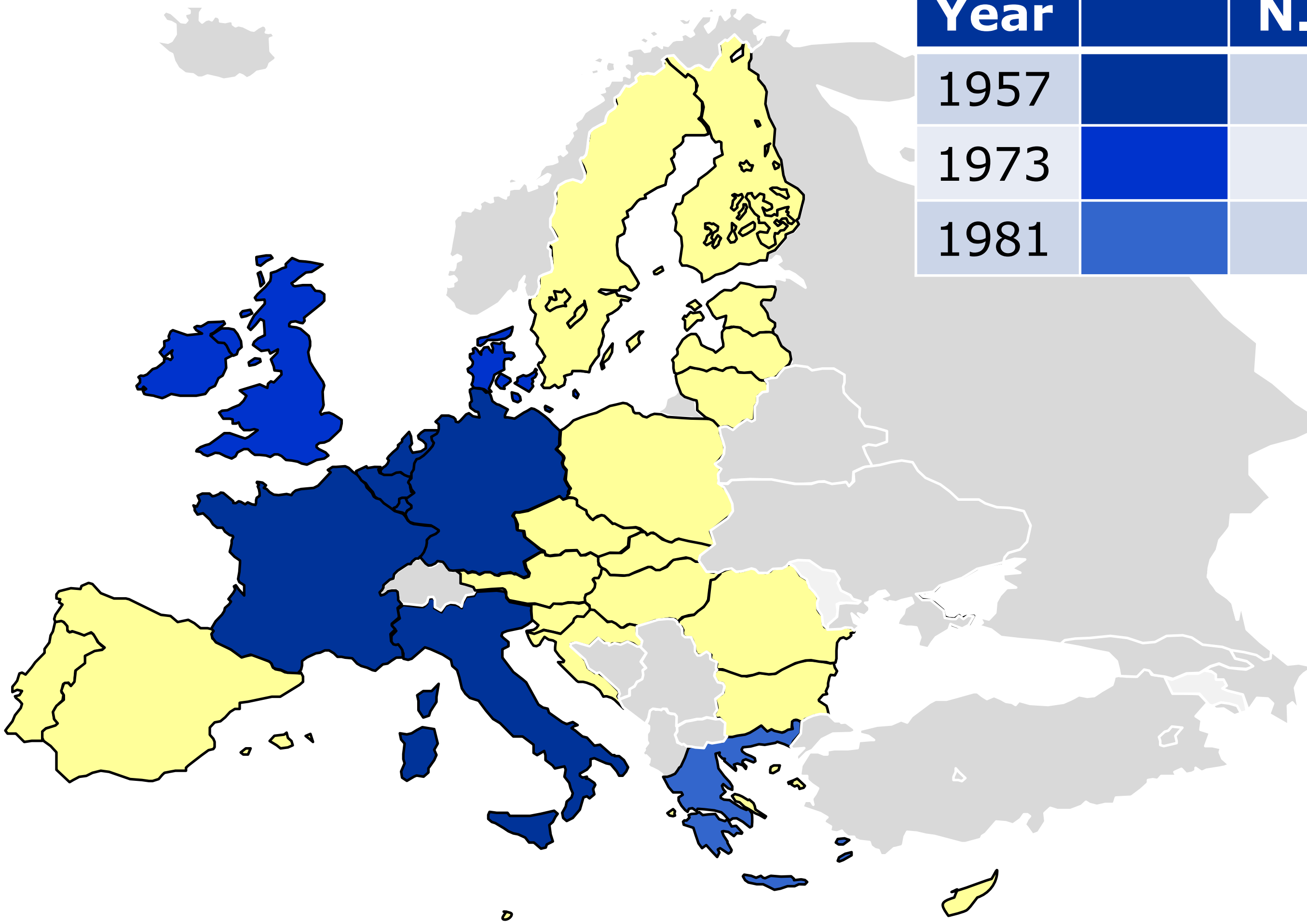
The European Union



Year		N. of MSs
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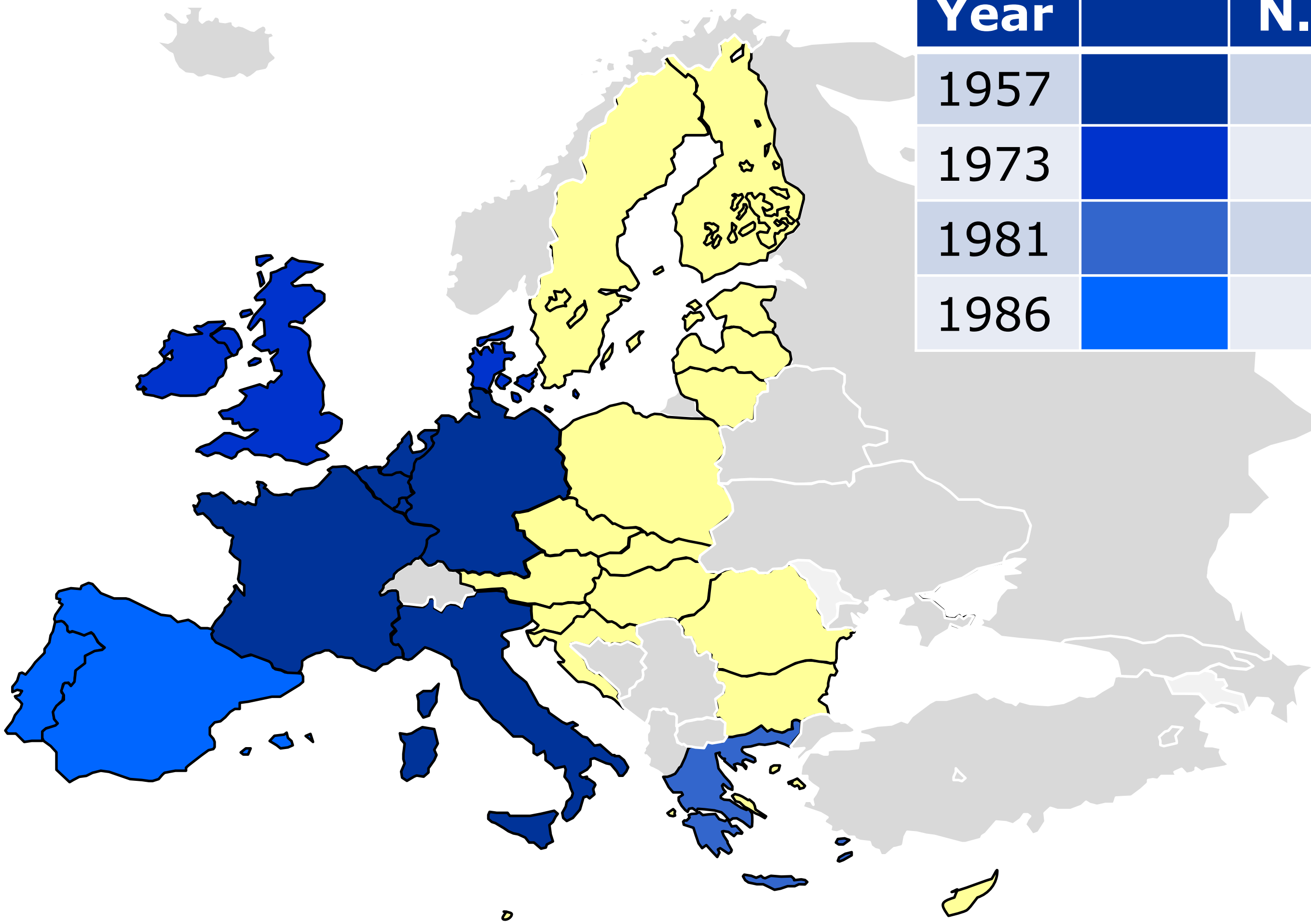
1973		9
1981		10

The European Union



Year		N. of MSs
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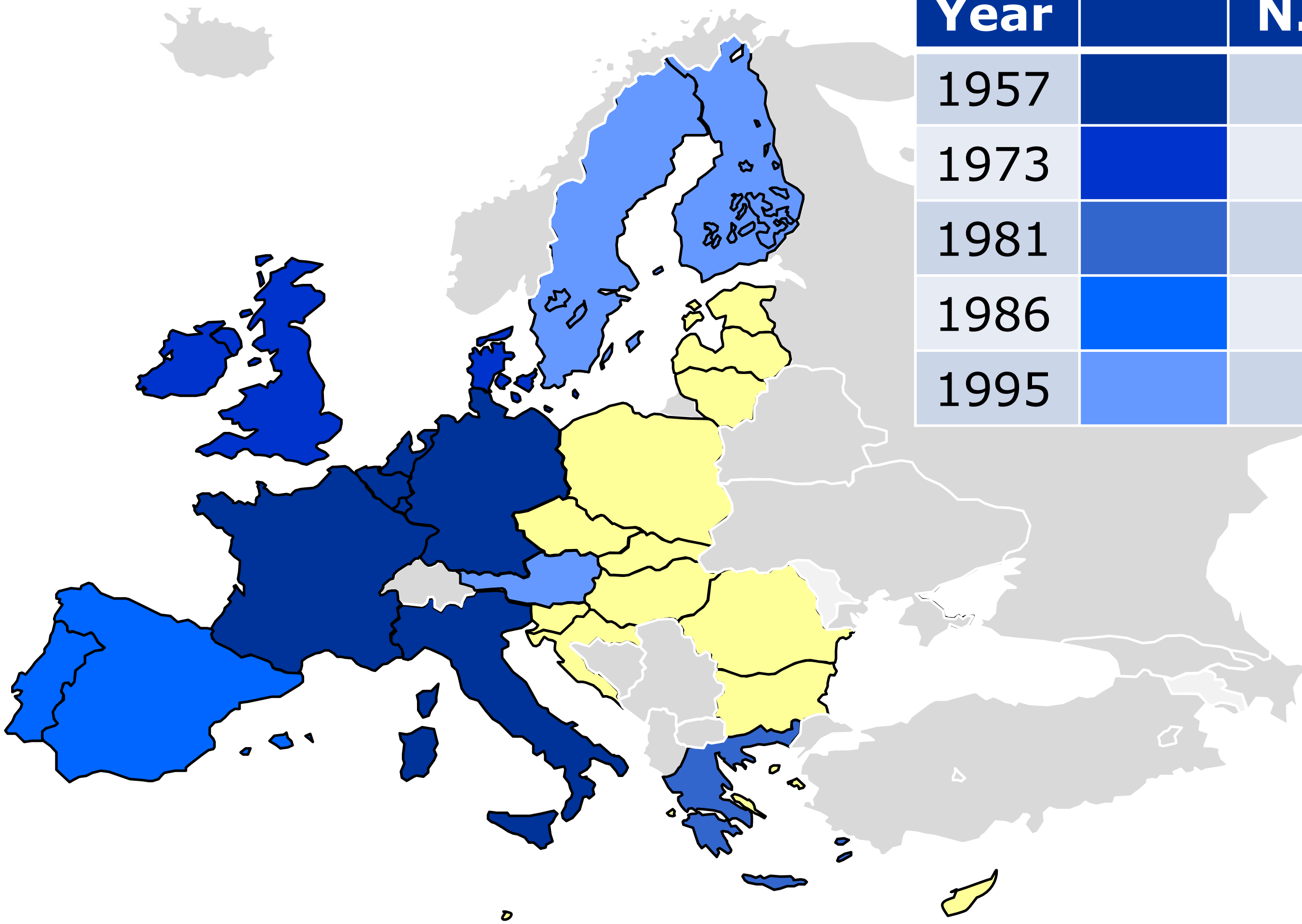
1973		9
1981		10
1986		12

