



**3rd Annual
East West Interconnector and Moyle Interconnector User Forum**

**Date: 4 May 2016
10:30 – 16:00**

Venue: Clayton Hotel Ballsbridge - Thomas Prior Hall, Dublin, Ireland

The East West Interconnector and Moyle Interconnector User Forum will discuss commercial and operational aspects in relation to the interconnectors.



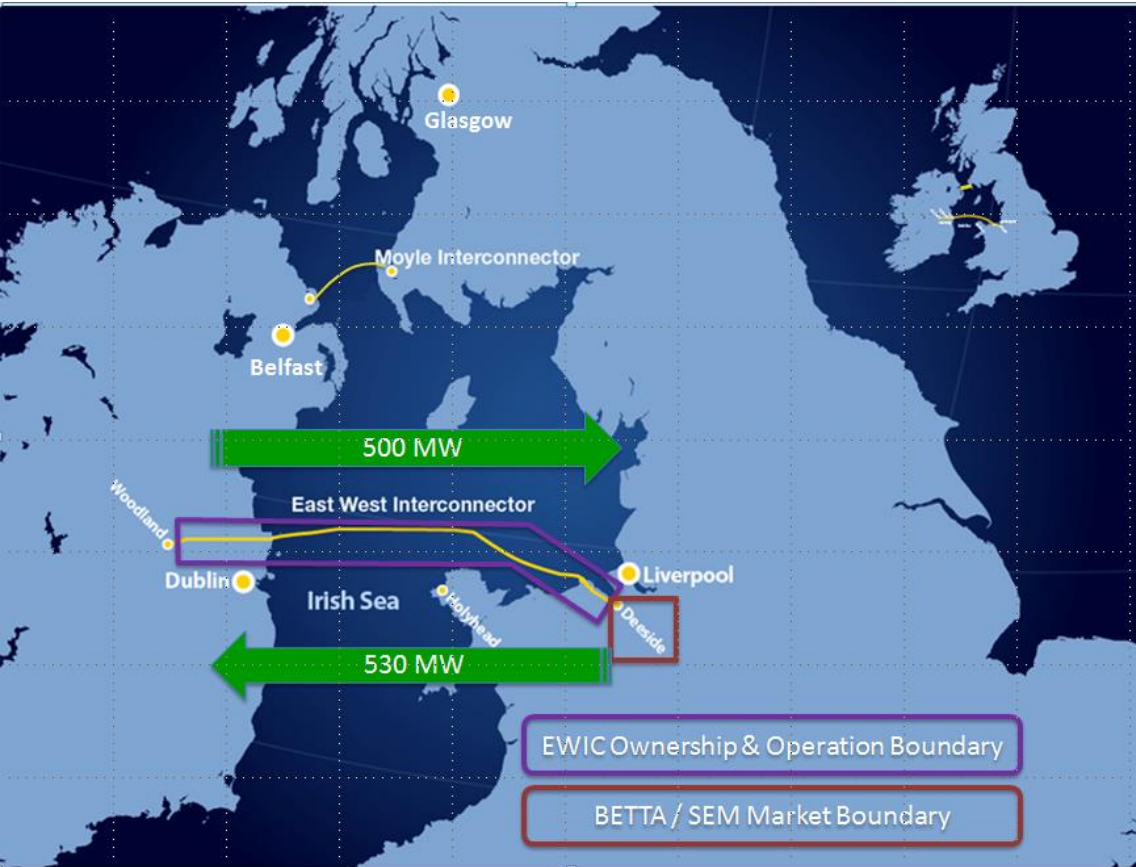
Agenda Time	Topic	Speaker
10:00	Morning Tea/Coffee	
10:30	Welcome	Aidan Corcoran (EIL)
10:35	EWIC and Moyle Commercial Overview	Paul McGuckin (Mutual Energy) / Stephen Gannon (EIL)
10:50	Moyle - Cable Repair/ Long Term Capacity	Stephen Hemphill (Mutual Energy)
11:10	EWIC - Asset Management & Marine Survey	Ray Niland / Eamon Carroll (EIL)
11:40	CACM and FCA implementation	Mark Lane (EirGrid / SONI)
12:10	Questions / Discussion	
12:30	Lunch	
13:30	I-SEM Overview	Michael Kelly (EirGrid / SONI)
14:20	Joint Allocation Office (JAO) Platform	Frederik Johnson (JAO)
14:40	JAO and how it relates to I-SEM	Michael Carrington (EirGrid / SONI)
15:00	Afternoon Refreshments	
15:20	NEMO	Peter Lantry (EirGrid / SONI)
15:40	Methodologies including HAR - Access Rules	Paul McGuckin – Mutual Energy
16:00	Questions / Discussion	

East West Interconnector Commercial

May 2016



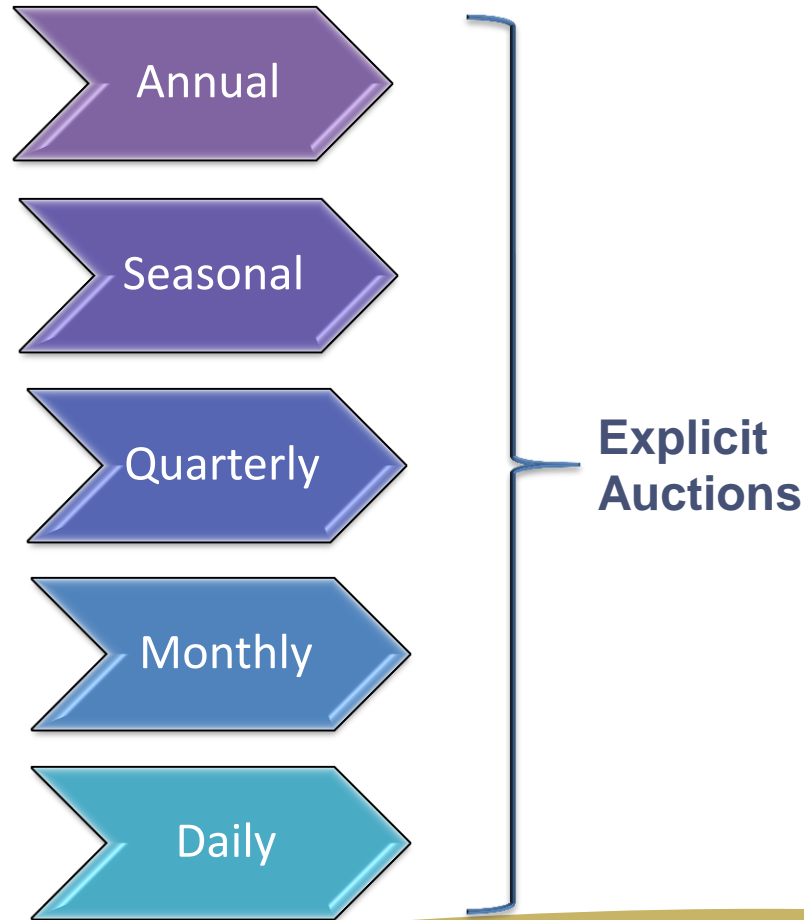
EWIC - Commercial



Commercial Overview

- EWIC has been commercially operational with unrestricted power flows since 1st May 2013
- EWIC offers capacity products to customers and ancillary services to EirGrid and National Grid

EWIC - Commercial



Commercial Overview

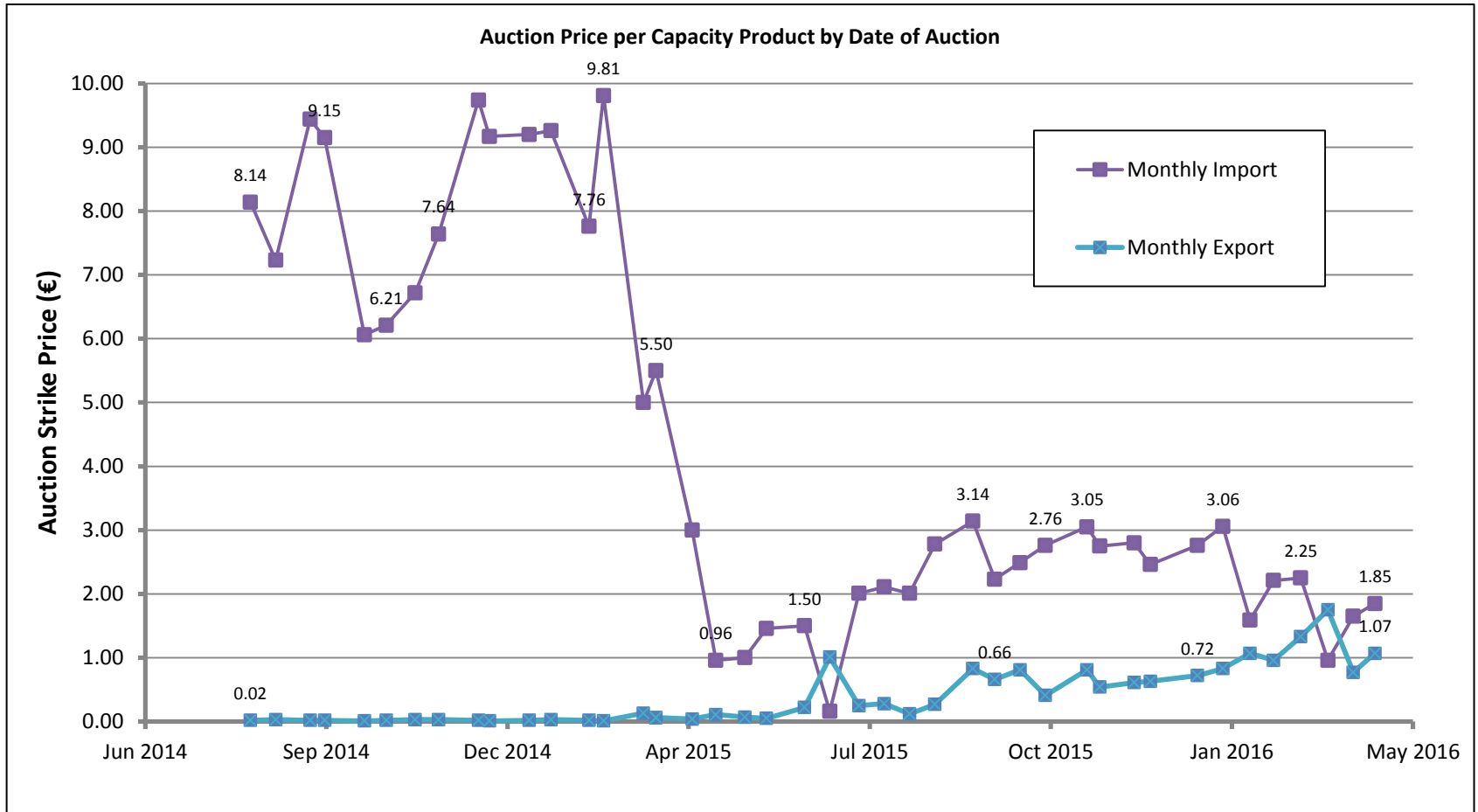
- Commercial team facilitate the sale of capacity over the interconnector
- Capacity sold through Annual, Seasonal, Quarterly, Monthly and Daily auctions

Customers

- 17 customers on EWIC
- Delivered over €10m capacity auction revenues in the 2015/16 financial year lowering TUoS costs for end consumers

