

# The IEM: Integration process

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- Background:
  - Goals of 3<sup>rd</sup> package & Process
  - Overview of codes
- State of implementation
- Other EU relevant legislation - REMIT
- Issues to consider
- Alternative IEM interaction examples

# European Third Energy Package – 2009

## Goals

### Enabling renewables

Creating clear connection rules.

Providing harmonisation to benefit manufacturers.

Creating markets to reduce risks.

### Ensuring security of supply

A coordinated approach to system operations.

Greater optimisation to enhance efficiency.

More flexible markets (e.g. balancing).

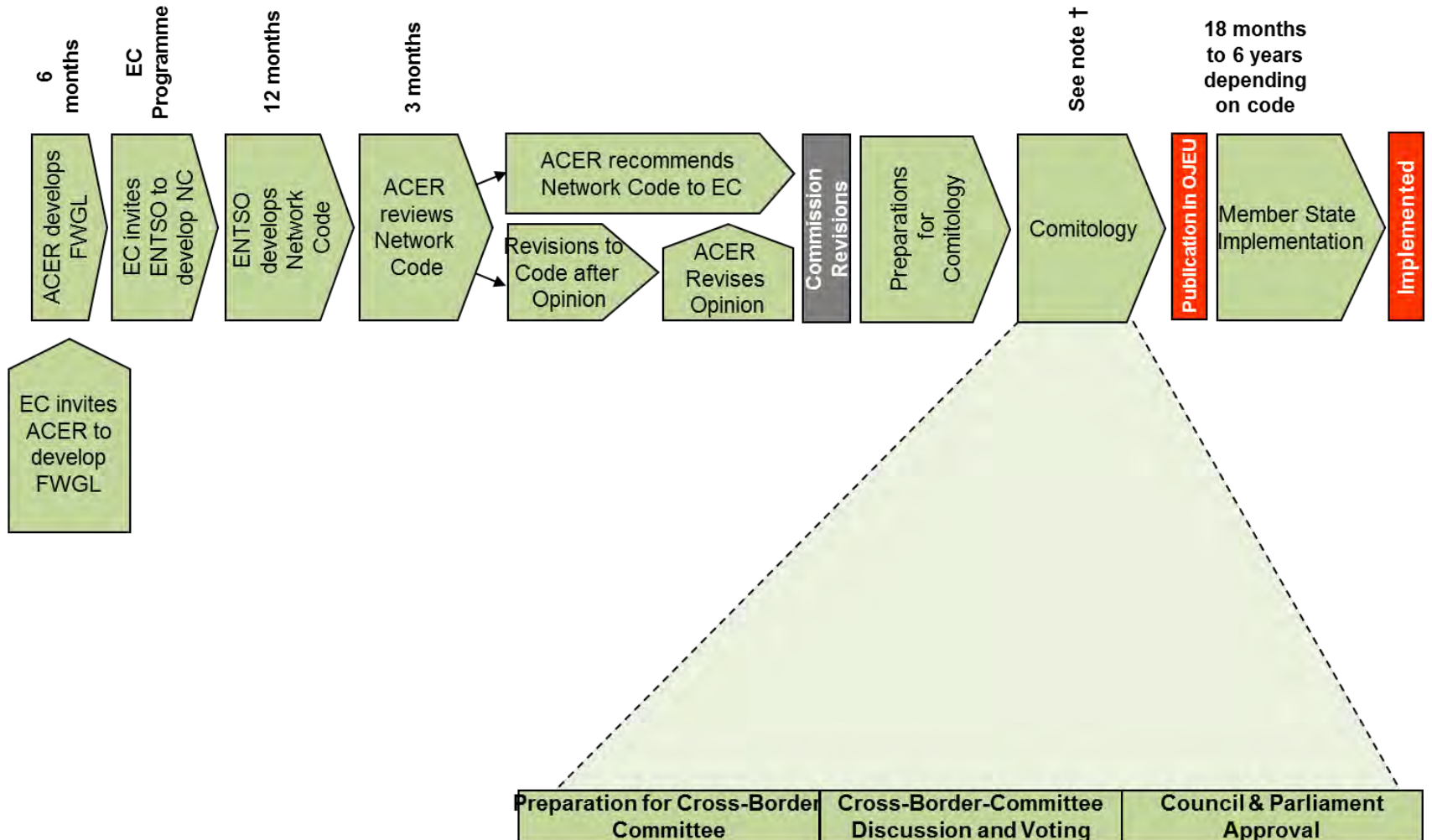
### Enhancing competition

A single market design across Europe (in all timescales).