The European Union



Year		N. of MSs
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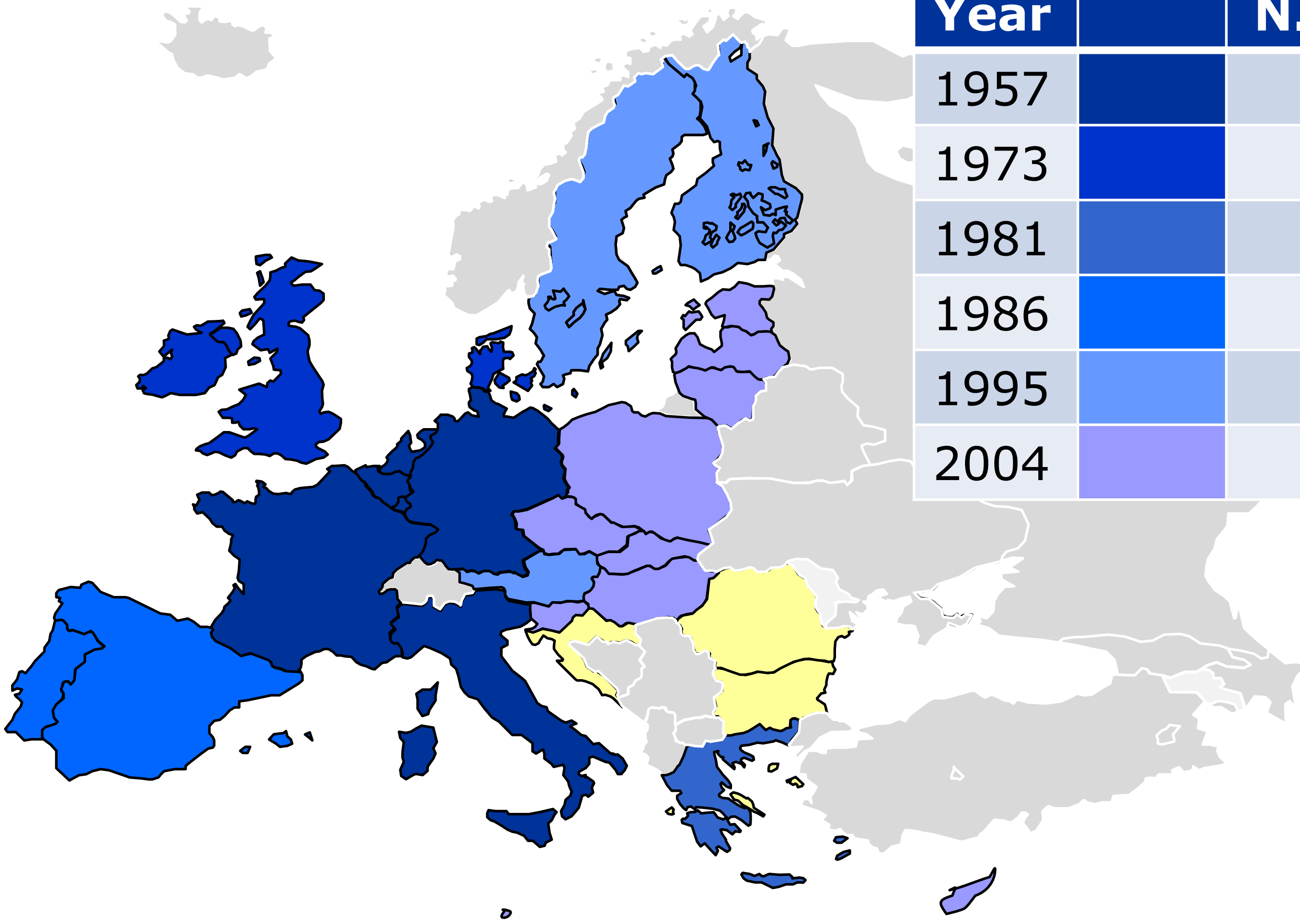
1973		9
1981		10
1986		12
1995		15

The European Union



Year		N. of MSs
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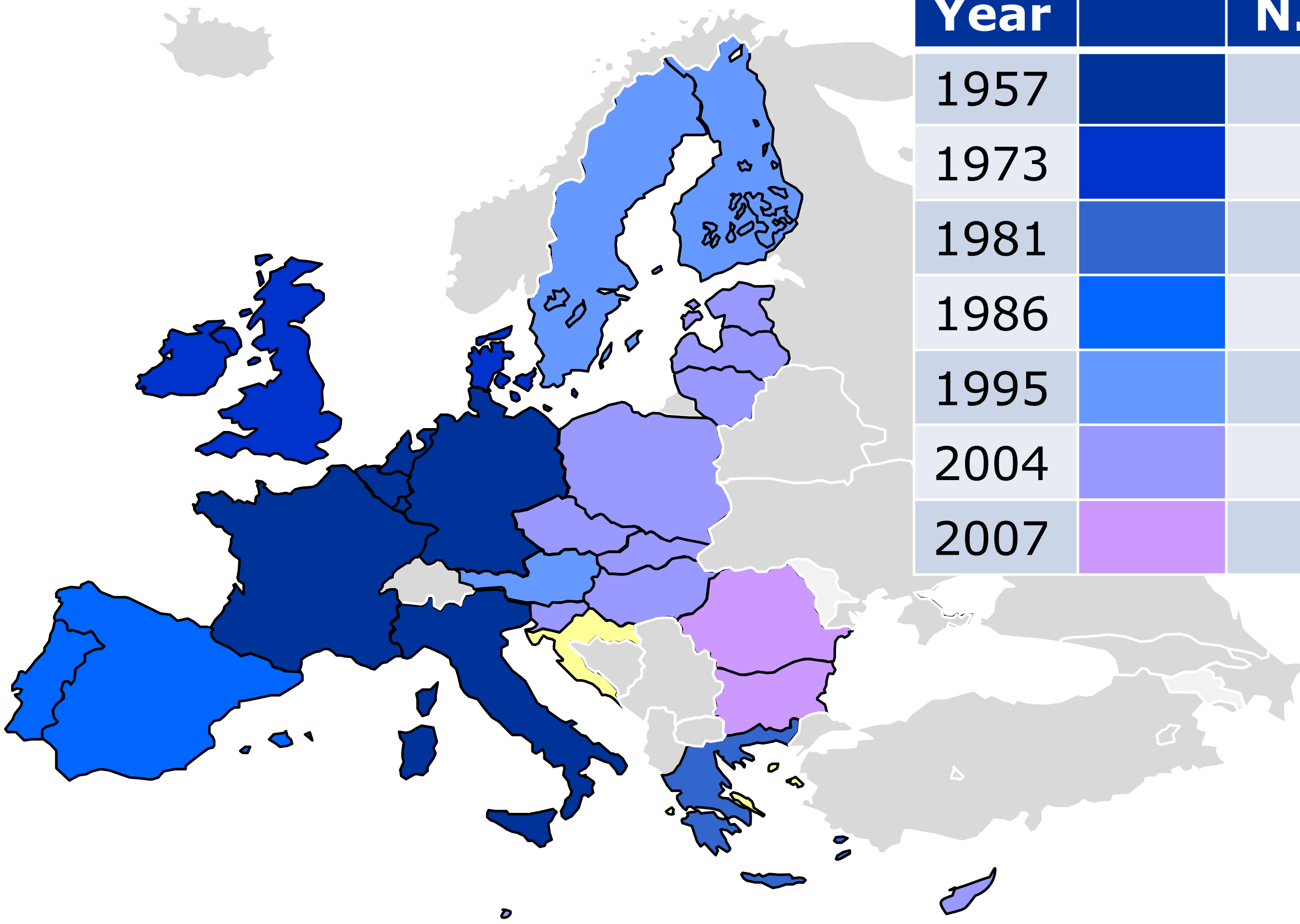
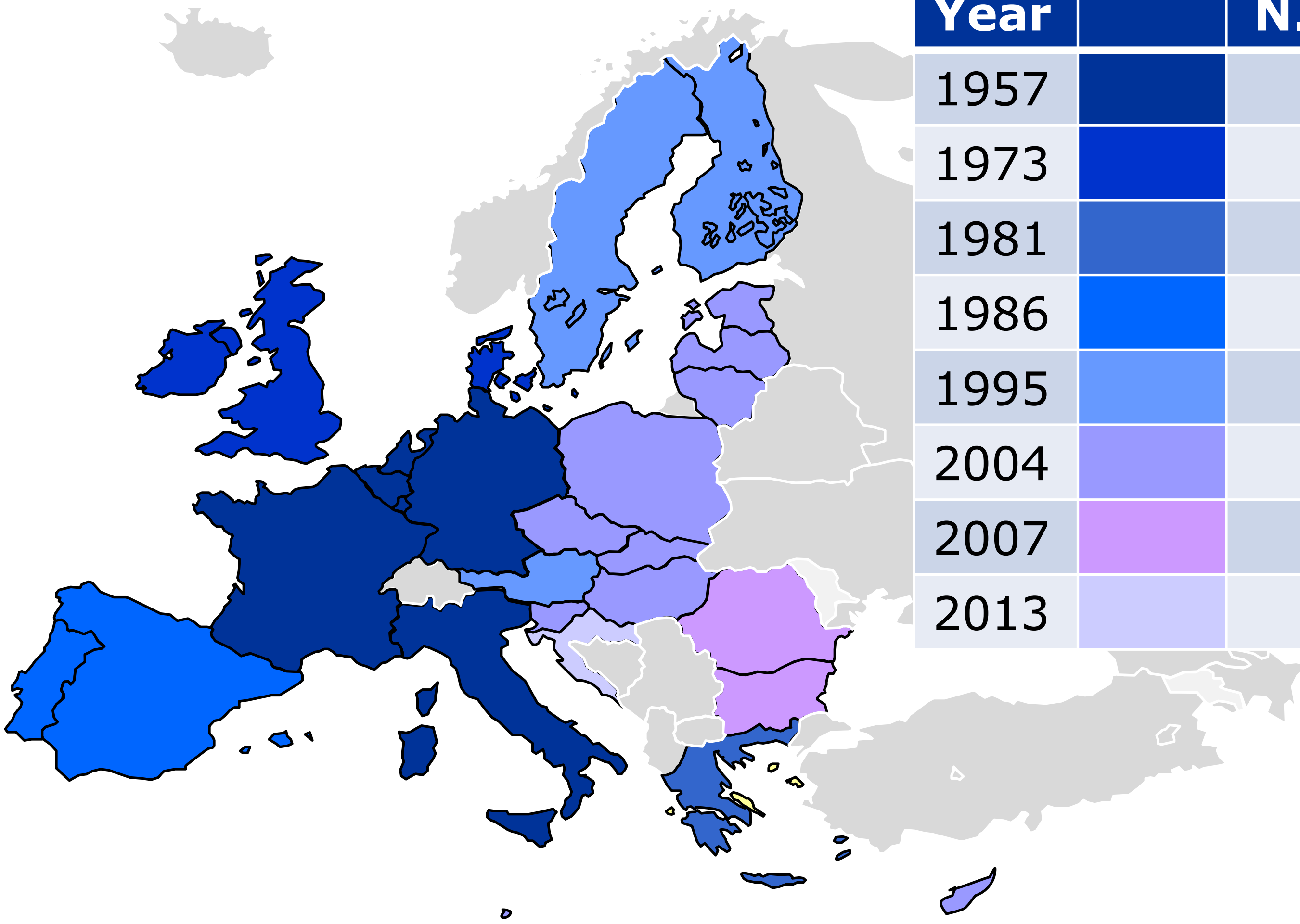
1973		9
1981		10
1986		12
1995		15
2004		25