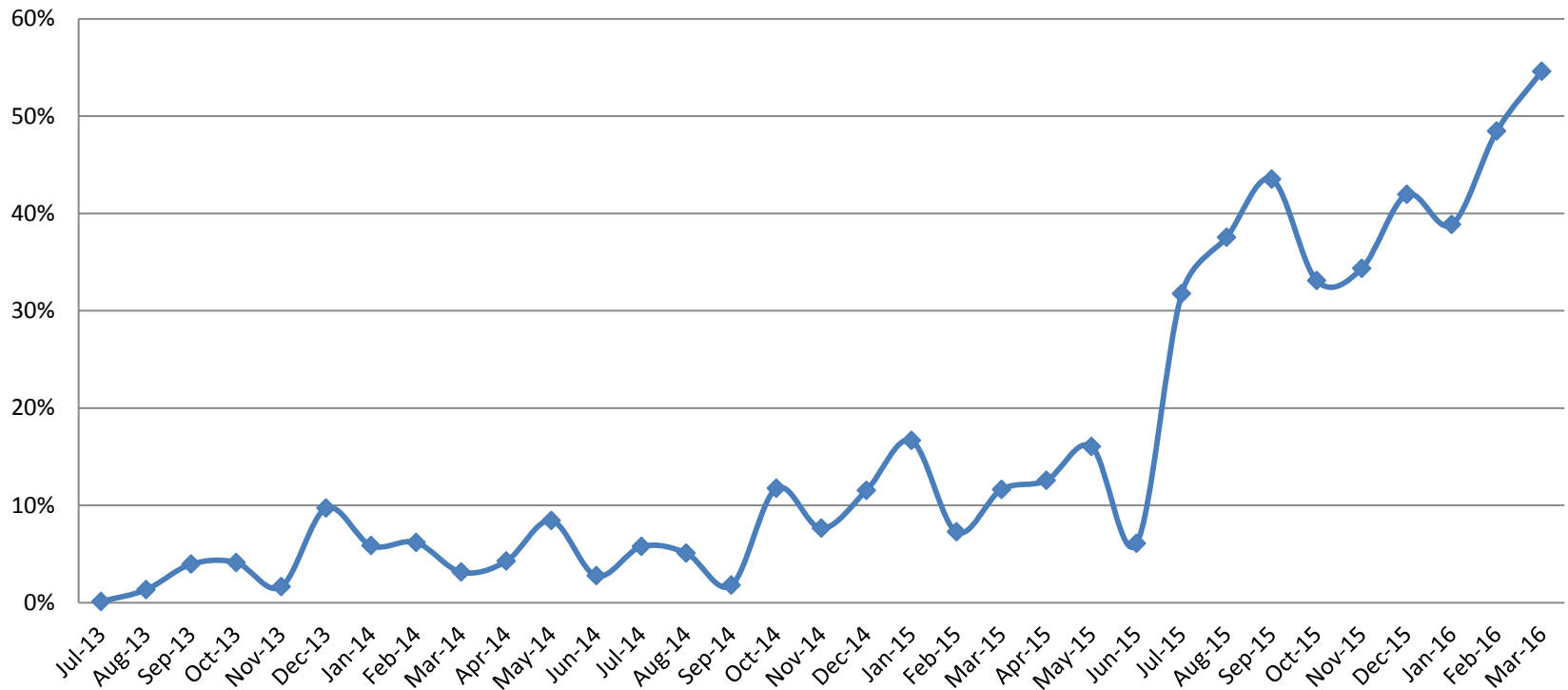


Auction Price per Capacity Product by Date of Auction



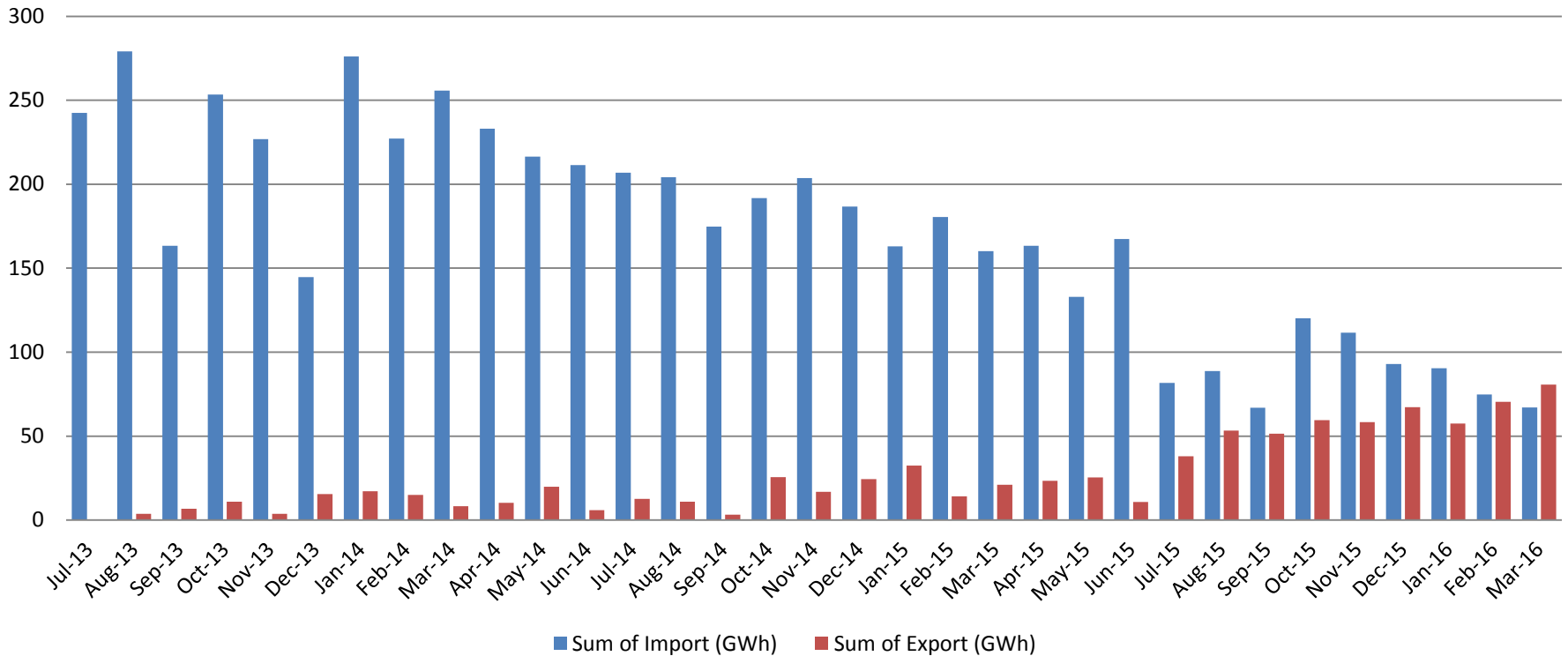
EWIC – Increase in IE – GB exports

Monthly Export Percentage of Total Energy (GWh) Transfer
Export / (Import + Export)



EWIC Export/Import (actual GWh)

EWIC Import and Export



REMIT Reporting

EirGrid Reporting

- 3.1(b)(i) EirGrid **will** report on all primary explicit capacity allocation contracts resulting from explicit auctions in the Auction Management Platform.
- 3.1(b)(ii) EirGrid **will** report on all resale contracts resulting from explicit auctions in the Auction Management Platform.
- 3.1(b)(ii) EirGrid **will not** report on transfer of contracts between market participants.

Under 3.1(b)(ii), the obligation to report is with Market Participants; however, EirGrid will provide a facility to opt in for reporting on your behalf and will take responsibility for mapping and transmitting the agreed REMIT Data to the European Agency for the Cooperation of Energy Regulators (ACER).

Those Market Participants who wish to appoint EirGrid to report REMIT Data are required to sign a **Data Reporting Agreement**.

REMIT

- Nominations and Bids files have been submitted successfully from 7th April (compliance deadline) onwards. The Rights (Resales) file has not been submitted - there has been no data to send to date.
- AMP Rights web feed, including opt-in/opt-out changes went live
- Four out of seventeen EWIC/Moyle Customers have opted in for the Data Reporting Agreement.