Promoting cross border trade & enhancing liquidity.

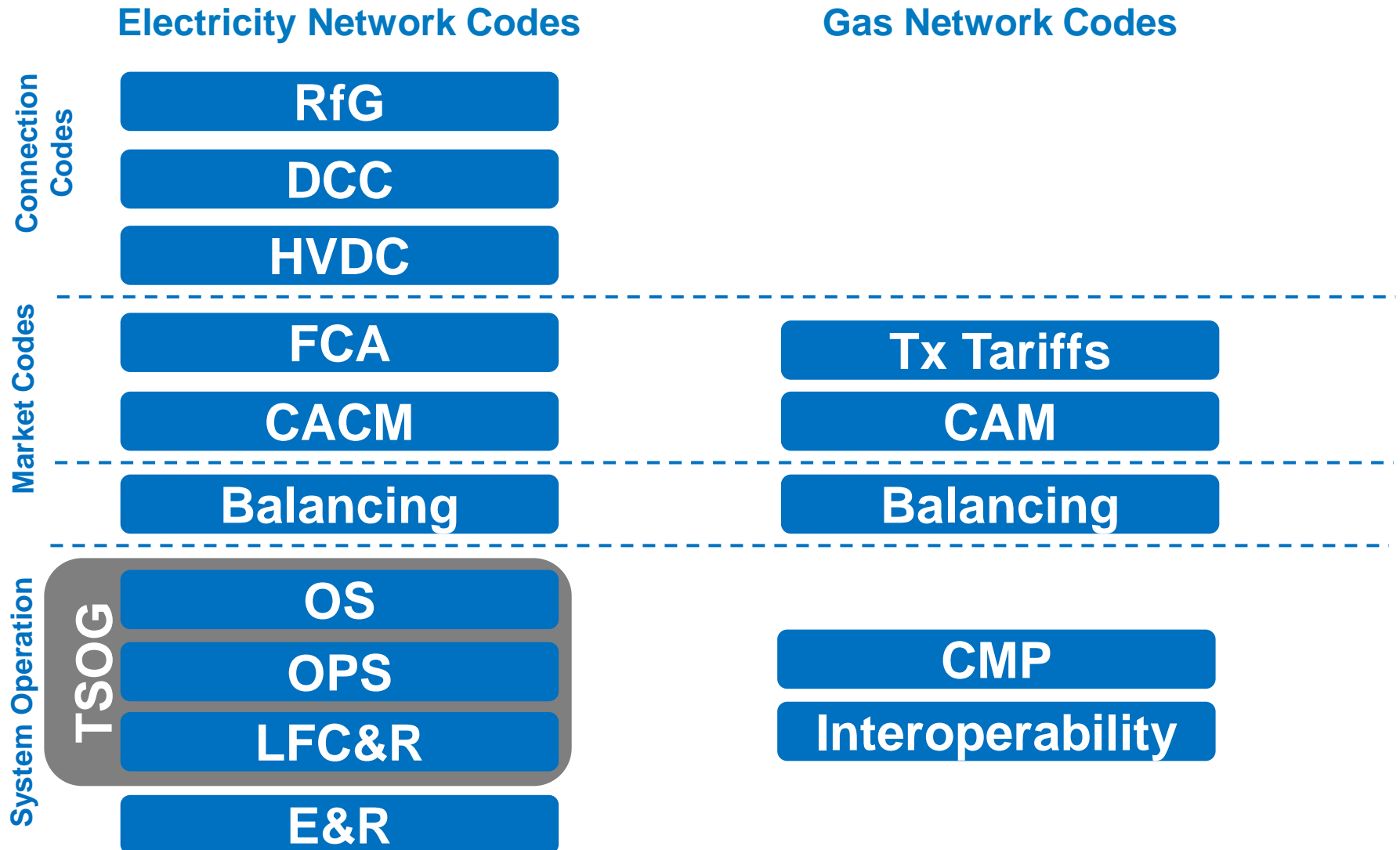
Reducing risk for all market players