The European Union



Year		N. of MSs
1957		6
1973		9
1981		10
1986		12
1995		15
2004		25
2007		27

The European Union



Year		N. of MSs
1957		6
1973		9
1981		10
1986		12
1995		15
2004		25
2007		27
2013		**28**

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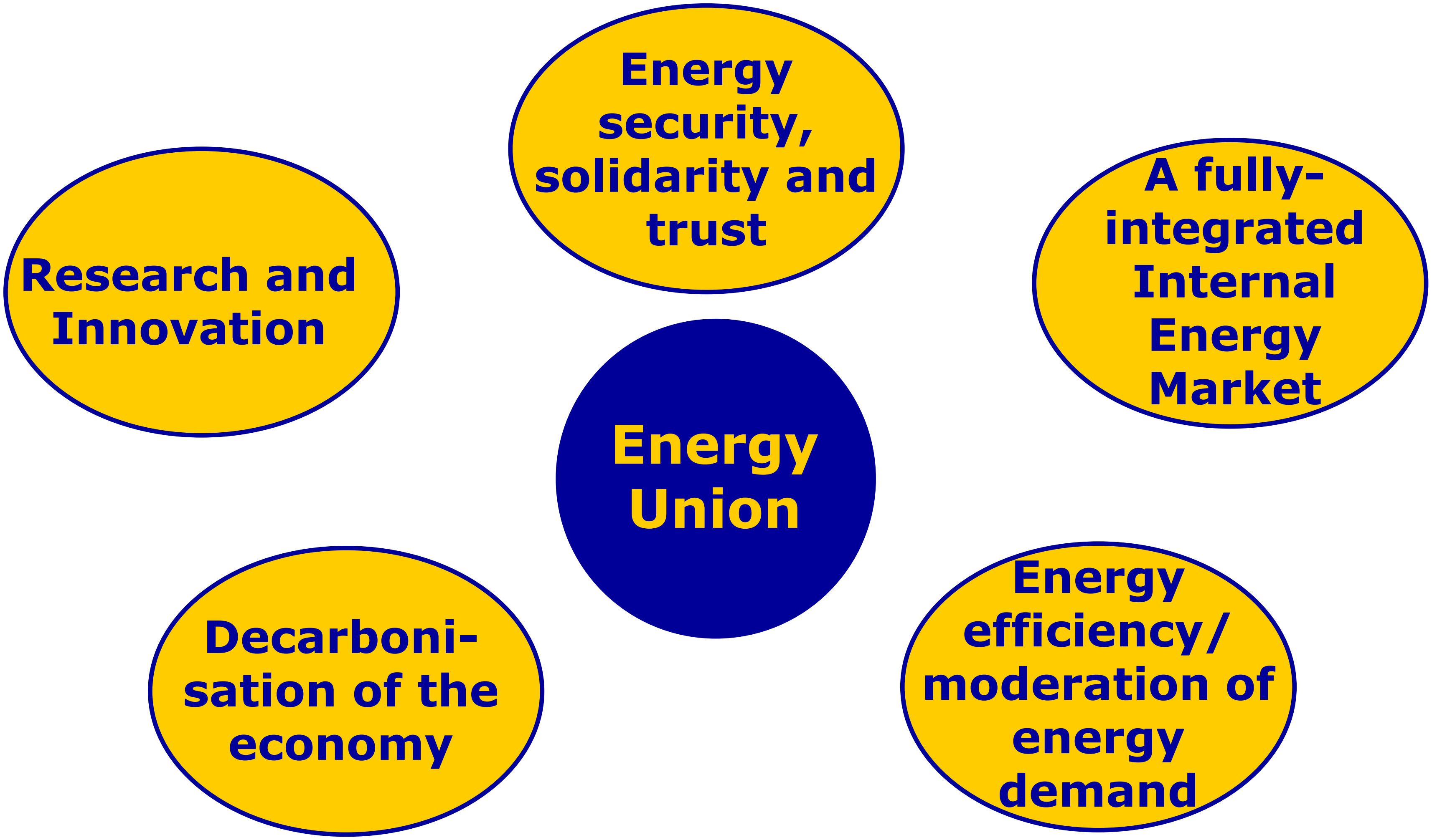
President Junker's Priorities The European Energy Union

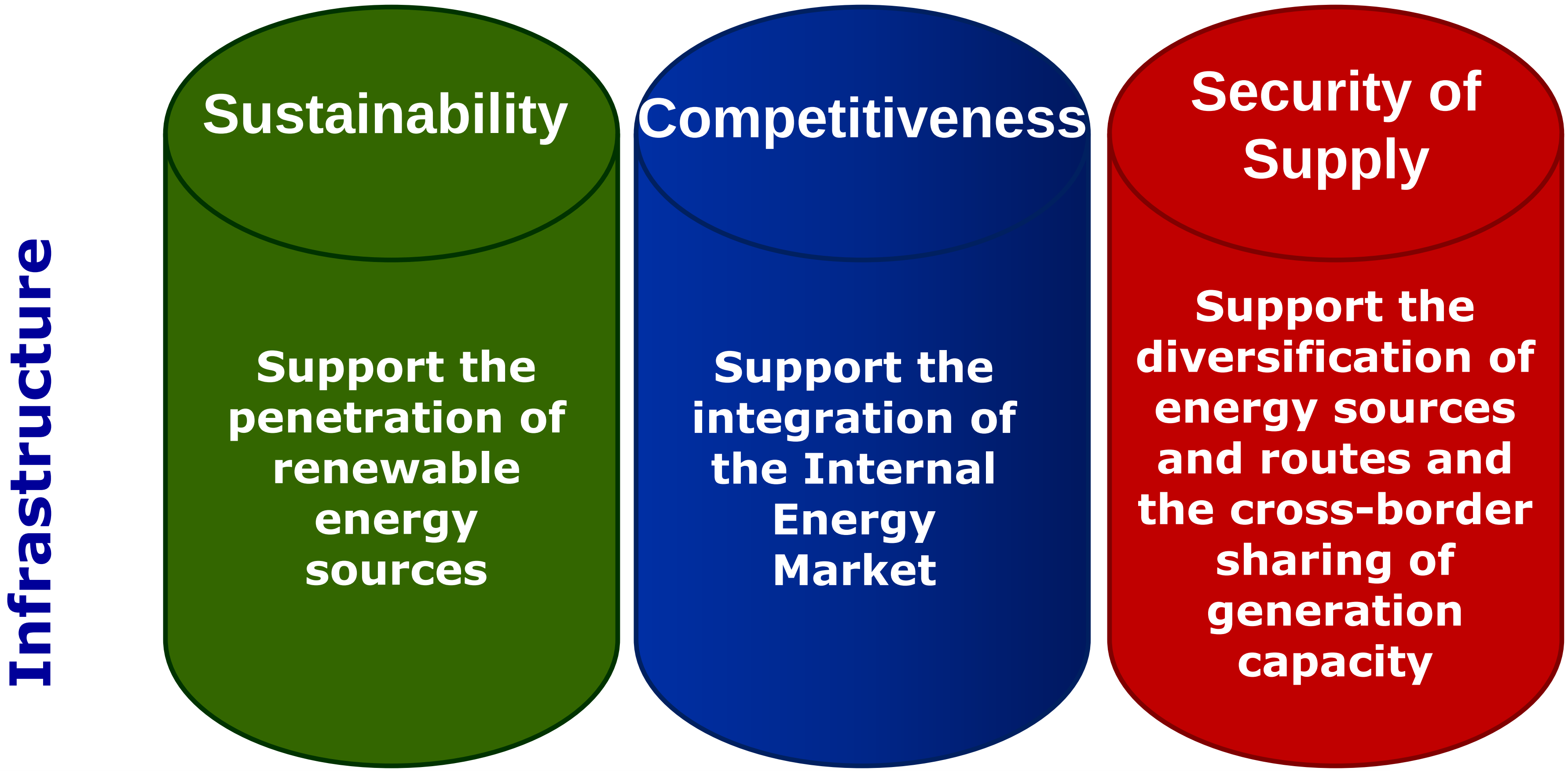
- **Pool our resources, combine our infrastructures** and unite our negotiating power vis-à-vis third countries
- **Diversify our energy sources**, and reduce the energy dependency of several of our Member States
- Keep our **European energy market open** to our neighbours. However, if the price for energy from the East becomes too expensive, either in commercial or in political terms, Europe should be able to **switch very swiftly to other supply channels**. We need to be able to **reverse energy flows** when necessary
- Strengthen the share of **renewable energies** on our continent. This is not only a matter of a **responsible climate change policy**.[…] Europe's Energy Union to become the world number one in renewable energies

The European Energy Union



EU Energy Policy and Infrastructure

The Three Pillars



European Council Conclusions – 4 Feb 2011

Market Integration
(by 2014)

Removal of Energy Islands
(by 2015)

More Efficient Use of Existing Infrastructure

Infrastructure Expansion

Market Design Improvements

Efficient Infrastructure Planning and Development

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Completing the Internal Energy Market

Shared Vision: "Target Model" → Common Rules (Framework Guidelines and Network Codes) → Implementation and monitoring

A Parallel Process to deliver tangible benefits to EU energy consumers as soon as possible

Formal Framework Guidelines / Network Codes Process

Voluntary Early Implementation of the Target Model

Framework Guidelines and Network Codes

Framework Guidelines (FG)	Network Codes (NC)
Based on the annual **priorities set by the Commission**	
Prepared by ACER	**Drafted by ENTSO-E/ENTSOG**
Non-binding	Are made **legally binding via "Comitology"**
Setting **clear and objective principles** for the NCs	Must be **in line with the FG**