Moyle commercial overview

Paul McGuckin

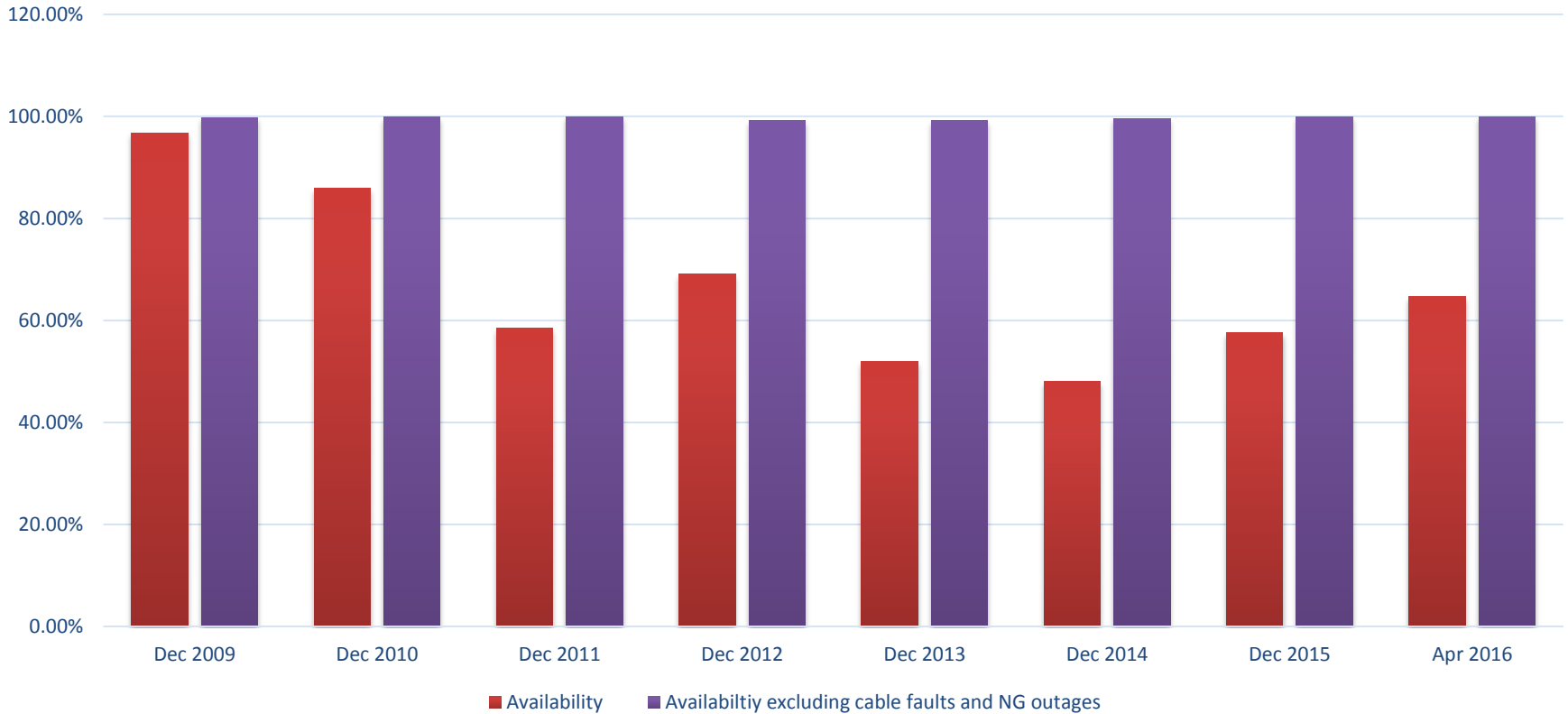
4th May 2016

Moyle commercial overview

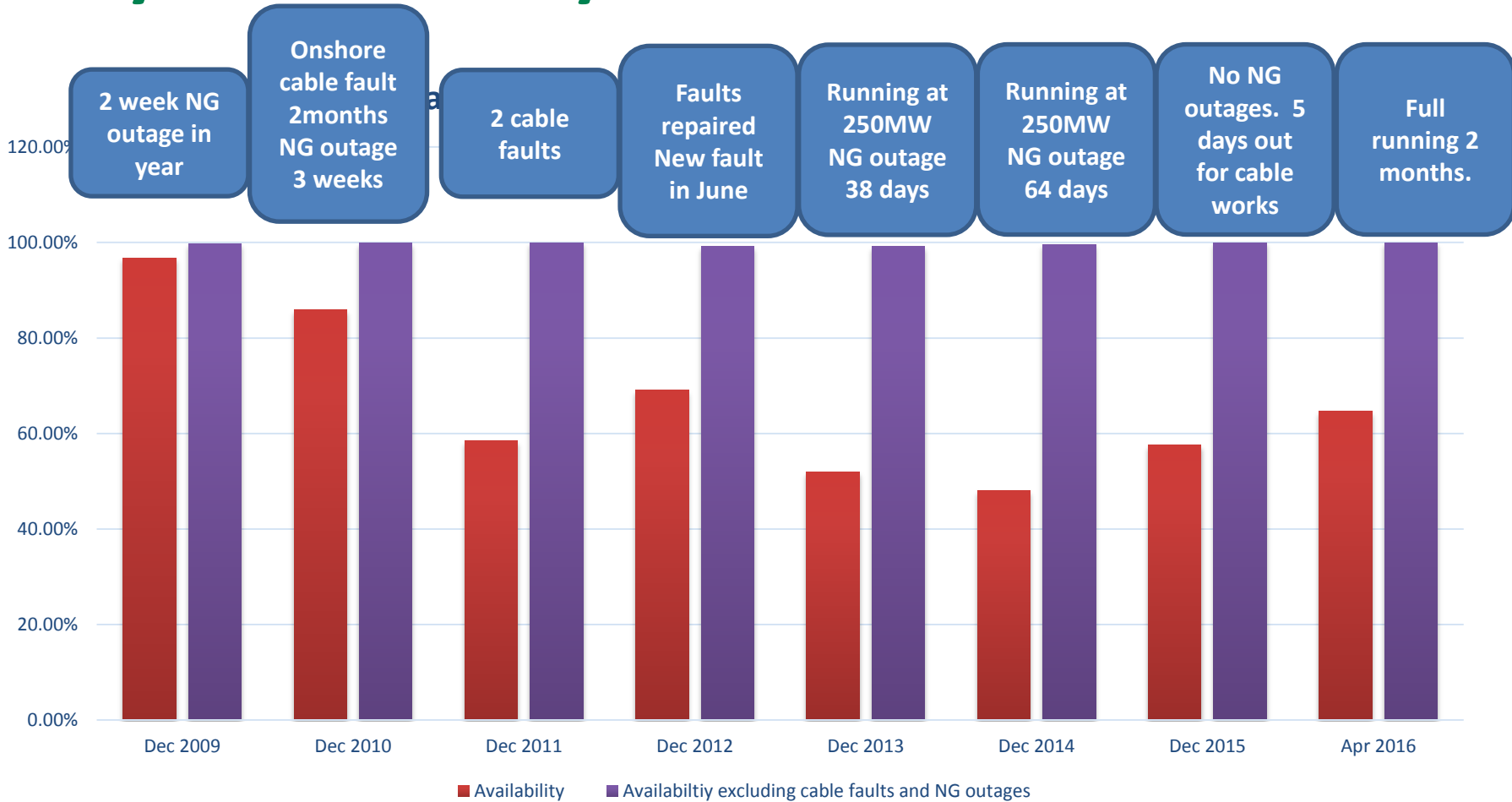
- Availability
- Physical and commercial use of the asset
- Auctions

Moyle availability

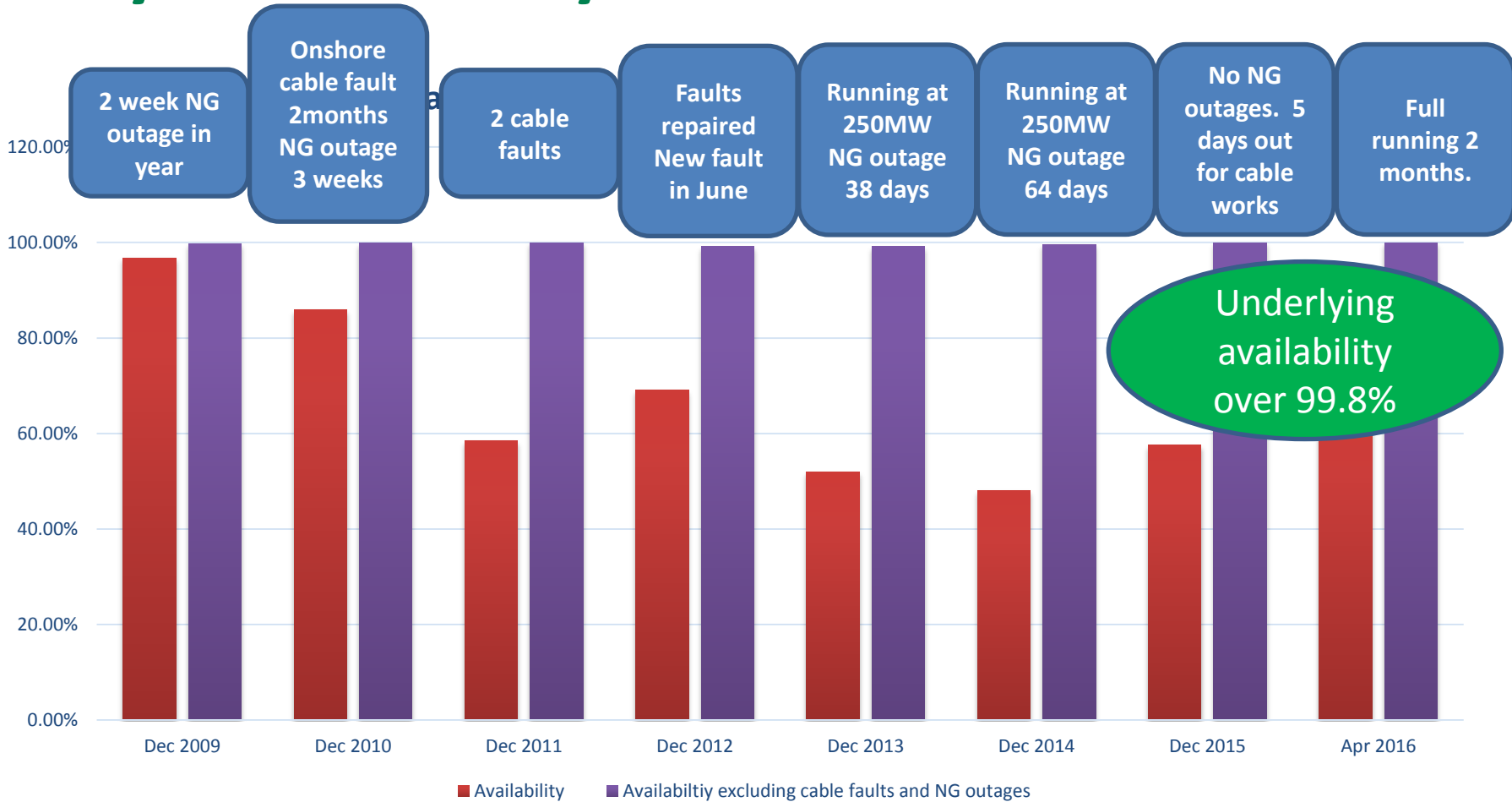
Moyle actual availability and adjusted for cable and National Grid outages



Moyle availability



Moyle availability

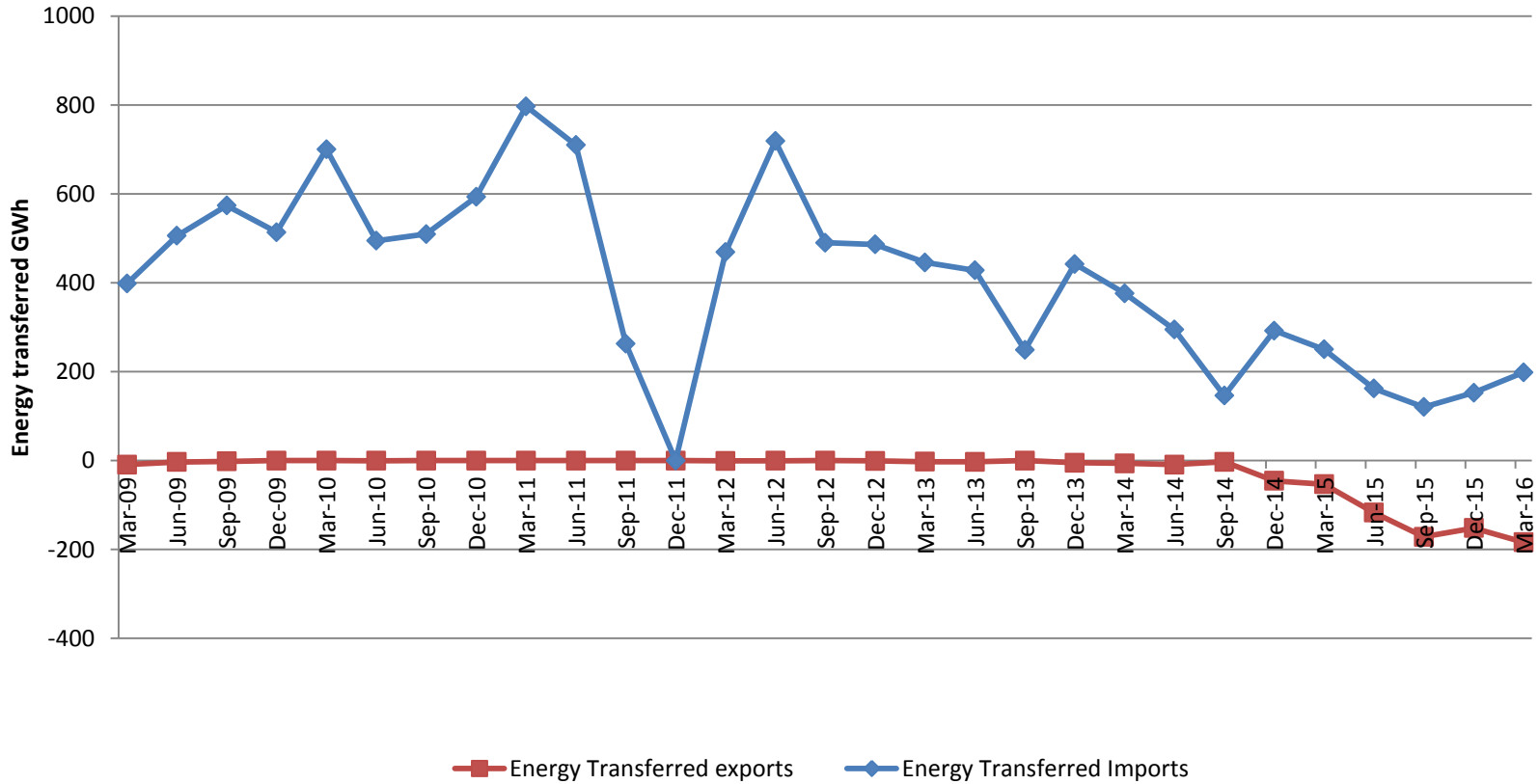


Outage communication

- Bound by REMIT/transparency regulation
- ‘Long range’ planned outages on website and published on AMP without NTC change
- Short term outages:
 1. AMP
 2. ENTSOE transparency platform
 3. Email
 4. Website