# European Network Code Process

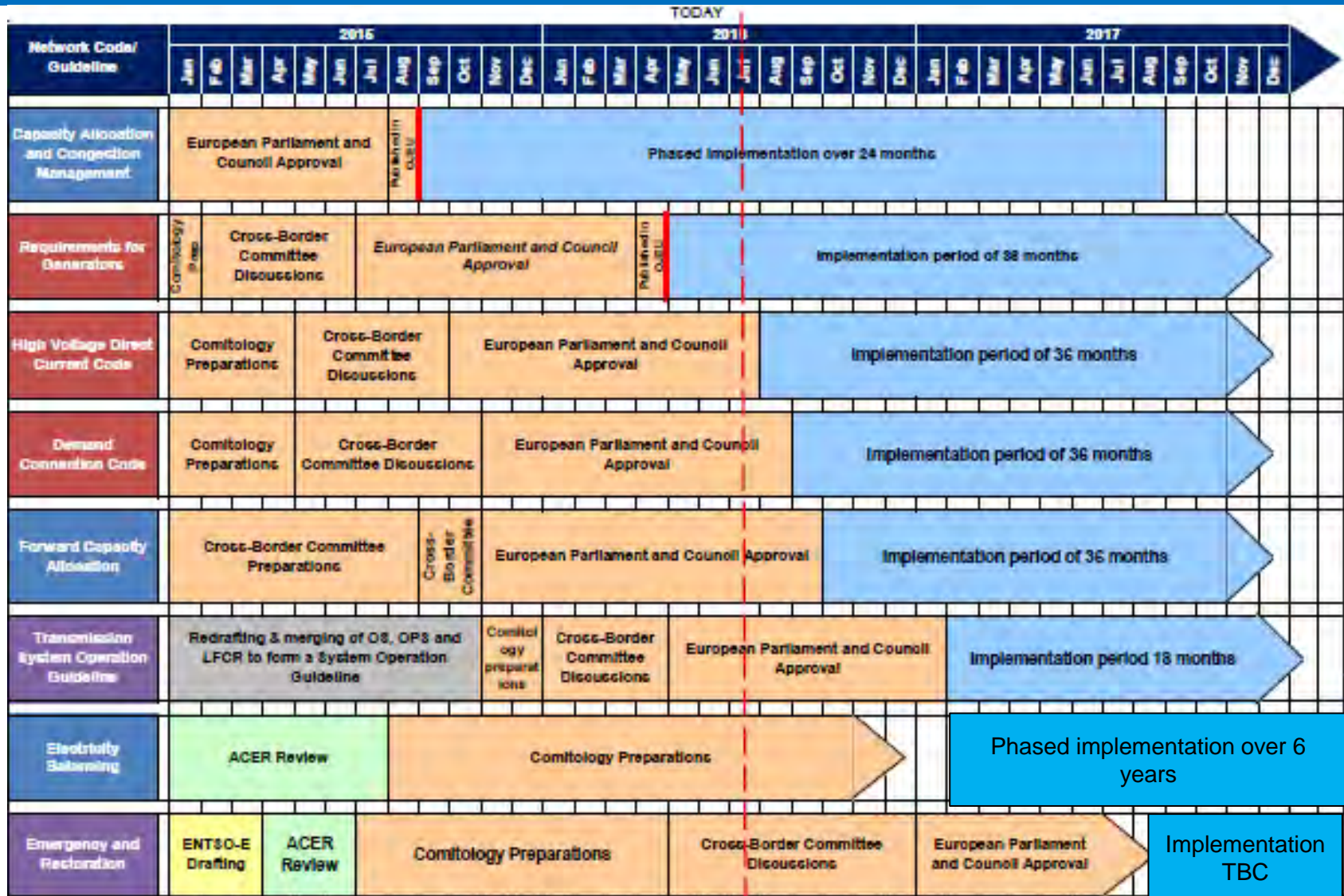


† Timescales for the stages of Comitology are not specified and under the Commission's control