Framework Guideline and Network Codes

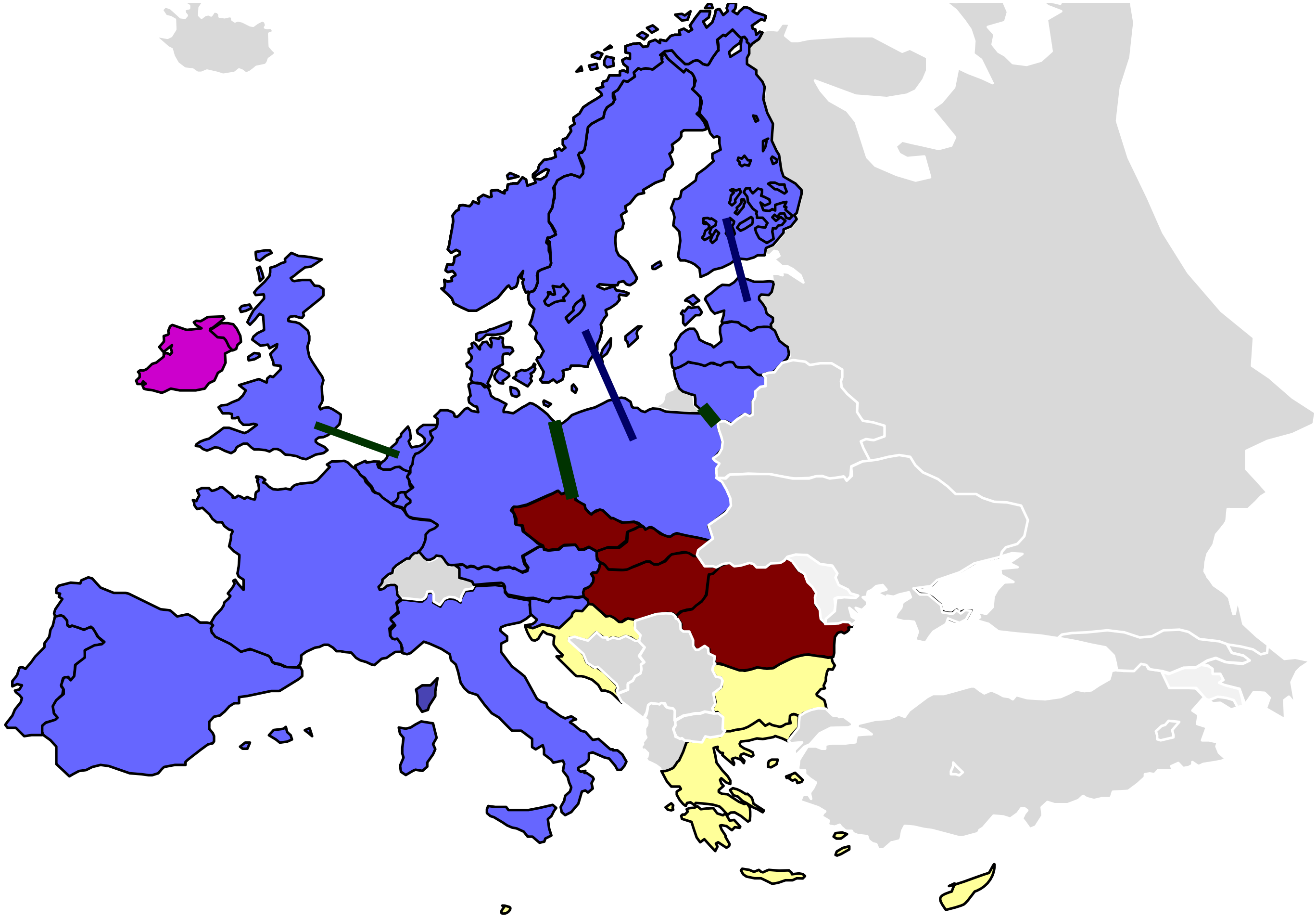
Priority Area	FG adopted by the Agency	NC Status
	Electricity	
Grid Connection	20.07.2011	3 NCs recommended for adoption
Capacity Allocation and Cong. Manag.	29.07.2011	1 NC recommended for adoption 1 NC approved in Comitology
System Operation	02.12.2011	3 NCs recommended for adoption 1 NC being drafted by ENTSO-E
Balancing	18.09.2012	1 NC: the Agency is drafting Recommendation
	Gas	
Capacity Allocation	03.08.2011	OJ: 14.10.2013 EiF: 1.11.2015
Balancing	18.10.2011	OJ: 26.03.2014 EiF: 1.10.2015
Interop. & Data Exch.	26.07.2012	1 NC approved in Comitology
Harm. Tariff Struct.	29.11.2013	Reasoned Opinion issued by the Agency. ENTSOG reviewing the NC

Electricity Capacity Allocation and Congestion Management Cross-regional Roadmaps

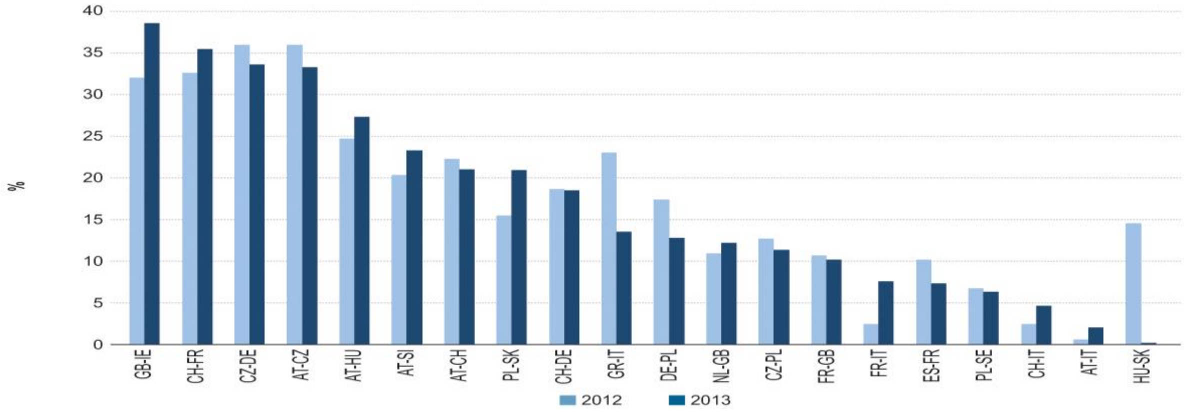
… for the early, voluntary implementation of the Target Model

Day-Ahead	**SINGLE EU PRICE COUPLING** to optimise use of existing day-ahead cross-border capacities at EU level
Intraday	**SINGLE EU CONTINUOUS TRADING** with the possibility of auctions
Long Term	**SINGLE EU ALLOCATION PLATFORM** one-stop shop for allocating long-term transmission rights
Capacity Calculation	**FLOW-BASED METHOD** to improve network security and the level of available capacity

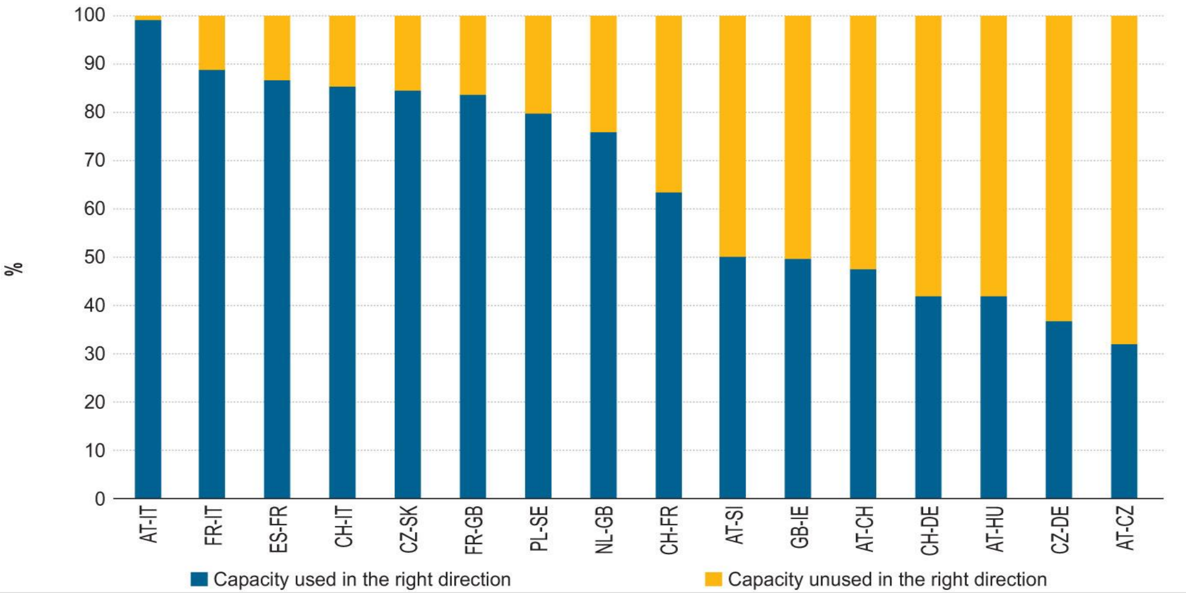
Electricity Day-Ahead Regional Integration (Market Coupling)



Wrong-way flows and capacity under-utilisation in electricity cross-border interconnectors persist …



Percentage of hours with net day-ahead nominations against price differentials per border – 2012-2013 (%)



Percentage of available capacity (NTC) used in the 'right direction' in the presence of a significant price differential, per border – 2013 (%)

Source: ENTSO-E, data provided by NRAs through the ERI, Vulcanus (2014) and ACER calculations

Electricity Capacity Allocation and Congestion Management Cross-regional Roadmaps

… for the early, voluntary implementation of the Target Model

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Capacity Calculation	**FLOW-BASED METHOD** to improve network security and the level of available capacity