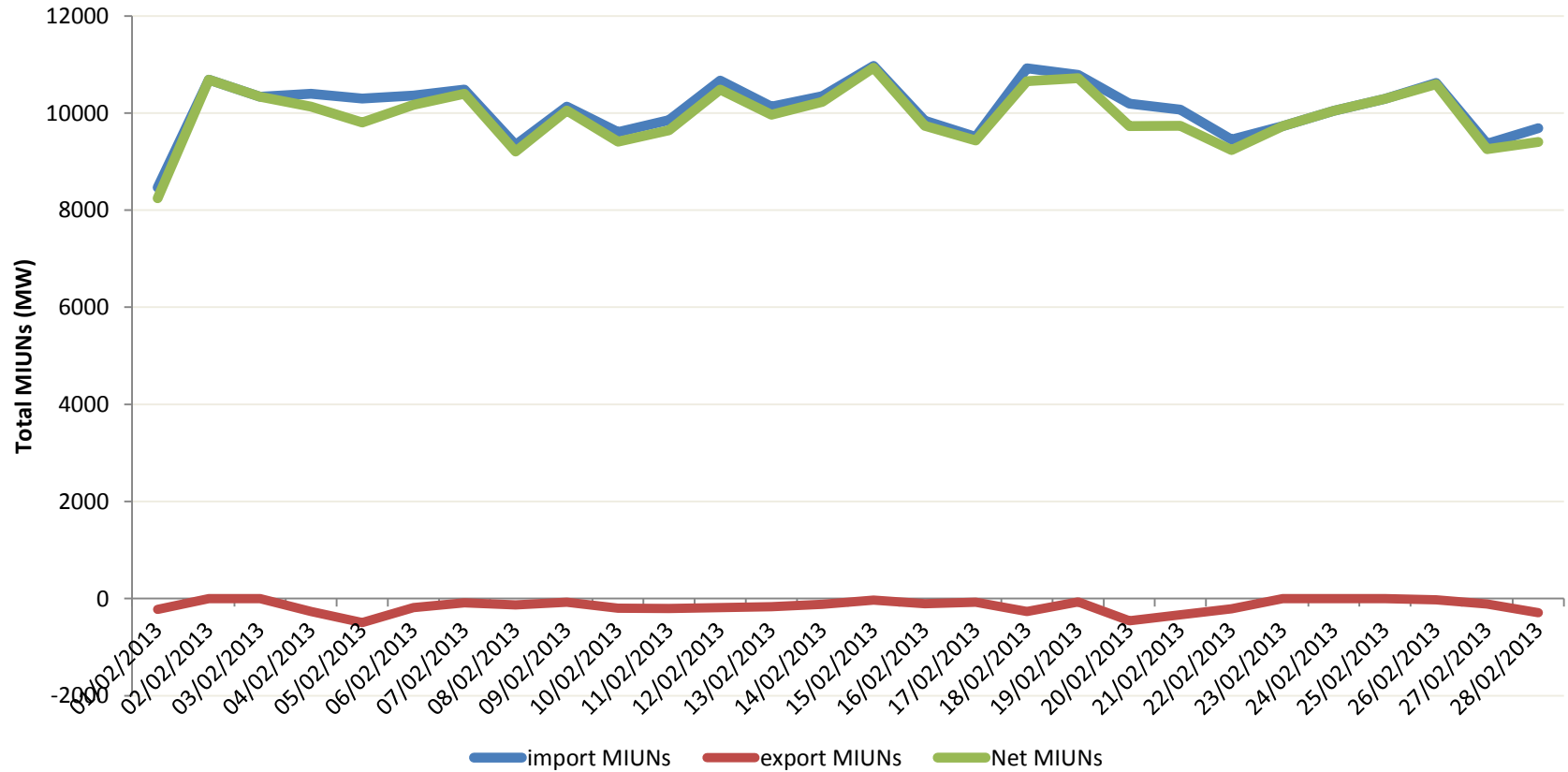
Moyle physical flows

Moyle quarterly physical flows



Moyle commercial flows

Moyle MIUNs February 2013



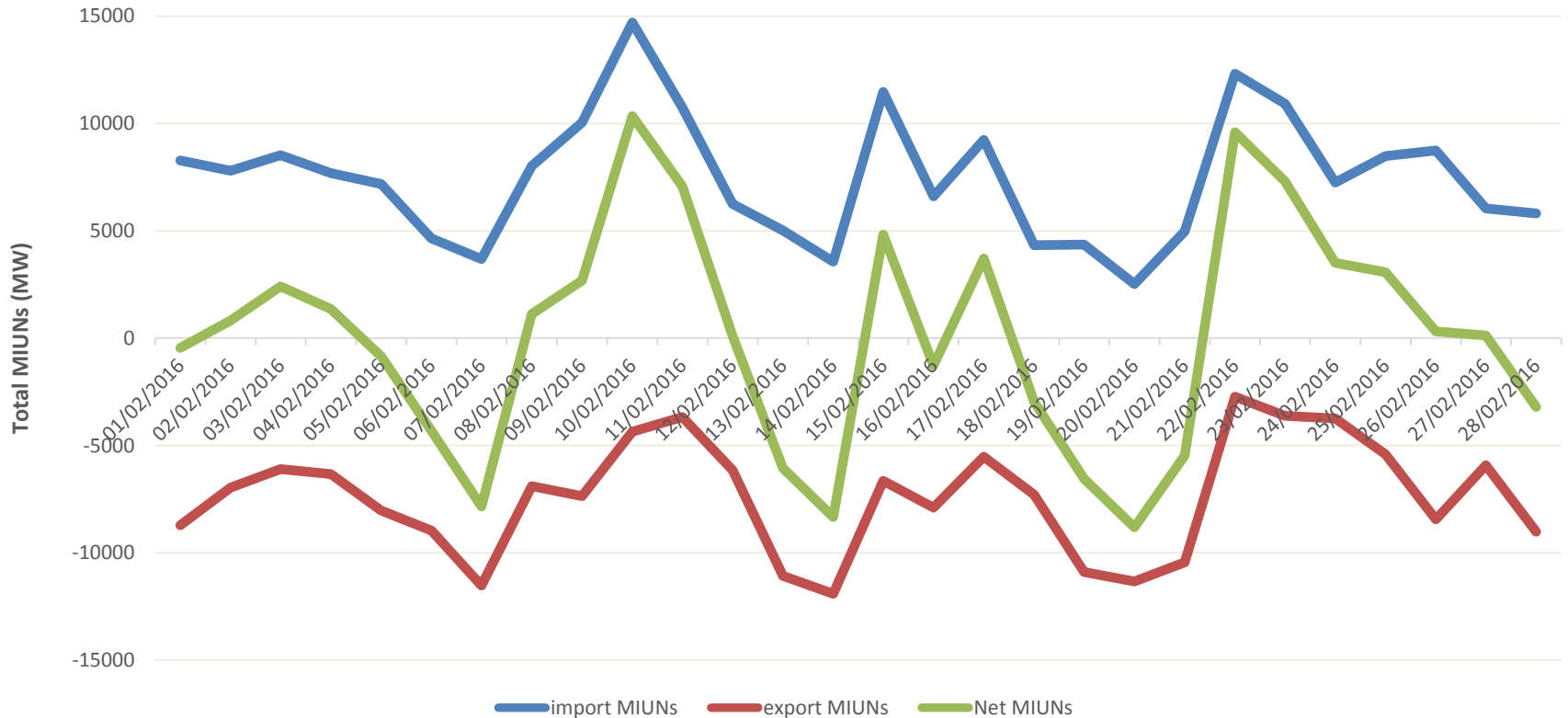
Moyle commercial flows

Moyle MIUNs February 2015



Moyle commercial flows

Moyle MIUNs February 2016

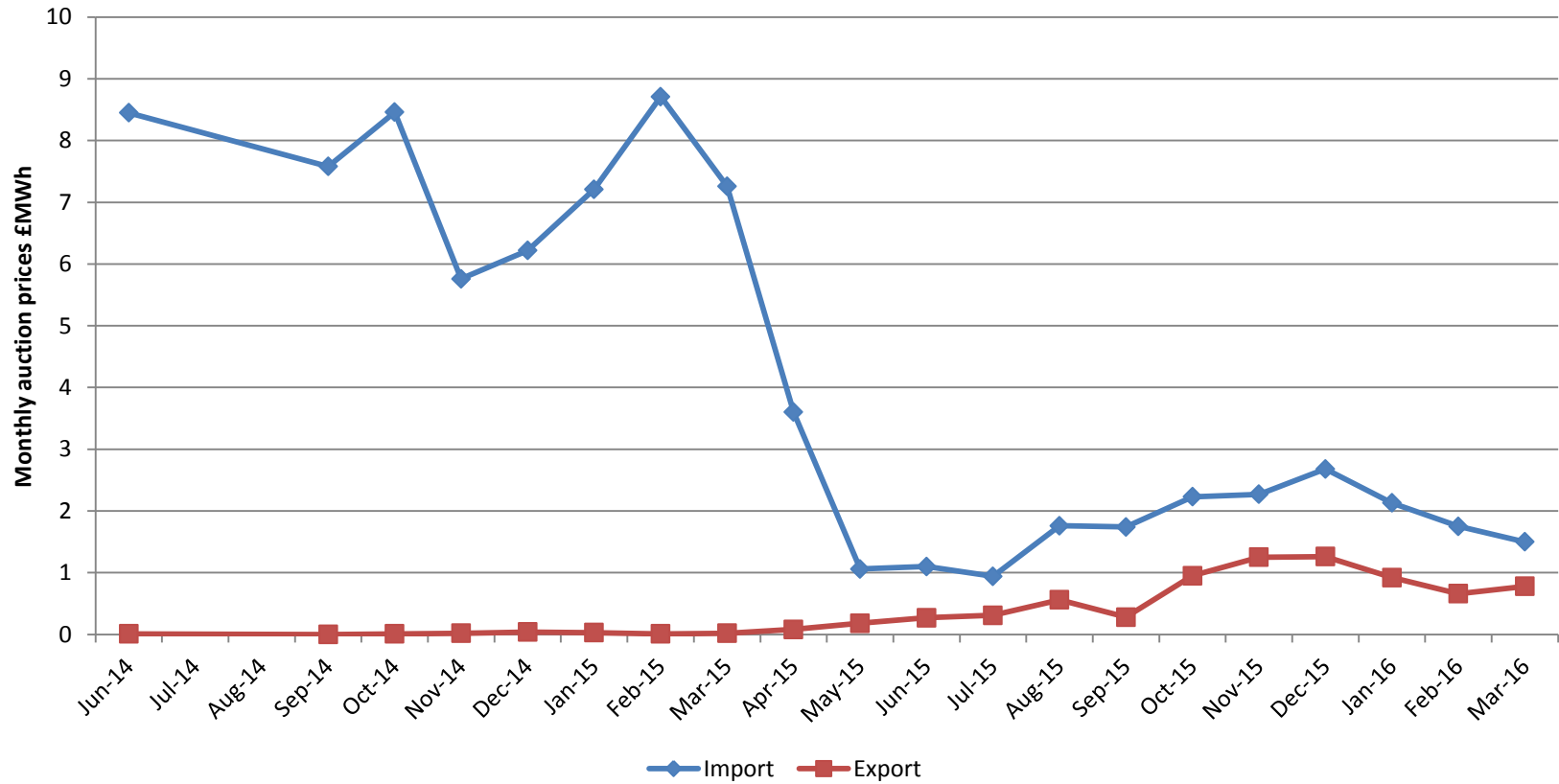


Moyle commercial flows

- Total MIUNs
 - Feb 2013 286,917MW
 - Feb 2015 327,751MW
 - Feb 2016 420,906 MW
- Physical flows reduced but trading activity up
- Imports reduced but exports substantially increased
- Import hedging, export arbitrage?