# Overview of Gas & Electricity Codes



# Electricity Network Codes – Status



# Electricity Network Codes – FCA & CACM

## Market Design

### Capacity Allocation & Congestion Management (CACM) Guideline

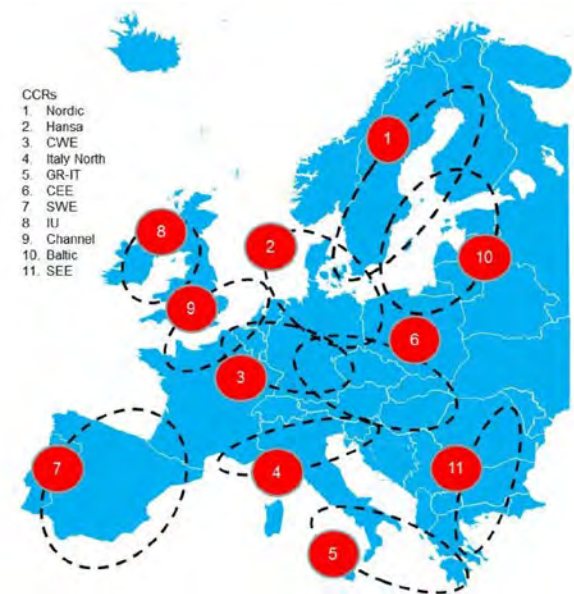
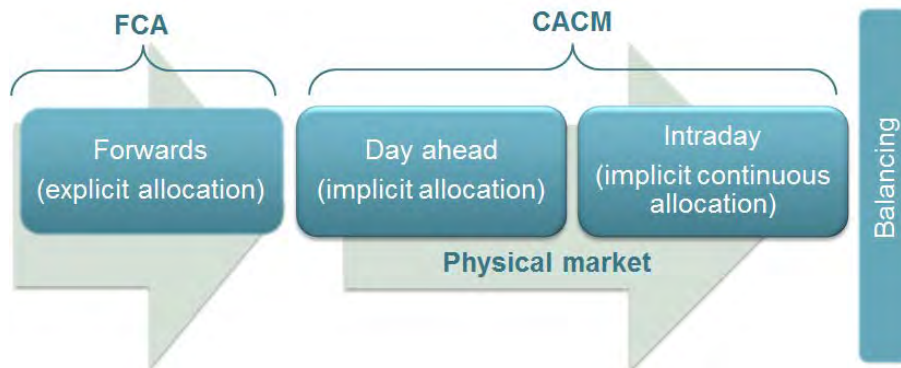
- Implicit Day Ahead & Intraday cross border trading
- Bidding zone reporting process and subsequent review

### Forward Capacity Allocation (FCA) Guideline

- Long term transmission rights;
  - PTRs with UIOSI
  - FTR options
  - FTR obligations
- Single Allocation Platform with Harmonised Allocation Rules

## Capacity Calculation

- CACM and FCA both increase regional TSO coordination with **capacity calculation** used to determine interconnector capacities
- Calculation underpinned by a pan-EU Common Grid Model (CGM)



# Electricity Network Codes – Balancing

## Pan-EU Balancing Energy Market

- Development of pan-EU platforms for the exchange of standard balancing energy products
- 6 year implementation period
- RR / mFRR / aFRR / Imbalance Netting
- Specific products retained nationally