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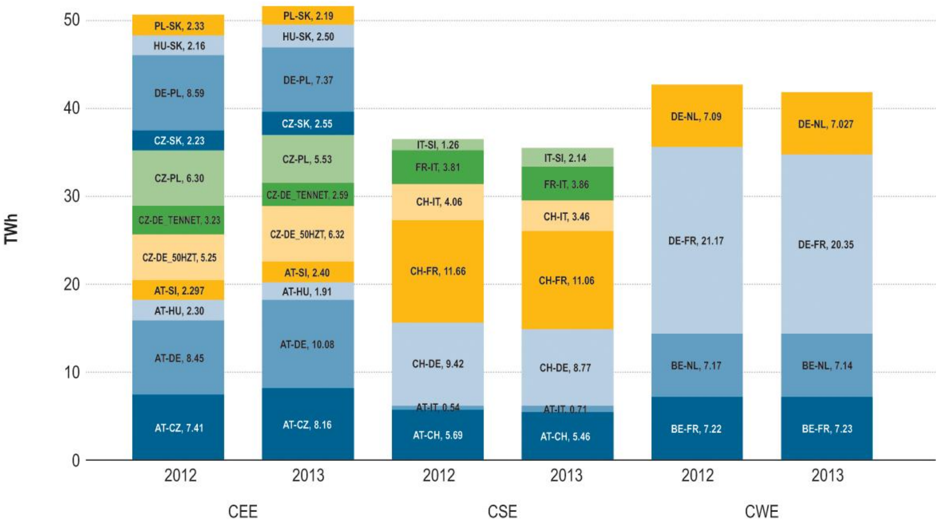
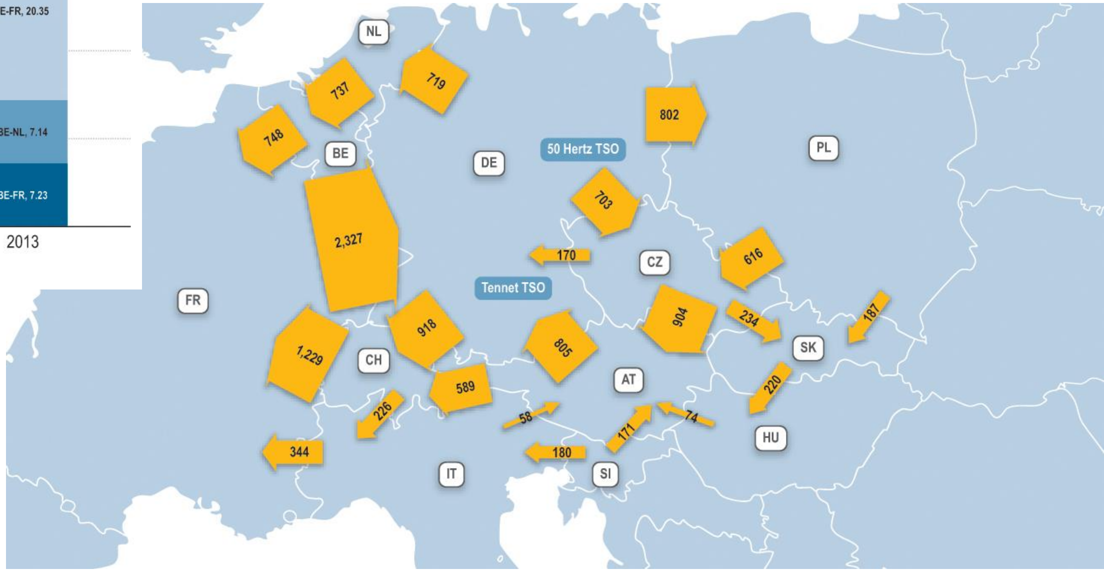
Increasing unscheduled flows require solutions and more transparency as they affect network security and cross-border capacity

Absolute aggregated sum of unscheduled flows for three regions – 2012-2013 (TWh)



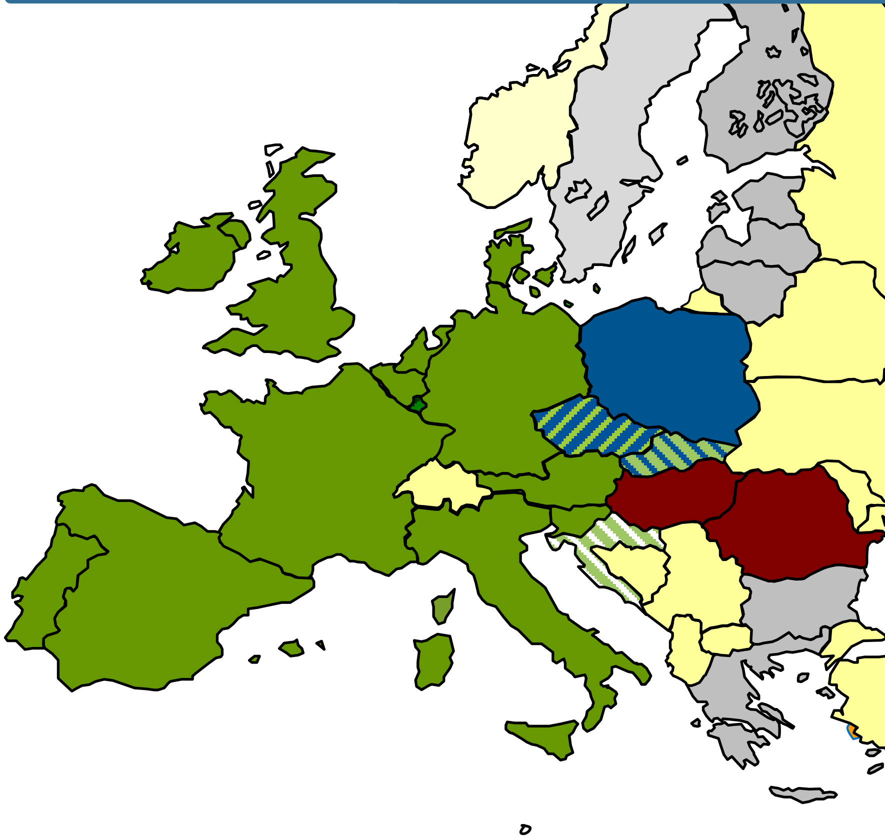
Average unscheduled flow indicator for three regions – 2013 (MW)



Current CAM Pilot Projects (as of 7 April 2015)]

CAM

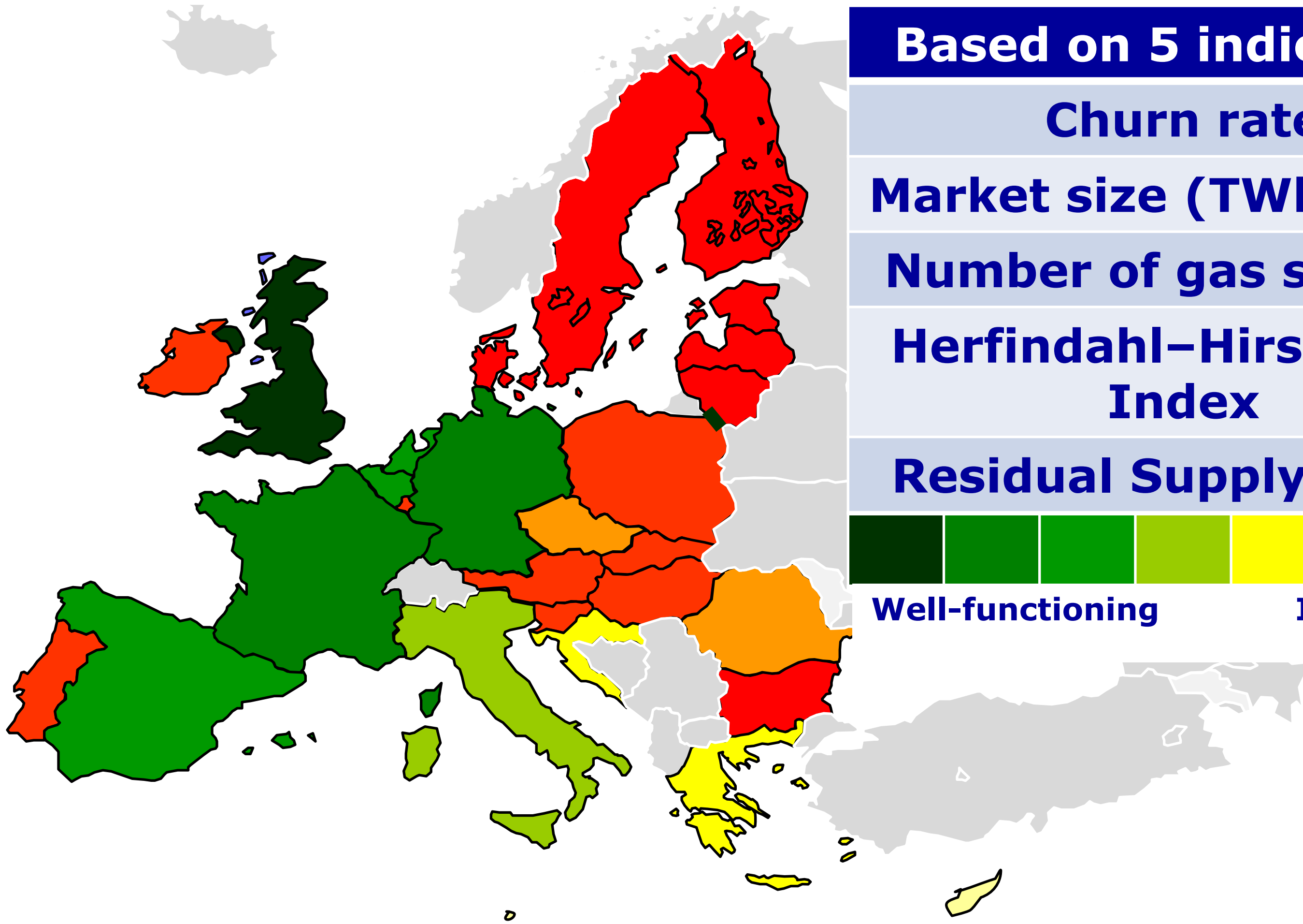
COORDINATED AUCTIONS for the allocation of a common set of cross-border bundled capacity products



	AT, BE, DK, ES, DE, FR, IE, IT, NL, PT, SI, UK	PRISMA Platform
	PL	GSA Platform: Bundled Capacity at Polish IPs + Pilots
	HU, RO	Regional Booking Platform: Auctions of Bundled Capacity
	LU/DE	**Pilot** Project w/ PRISMA
	DE/CZ & PL/CZ	2 bundling **Pilot** Projects: PRISMA: DE/CZ GSA: PL/CZ
	CZ/SK	Discussion on Pilot(s) between eustream (SK) & I) GSA II) PRISMA
	SI/HR	Discussion on PRISMA Pilot
	BG, GR, SE, FL, LT, LV, EE	undecided

Performance of Wholesale Gas Market in 2014
GTM 2011 criteria

Based on 5 indicators:
Churn rate
Market size (TWh/year)
Number of gas sources
Herfindahl–Hirschman Index
Residual Supply Index



The EU Energy Sector trends and challenges

(from the "Bridge to 2025" Conclusions Paper – September 2014)