Moyle auction prices

Moyle monthly capacity auction prices



Summary

- Strong underlying asset performance
- Commercial activity > Physical flows
- Trend reflected in auctions



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Moyle Technical Update

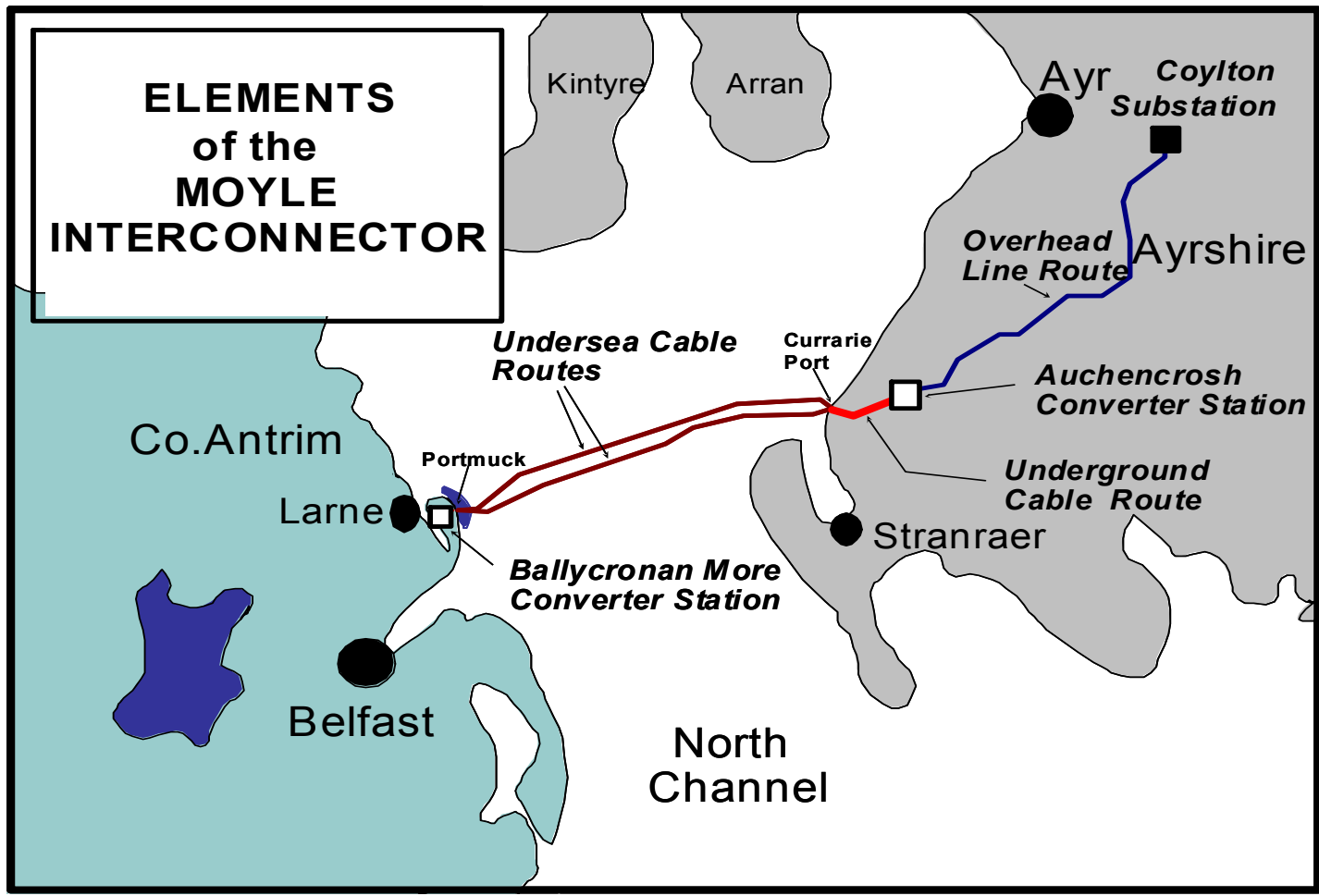
Interconnector Users Forum
4th May 2016

- Cable Recovery Plan
- Availability
- Look Forward

Stephen Hemphill
Group Operations Manager



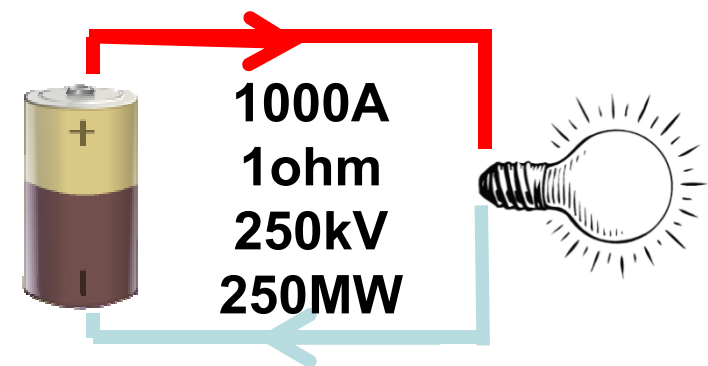
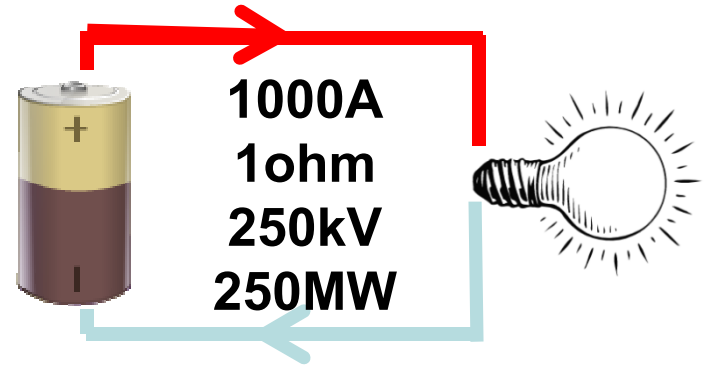
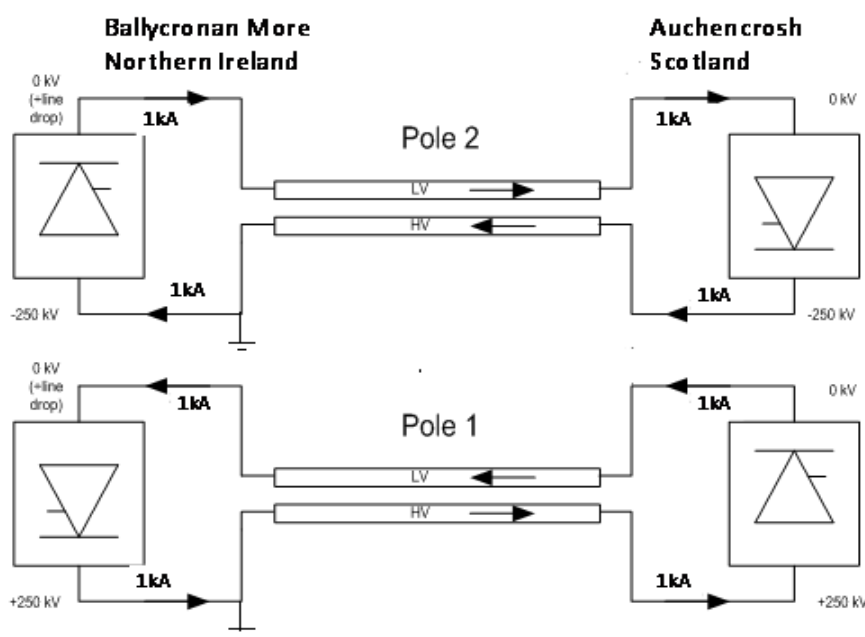
Dual Monopole HVDC 2 x 250MW



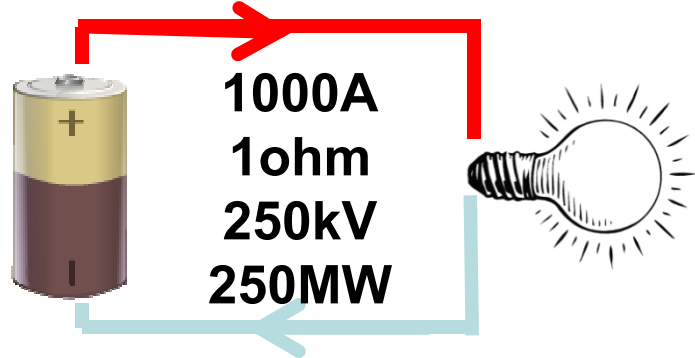
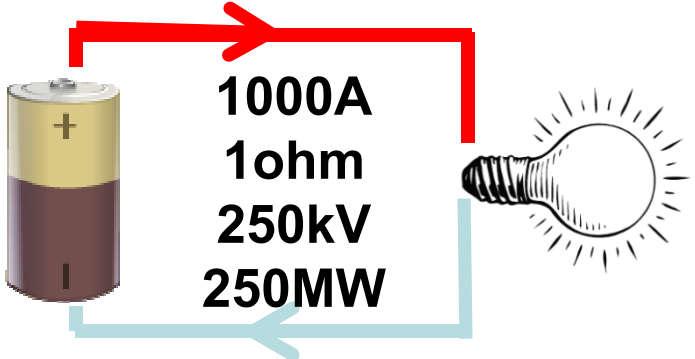
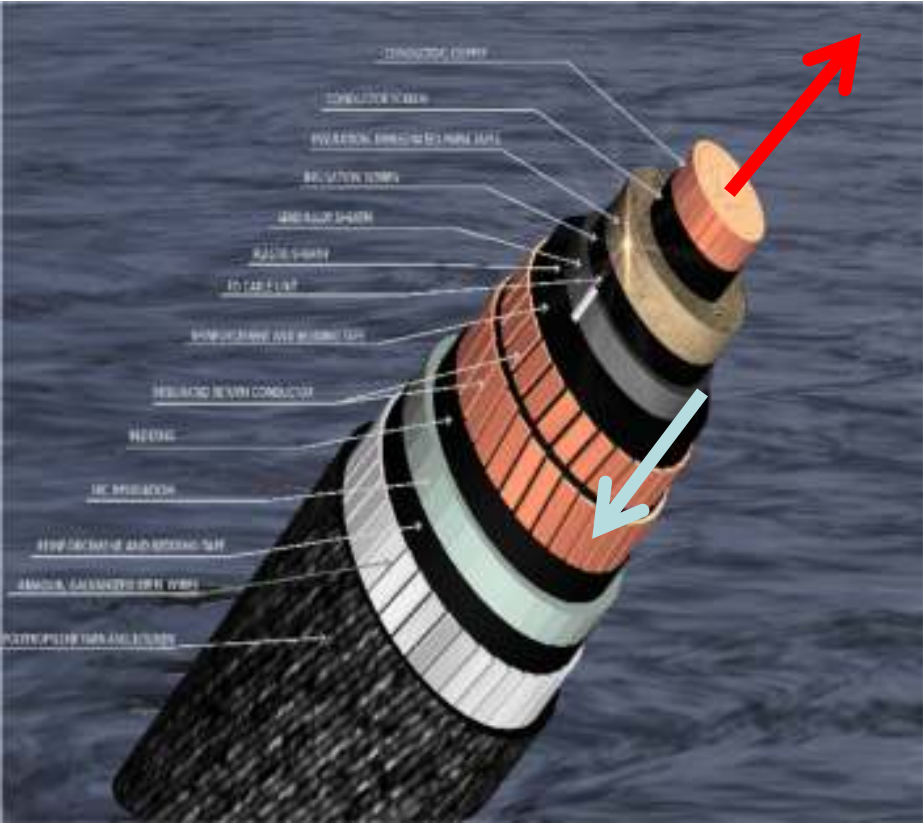
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Dual Monopole HVDC 2 x 250MW