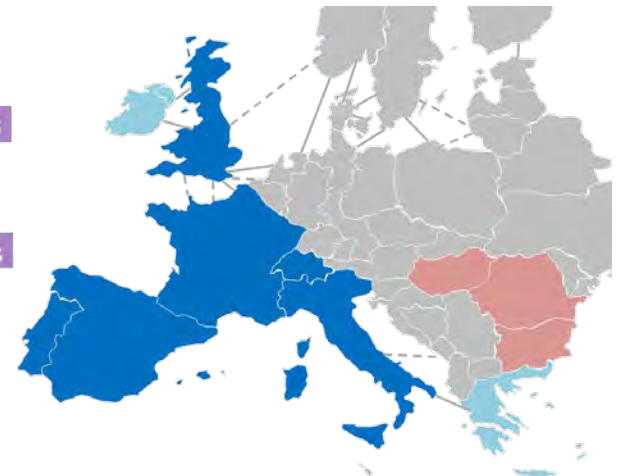
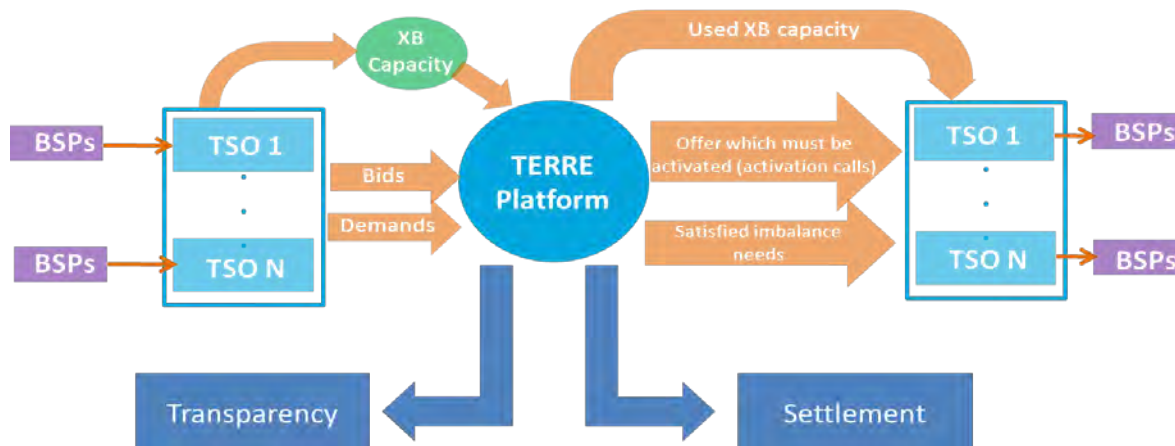
## Harmonisation of Market Design & Settlement

- Harmonised Gate Closure Time for standard products
- Harmonisation of ISP at Synchronous Area level
- Harmonisation of imbalance arrangements (preference for single imbalance pricing)
- Harmonisation of reserve procurement arrangements

## Cross Border Capacity Reservation

- Opens the possibility for TSOs to reserve XB capacity for the exchange of balancing energy
- Cooptimisation with market timeframes
- TSOs to develop detailed methodologies

## Early Implementation – Project TERRE



# Electricity Network Codes – System Operation

## System Operation Codes

### Transmission System Operation

**Guideline (TSOG):** Setting minimum system security, operational planning and frequency management standards to:

- ensure safe and coordinated system operation across Europe, and
- create a standardised framework for regional cooperation.

**Entry into force**  
~ Dec '16

### Emergency & Restoration Code (E&R):

Harmonisation of system defence and restoration procedures during severe events

**Entry into force**  
~ Apr '17



# Electricity Network Codes – Connection Codes

**The Connection Codes set harmonised rules for new grid connections across EU, with a focus of ensuring system security**

**They are implemented permitting Member State TSOs a degree of scope to determine technical parameters proportionately to local system needs**

## Requirements for Generators (RfG)

**Status:** Implementation

- Applies to new generators of 800W capacity and up
- Assigns user compliance obligations dependant on connection voltage, and unit capacity under x4 'Types' ("Generator banding")

## High Voltage Direct Current (HVDC)

**Status:** EU Approval

- Applies to new HVDC systems (e.g. interconnectors) connected at 110kV or above and DC-Connected Power Park Modules
- Defines requirements envisaging a greater level of network 'meshing' in future

## Demand Connection Code (DCC)

**Status:** EU Approval

- Applies to new Transmission-connected Demand facilities, Distribution facilities (e.g. GSPs), and Distribution systems
- Also applies requirements to new providers of Demand Side Response (DSR)