Moving towards a Low-Carbon Society

Increased penetration of non-programmable Renewable Sources

Adequacy Concerns and greater need for Flexibility of the Electricity System

Flexibility and Adequacy Markets in Electricity

Uncertainty over Future Gas Demand

New uses of Gas

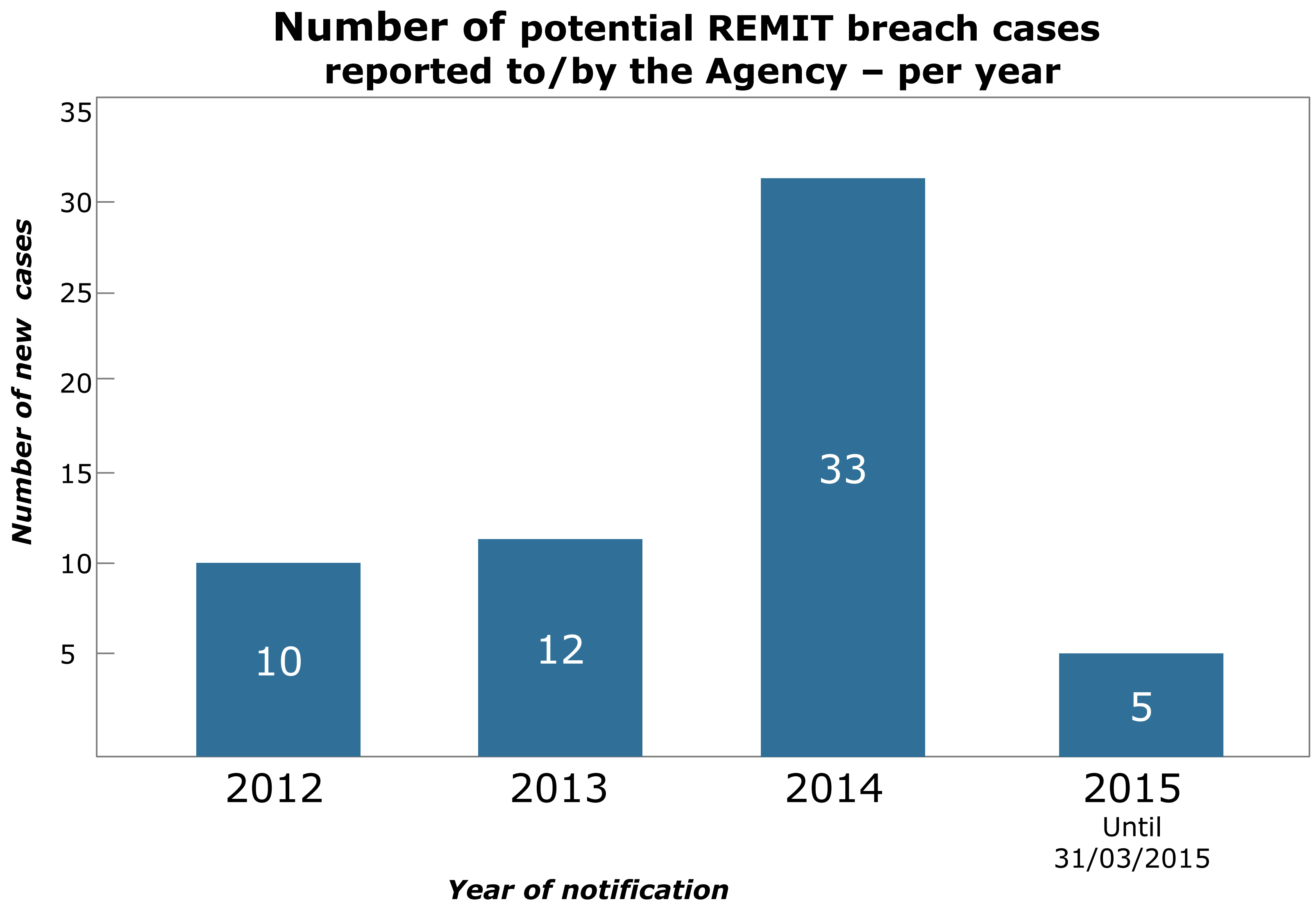
Gas used for Flexible Power Generation

More liquid, flexible and integrated Gas Markets

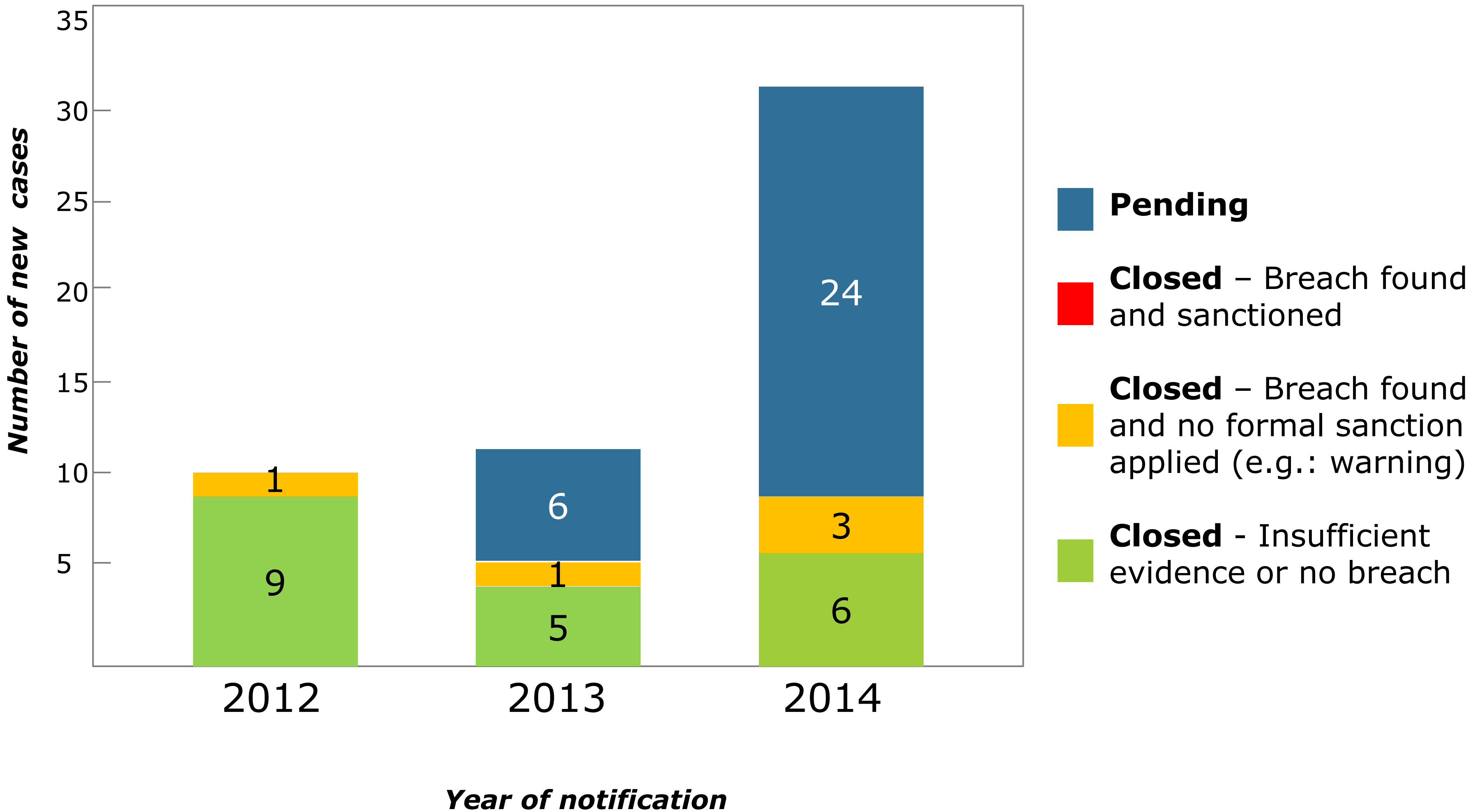
REMIT at a Glance

Integrity	Explicit prohibitions of abusive practices (market manipulation, attempted market manipulation and insider trading) in wholesale energy markets
Transparency	Obligations for market participants to disclose inside information
Monitoring	A new, sector-specific, comprehensive and effective monitoring framework for wholesale energy markets
Cooperation	Close cooperation and coordination between ACER (EU-wide monitoring) and NRAs (national monitoring, investigation and enforcement)

Reported Suspicious Cases



Status of potential REMIT breach cases reported to/by the Agency – per year



* Breach found and no formal sanction applied – 2 cases with Art.3 / 1 case Art.4 / 1 case with Art.5 and 1 case with Art. 15 breach

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Main Challenges for the future

- Complete the **implementation of the Third Energy Package**, including the **adoption and implementation of Guidelines and Network Codes**

- Ensure application of the new rules as soon as possible (including through **early, voluntary implementation**)

- Supplement the current Electricity Target Model to address the **adequacy and flexibility challenges**

- Revised Gas Target Model: Improve the **liquidity of wholesale gas markets** (including through market integration)

- Implement **REMIT** effectively

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European Council Conclusions – 4 Feb 2011

Market Integration
(by 2014)

Removal of Energy Islands
(by 2015)

More Efficient Use of Existing Infrastructure

Infrastructure Expansion

Market Design Improvements

Efficient Infrastructure Planning and Development

Infrastructure Planning and Development

TEN-E Guidelines (2006) → **Projects of Common/European Interest**
- Long list of approx. 550 projects
- Selection based on political agreement
- No revision of the list envisaged in 7 yrs

Third Energy Package (2009) → **TYNDPs**
- Non-binding, … but reference for national NDPs
- EU dimension in Network Planning
- TYNDPs updated every two years

TEN-E Regulation (2013) → **Projects of Common Interest (PCI)**

TEN-E Regulation
Regulation (EU) No 347/2013

- **Objectives**
  - 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

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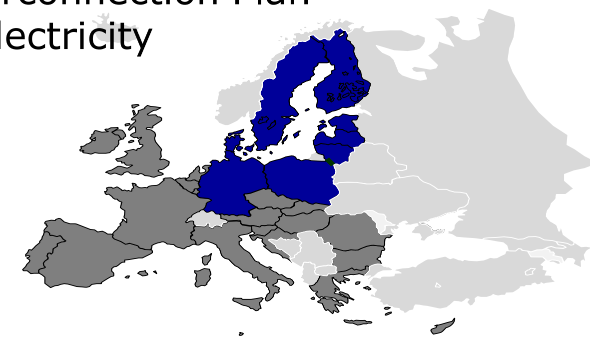
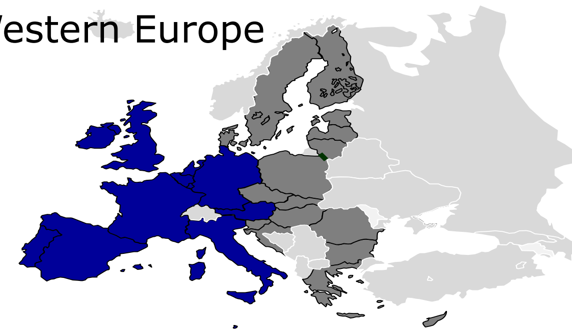
Priority Electricity corridors