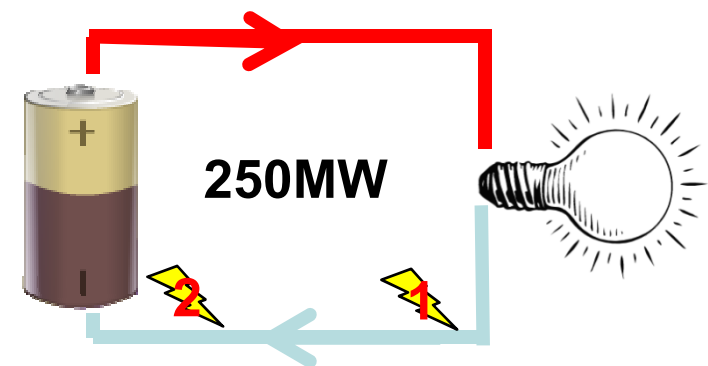
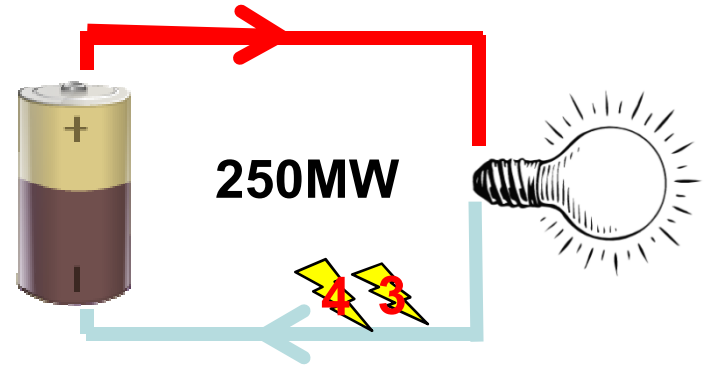


Integrated Return Conductor



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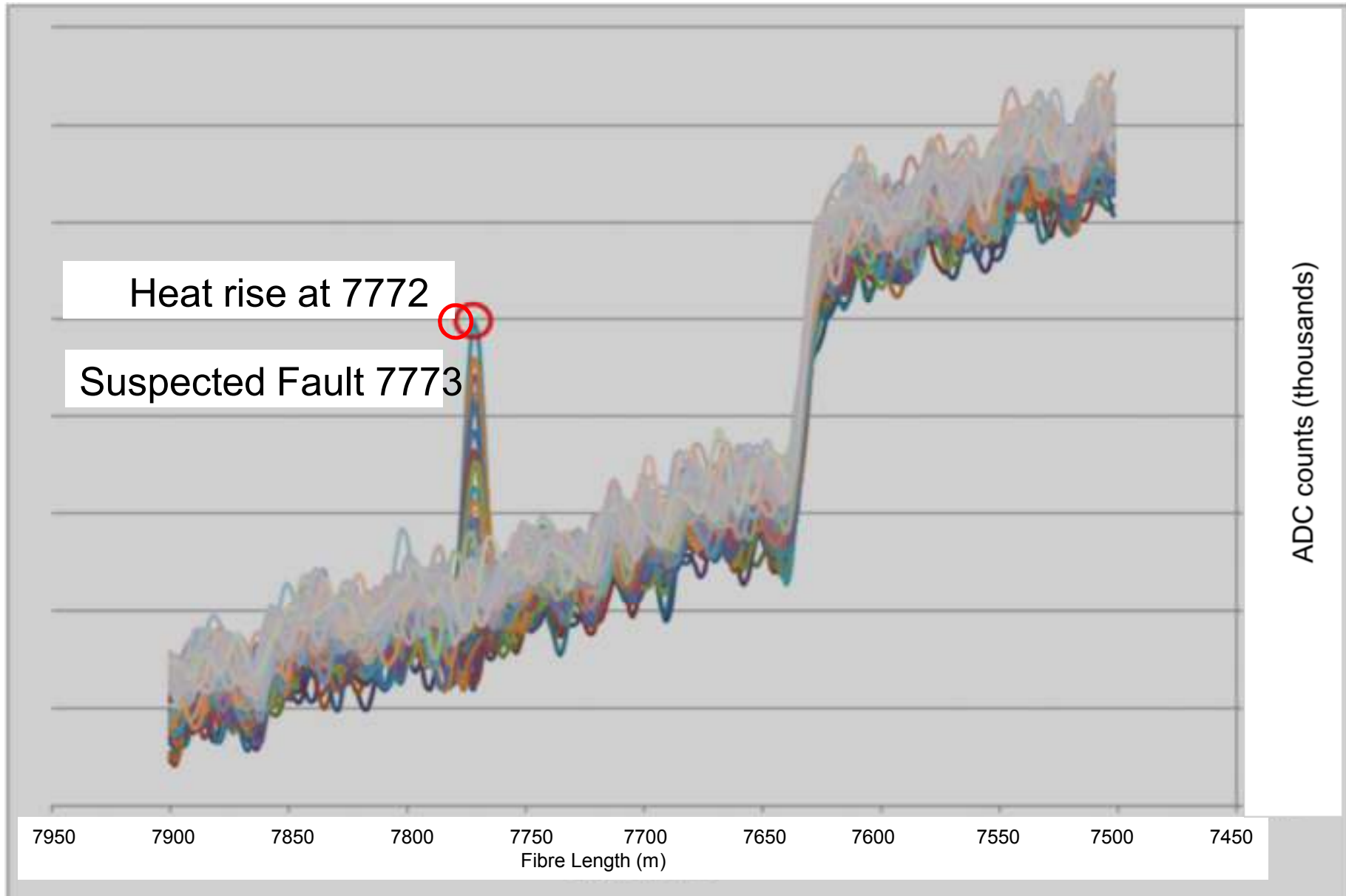
Submarine Cable Faults



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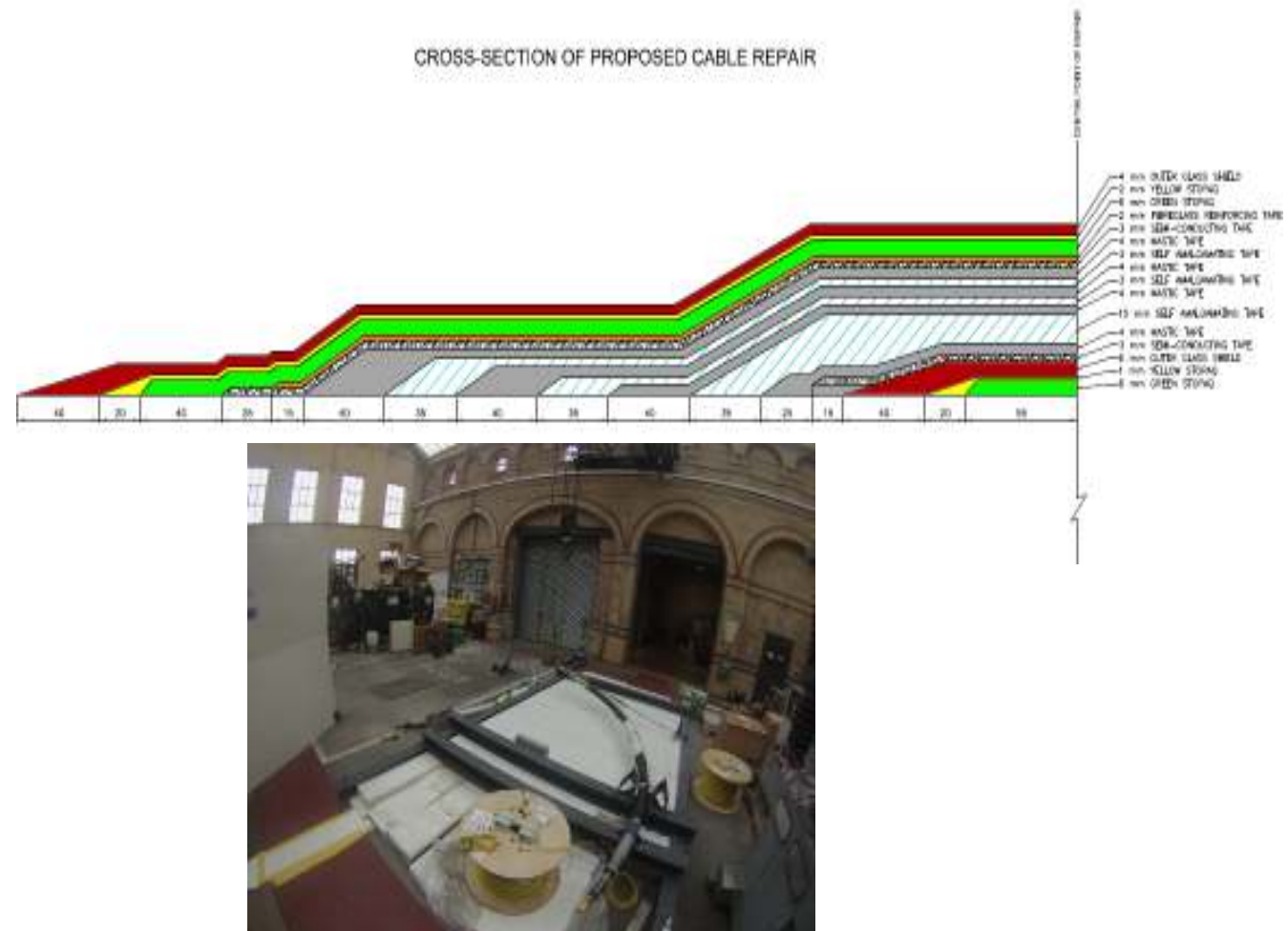


Seabed Repair : Pioneering Use of DTS to “pinpoint”