## Gas Network Codes – Status

Code	Current Status	Implementation date
Congestion Management (CMP)	Implemented	1 <sup>st</sup> October 2013
Capacity Allocation Mechanism (CAM)	Implemented	1 <sup>st</sup> November 2015
Gas Balancing (BAL)	Implemented	1 <sup>st</sup> October 2015
Interoperability & Data Exchange (INT)	Implemented	1 <sup>st</sup> October 2015, 1 <sup>st</sup> May 2016
Tariffs (TAR)	In comitology	1 <sup>st</sup> April 2017, 1 <sup>st</sup> October 2017, 31 <sup>st</sup> May 2019
Incremental Capacity (& CAM amendments)	In comitology	1 <sup>st</sup> April 2017

# Gas Network Codes – Market Codes (implemented)

The market codes implemented so far include:

- Rules for managing contractual congestion at interconnection points (IPs)
- Auction mechanisms for the release of capacity to access the transmission system
- Rules for balancing the system using market mechanisms over a harmonised gas day (06:00 to 06:00 CET)

## Congestion Management Procedures

Status: Implemented

- Applies to IPs
- Introduces mechanism to manage contractual congestion by overselling and buying back capacity

## Capacity Allocation Mechanisms

Status: Implemented

- Applies to IPs
- Capacity to be released via auction based mechanisms
- Capacity to be bundled at IPs
- Common platforms for booking capacity
- Defines harmonised gas day

## Gas Balancing

Status: Implemented

- Applies to transmission system
- Describes market based balancing rules
- Facilitates wholesale gas market
- Information provision to support daily balancing

# Gas Network Codes – System Operation Codes

**The interoperability code creates harmonised rules for the operation of transmission systems in order to encourage and facilitate efficient gas trading and transport across gas transmission systems within the EU.**

## **Interoperability & Data Exchange Rules**

**Status: Implemented**

- Creates rules for Interconnection Agreements
- Rules for allocation of quantities flowed
- Physical units for communications
- Gas quality and new publication requirements for gas quality data
- Odourisation
- Rules for data exchange

# Gas Network Codes – Market Codes (in development)

**The tariff code sets rules on harmonised transmission tariff structures for gas and includes rules on the application of a reference price methodology, the associated consultation and publication requirements.**

**The CAM amendment is mainly focused on rules for the release on incremental capacity at interconnection points.**

## **Transmission Tariff Structures** **Status: In Comitology**

- Applies to all entry/exit points
- Some specific rules for Ips
- Rules for use of methodology of a TSOs allowed revenue
- Rules for reconciliation of a TSOs allowed revenue
- Publication and consultation requirements

## **CAM Amendment (Incremental)** **Status: In Comitology**

- Applies to IPs
- New rules for incremental capacity release
- New rules on the release of different capacity products

# REMIT

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**REMIT** = Regulation on Wholesale Energy Market Integrity & Transparency

- Regulation (EU) 1227/2011 (REMIT) of 25 October 2011:
  - Prohibits market abuse and sets related disclosure obligations on market participants
  - Establishes a requirement for a transaction and fundamental data reporting framework which allows effective monitoring by ACER
  - Enables ACER and National Regulatory Authorities to investigate and take enforcement action against potential incidents of market abuse
- Supported by Commission Implementing Regulation (EU) 1348/2014 on data reporting implementing Article 8(2) and 8(6) of REMIT
  - Specifies that both standard and non-standard contracts should be reported
  - Sets out the categories of contracts to be reported and the detail of fundamental data to be reported
  - Sets out who should report on each category of contract and for fundamental data
  - Specifies the timing requirements for reporting

## Issues to consider

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**Level of  
harmonisation**

**Control over  
procedures**

**Control over  
code/  
frameworks**

**Consistency  
with  
neighbouring  
markets**

**Attractiveness  
of GB market**

**Solidarity/  
Security of  
Supply**

**Regional  
cooperation**

**Cross  
border trade**

# Alternative models

Other non-EU countries interact with the IEM

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- Norway



- Switzerland



- Canada



- Turkey