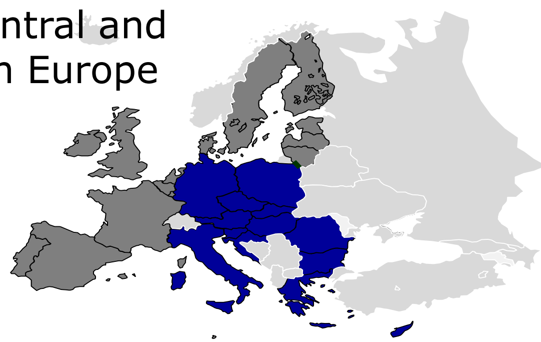
Baltic Energy Market
Interconnection Plan
in electricity



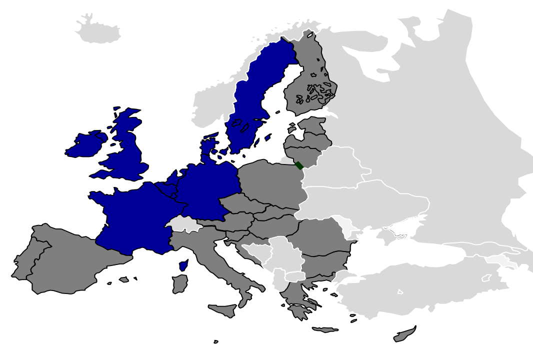
North South
interconnections
in Western Europe



North South
interconnections
in Central and
South Europe



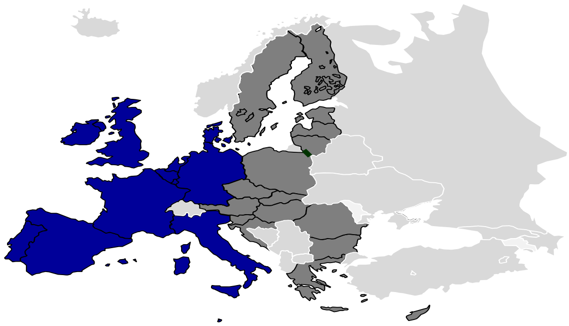
Northen Seas Off-shore
grid



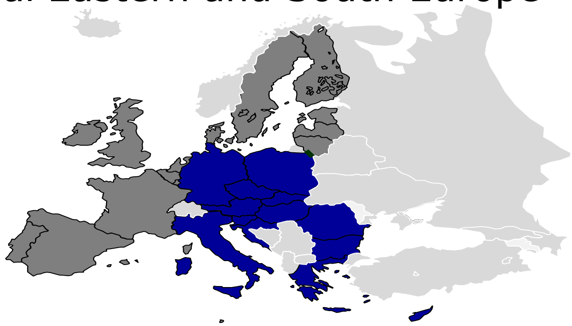
“Smart grids” and *Electricity highways* ***all MS concerned***

Priority Gas corridors

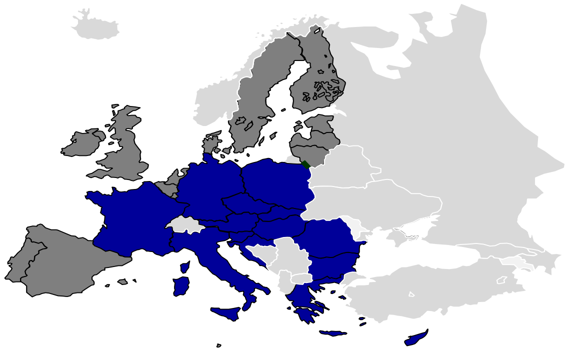
North South gas interconnections in Western Europe



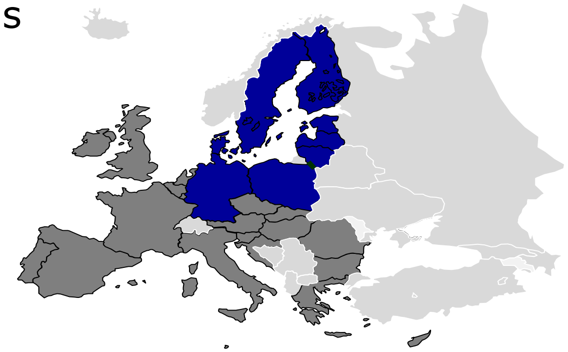
North South gas interconnections in Central Eastern and South Europe



Southern Gas Corridor « SGC »



Baltic Energy Market Interconnection Plan in gas



PCI Toolbox

- **Expedient permit granting procedures**
  - Priority status, including for EIA procedures
  - Competent authority to manage permitting
  - Time limits for procedures (3.5 years max)
  - Enhanced transparency and public participation
- **Regulatory and other support measures**
  - Cost-benefit analysis (CBA)
  - Cross-border cost allocation (CBCA): "beneficiaries pay" principle
  - Risk-related incentives
  - Financial support (grants for studies and financial instruments for all PCIs and grants for works for some)

Importance of the Cost-Benefit Analysis

- **The CBAs should represent the basis for:**
  - Preparation of TYNDPs (including an assessment of individual projects) by ENTSOs
  - PCI selection by Regional Groups (EC and MSs)
  - CBCA decisions by NRAs (or ACER)
  - Decisions to extend grants for works support under the Connecting Europe Facility
- **ENTSOs released draft CBA methodologies** on 15 November 2013
- **Agency's Opinions** on 30 January 2014 (ENTSO-E's CBA) and 13 February 2014 (ENTSOG's CBA)

Projects of Common Interest (PCIs)

- **General criteria:**
  - Contribute to infrastructure priorities (corridors)
  - Economic, social, environmental viability
  - Involve at least two Member States
  - Have significant cross-border impact
  - Part of TYNDP (from the 2015 PCI list)
- **Specific criteria:**
  - Market integration (market, price convergence)
  - Security of supply
  - Sustainability
  - Competition (diversification – gas only)

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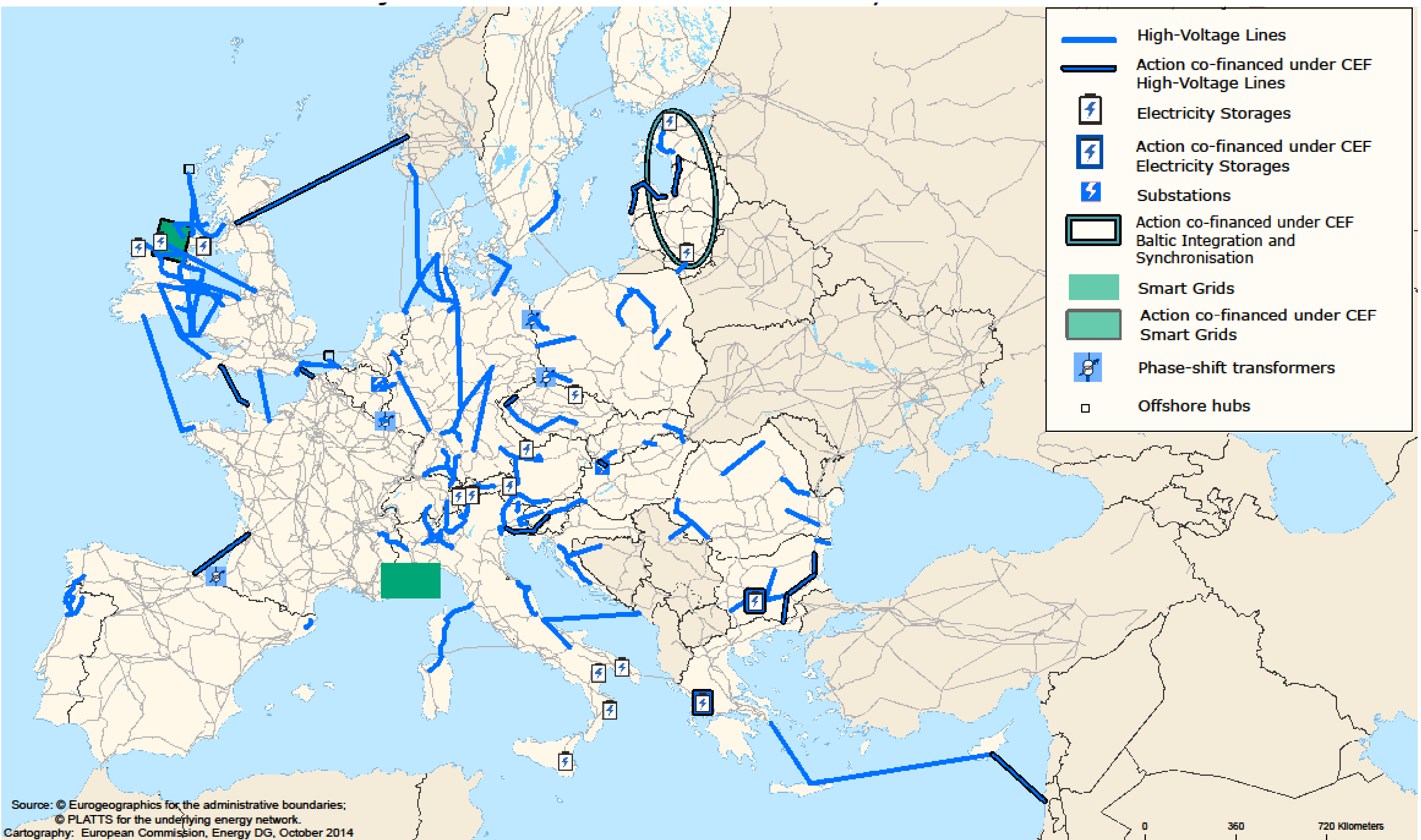
Electricity and Smart Grids PCIs