Engineering & Testing Dry Wrap Repair

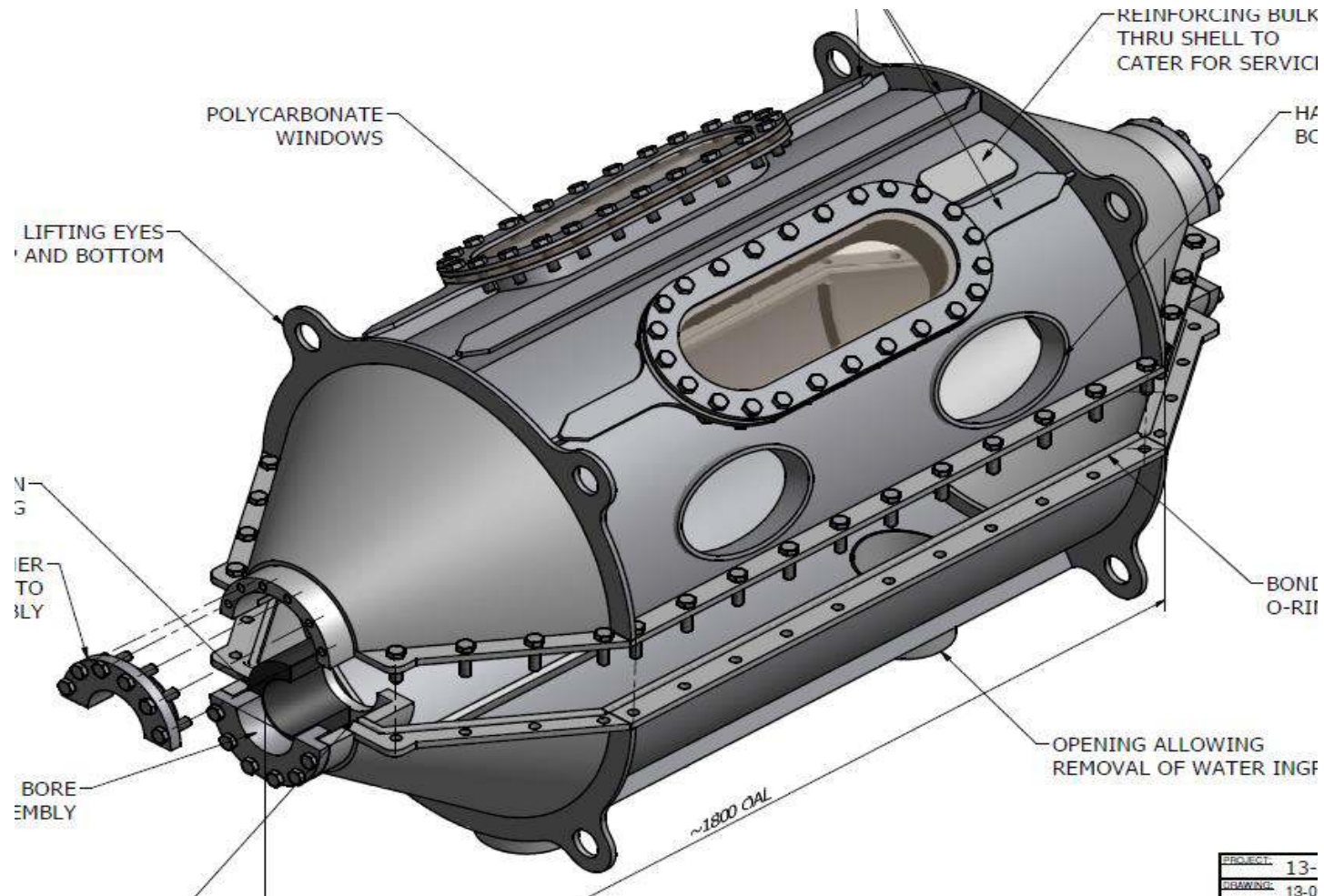
IEC 60502, IEC 60230, IEC 60229, CIGRE 496



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Designing a Dry Environment to execute the wrap : Internationally Acclaimed Innovation



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Procuring and mobilising a marine campaign within three months



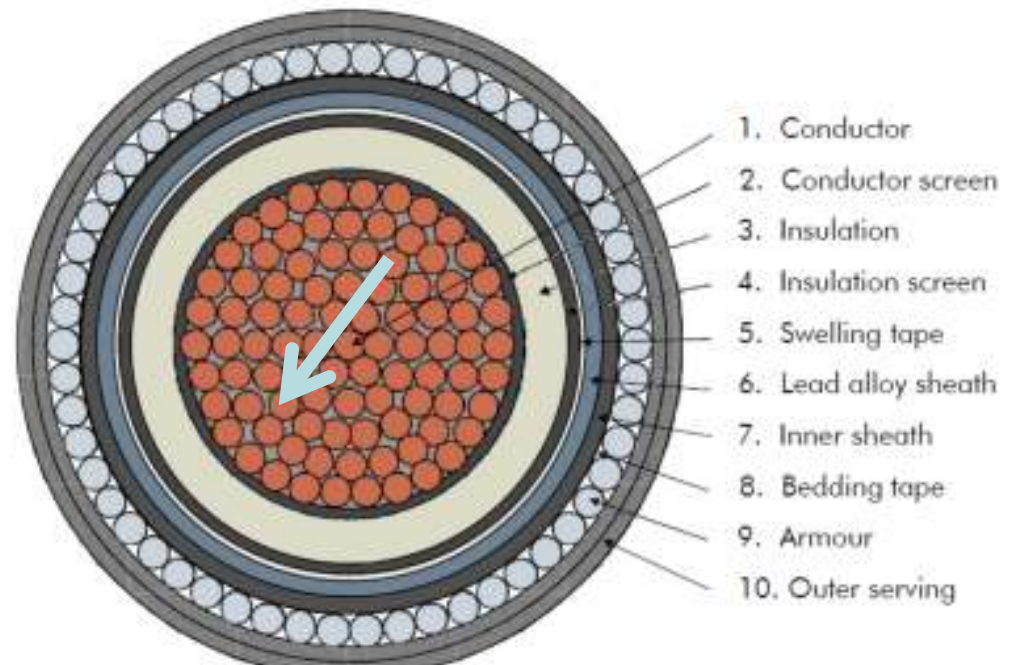
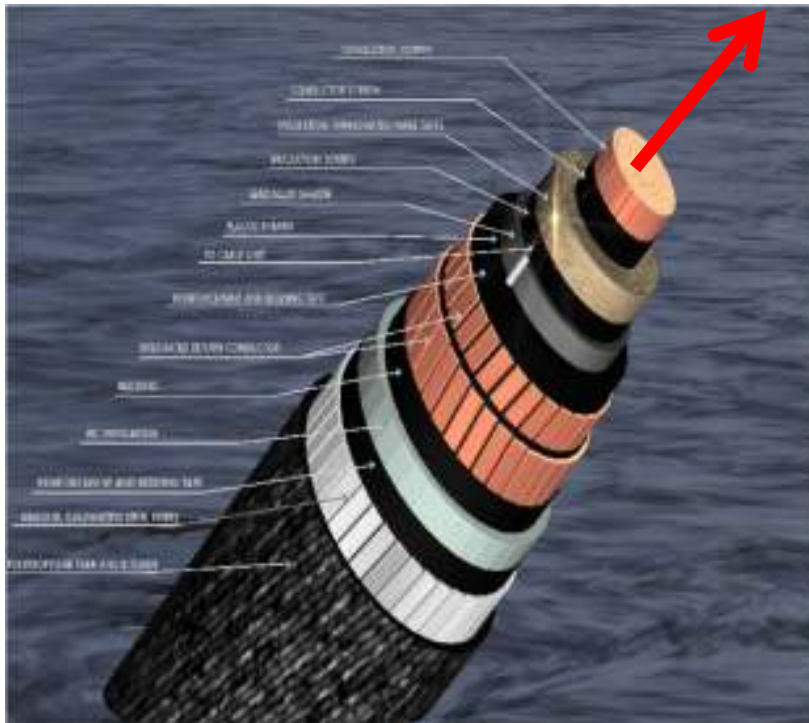
Employing a unique TUPE dive spread to maximise bottom time for divers





















Enduring Solution

New Low Voltage Return Cables

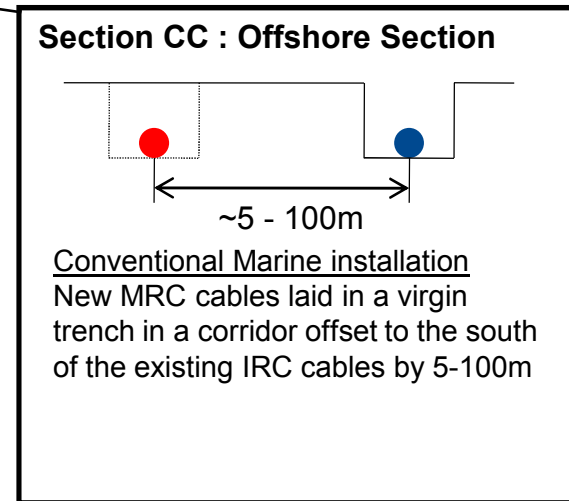
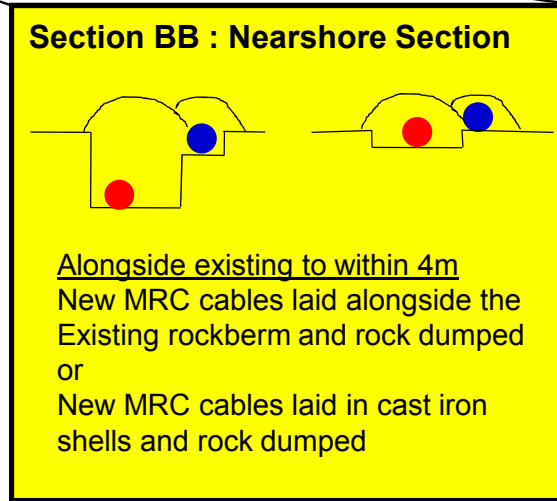
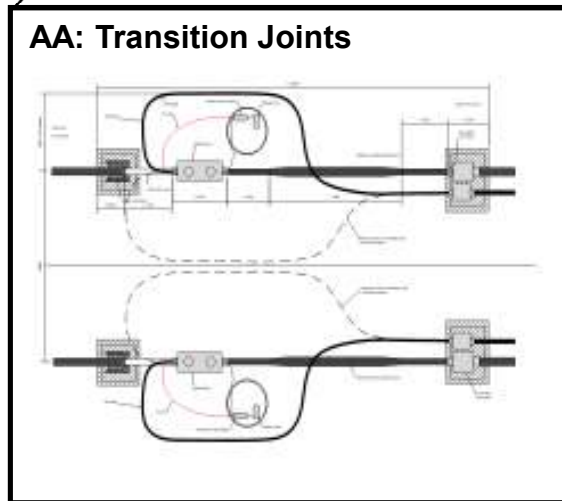
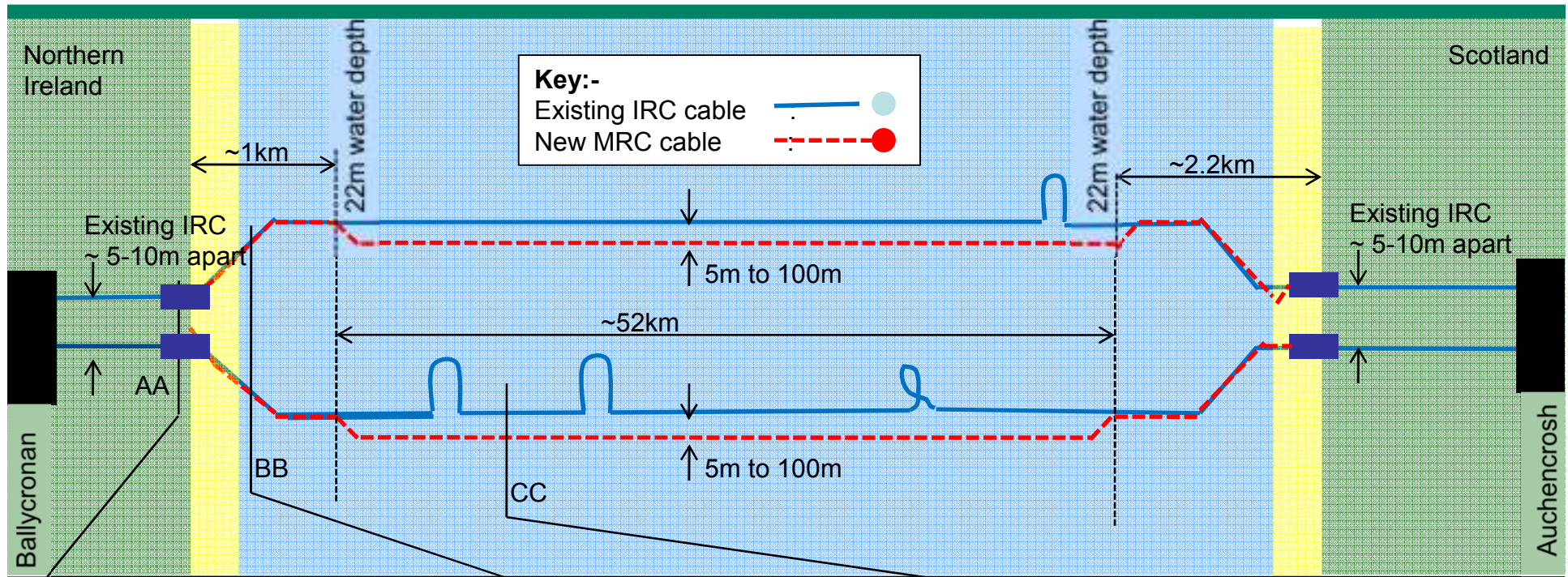
Cross-section drawing of TKRA 24 kV 1x1150 mm² KQ