Energy

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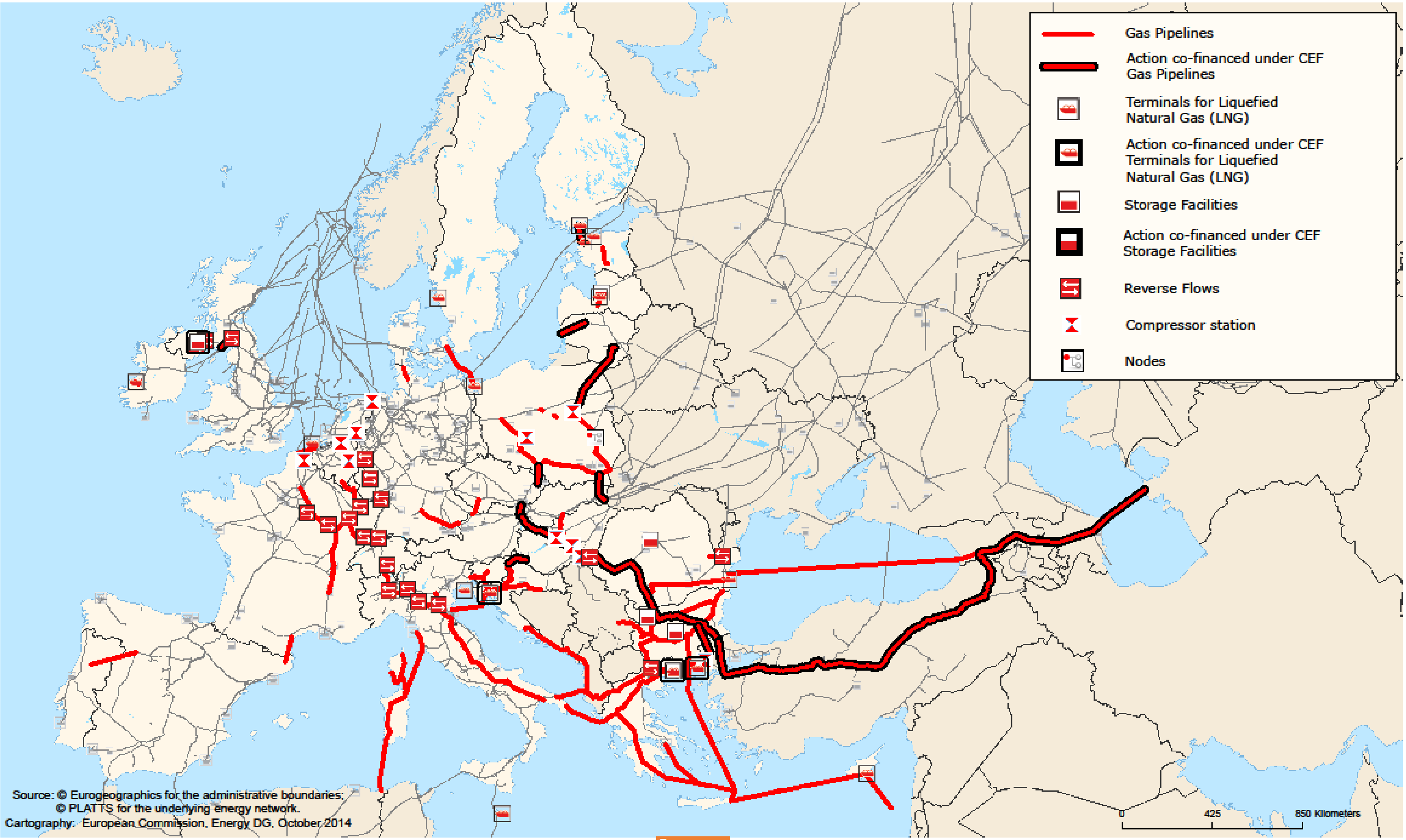
Gas PCIs



Energy

Cross-border cost allocation (CBCA)

Main features of the Agency's approach

(Recommendation No 07/2013 of 25 September 2013)

- Economic, social and environmental costs and benefits of the projects to be taken into account
- Compensation provided only if at least one hosting country bears negative net benefit
- Compensation should mainly aim at the "elimination of the negative net benefit"
- Compensation should be provided by countries to which the project provides a "significant" positive net benefit
  - "significance threshold" equal to 10% of the sum of positive net benefits of all net benefiting countries

Investment/CBCA Requests

Total investment requests (22)	Electricity (5)	Gas (17)
CBCA decisions taken by NRAs	3	10
CBCA decisions taken by ACER	0	1
CBCA decisions pending at ACER	1	0
Investment request still incomplete	0	1
Investment requests withdrawn	1	5
TOTAL	**5**	**17**

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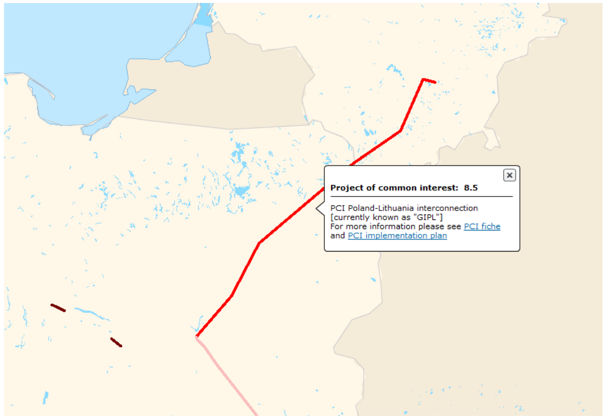
GIPL CBCA Decision (1)

Context

- 530 km pipeline with initial capacity 2.4 bcm/y, cost €558 m, net benefits €830 m
- Aimed at ending isolation of Baltic Member States from EU gas market and at diversifying gas supply



Process

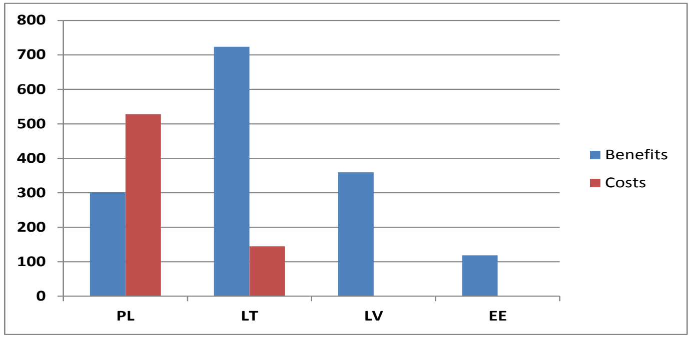
- 1 May: no NRA decision within 6 months deadline, investment request referred to ACER (Art. 12(6) TEN-E Regulation)
- May - July: consultations with NRAs and project promoters
- 11 August: Decision No 01/2014 adopted and notified to parties concerned. Decision published on 29 August

GIPL CBCA Decision (2)

Assessment

- Admissibility, completeness and maturity
- Costs and benefits by Member State

GIPL Costs and Benefits (€m)



Cross-Border Cost Allocation

(ACER Recommendation No 07/2013 of 25 September 2013)

Payer TSO	Recipient TSO	Compensation Payment (€m)
AB Amber Grid (LT)	Gaz-System S.A. (PL)	54.9 (64.0%)
JSC Latvijas Gāze (LV)	Gaz-System S.A. (PL)	29.4 (34.3%)
AS EG Vorguteenus (EE)	Gaz-System S.A. (PL)	1.5 (1.7%)
Total Compensation		**85.8 (100%)**

- Compensation payable upon project commissioning

CBCA Decisions: Main Features

- The vast majority of the CBCA decisions are on projects located in one country in which the relevant TSO will bear 100% of the costs
- In half of the cases the NRAs accepted the CBCA proposed by the Project Promoters
- In all but one case, the NRAs have agreed not to allocate costs to non-hosting beneficiaries
- In the two cases where more than 7% of CAPEX were proposed to be allocated to any non-hosting beneficiary, the concerned NRAs failed to reach an agreement
  - GIPL: ACER Decision 11 August 2014
  - LitPol: referred to ACER on 9 December 2014

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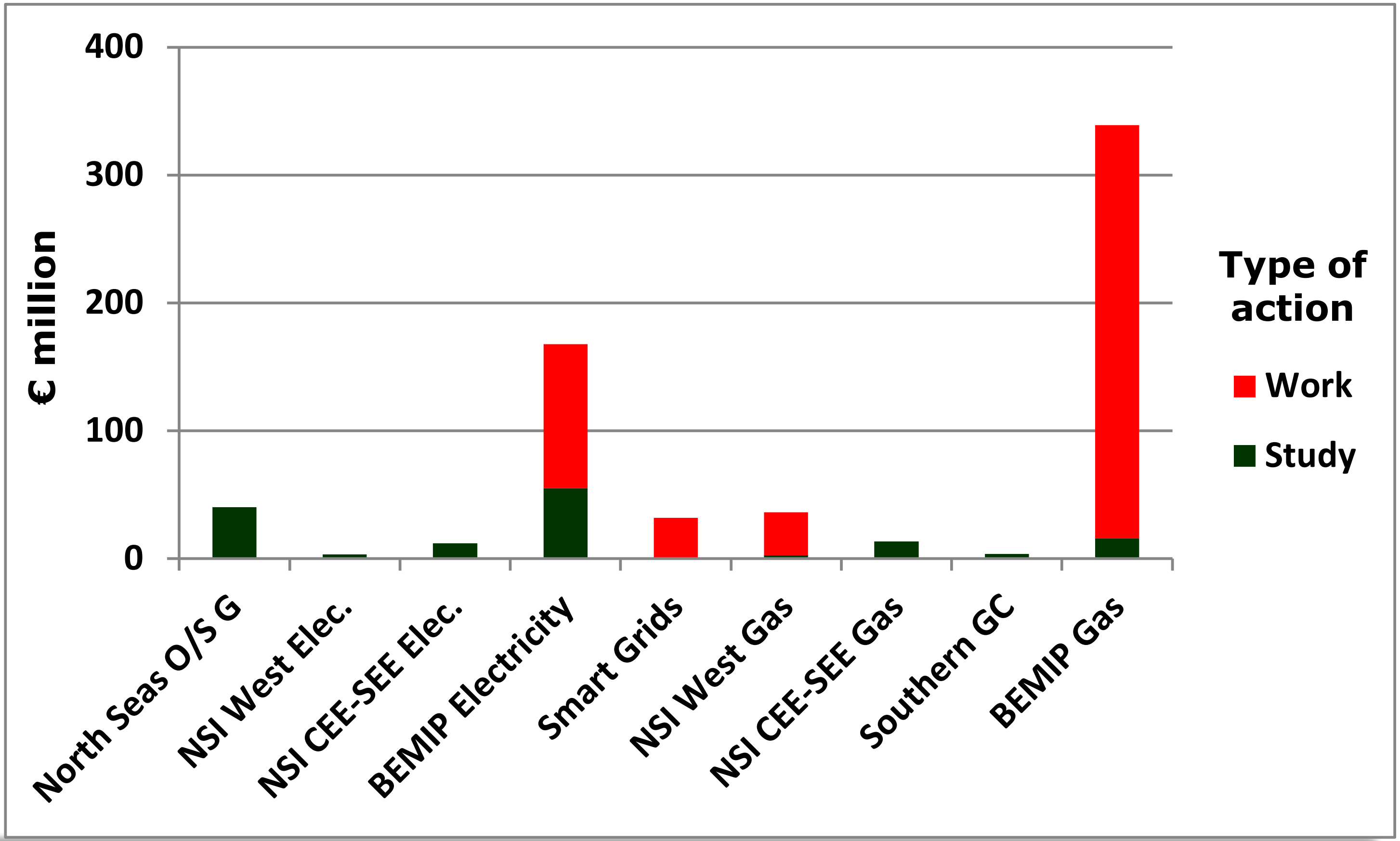
Connecting Europe Facility

- € 5.85 bn of financial support to energy PCIs (2014-20)
- First round (21 November 2014): € 647 million



Main Challenges for the future

- Refine the **Cost-Benefit Analysis** methodologies

- Improve and harmonise (as appropriate) the **regulatory framework** so that it is fully conducive to **investment in infrastructure delivering positive net benefits**

- **Financing** new infrastructure
  - **… but is it really a challenge?**

Thank you
for your attention

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