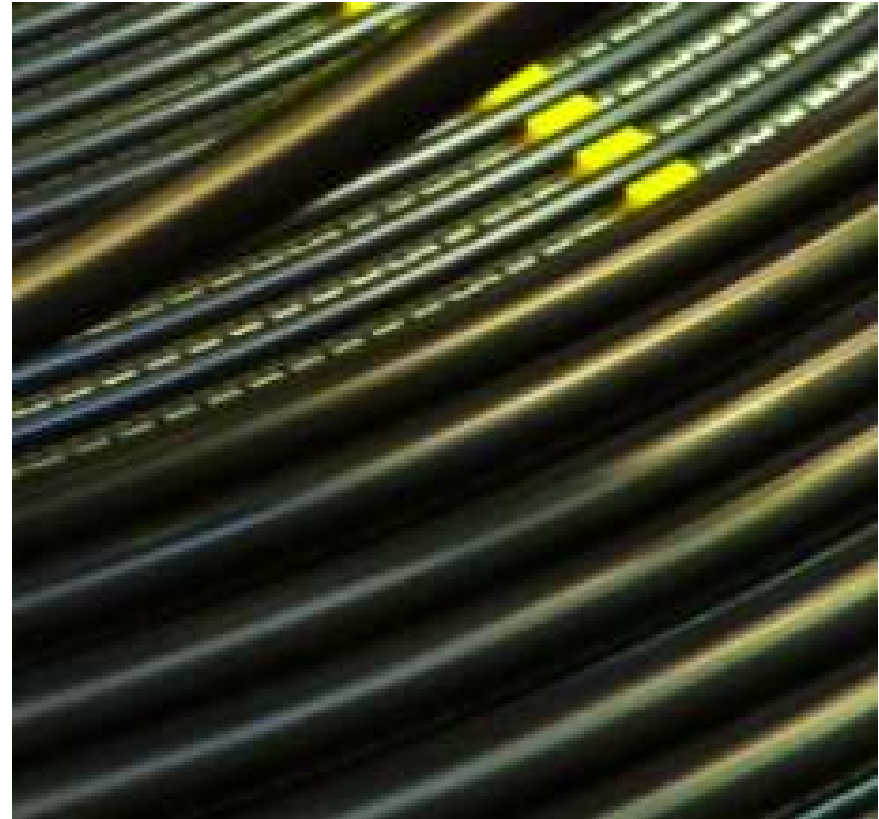
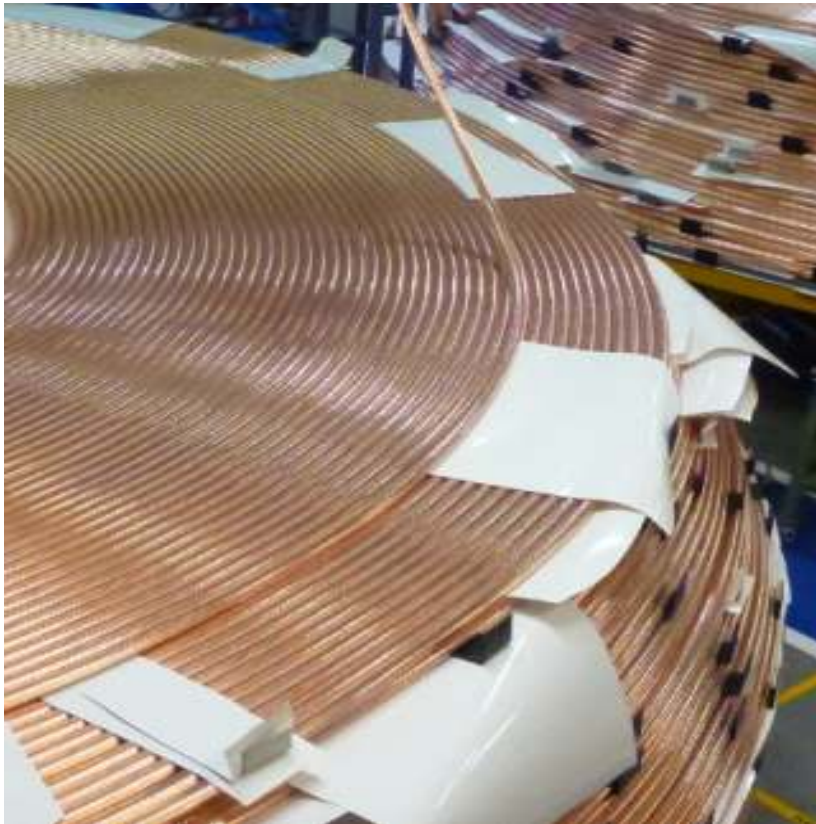
Target Delivery Full Capacity by Q4 2018

	2012	2013	2014	2015	2016	2017	2018
Concept and gaining support							
Consents & Permits (Marine & Land)		 					
Procurement		 					
Cable manufacture							
Cable lay & protection				 			
Onshore works							
Handover & Project Completion					  		

2 x 55km "MRC" Beach to Beach Cable Lay



Cable Manufacture February to May



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Load Out North Cable onto Skagerrak July 15



Transit



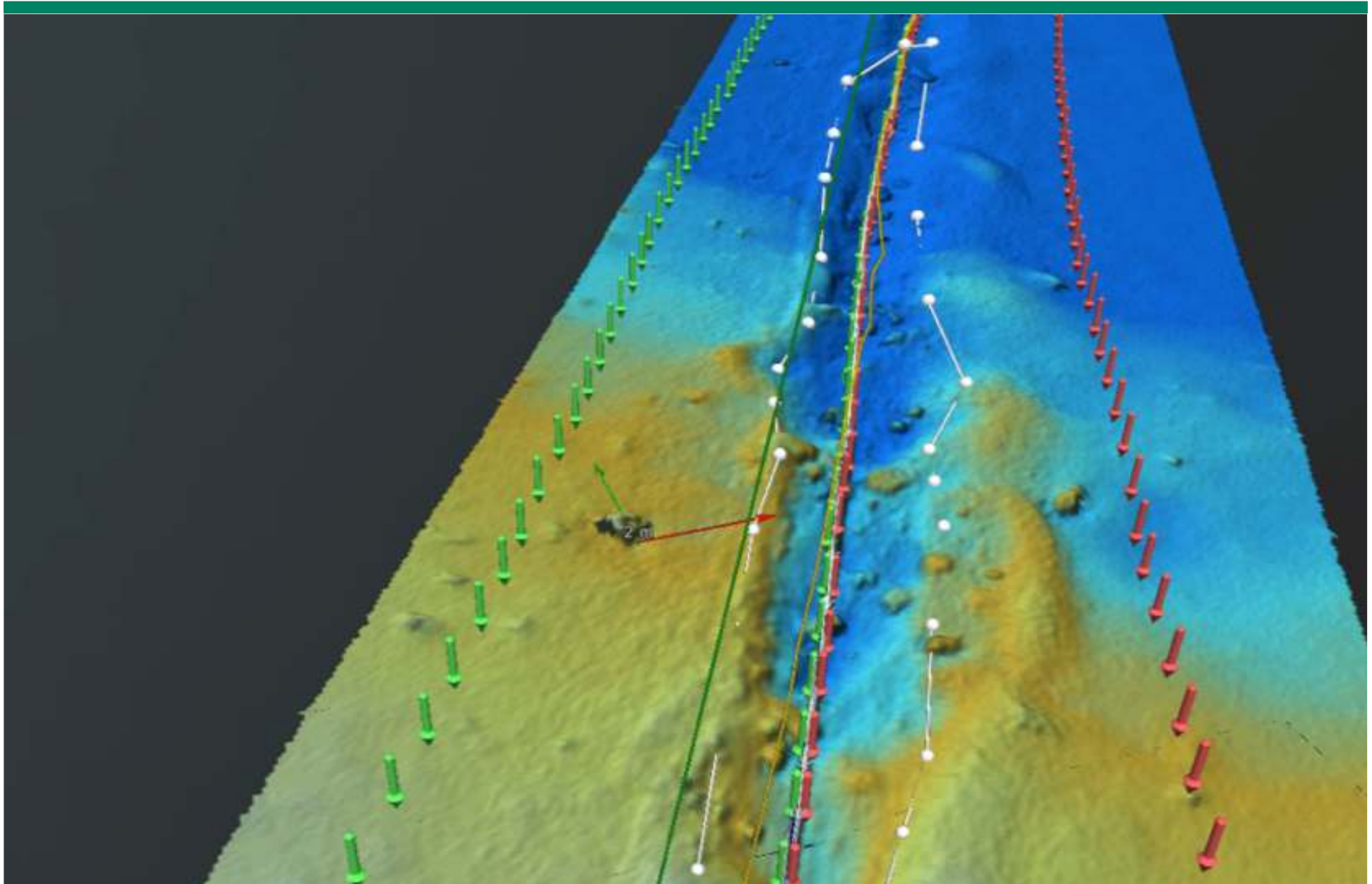
“Cable Float-in” Portmuck NI



Capjet Burial Tool Deployed from Skagerrak



Post Burial Survey to assess Rock Placement



Offshore “Fallpipe” Rock Placement



Offshore “Fallpipe” Rock Placement



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Nearshore “Split Barge” Rock Placement



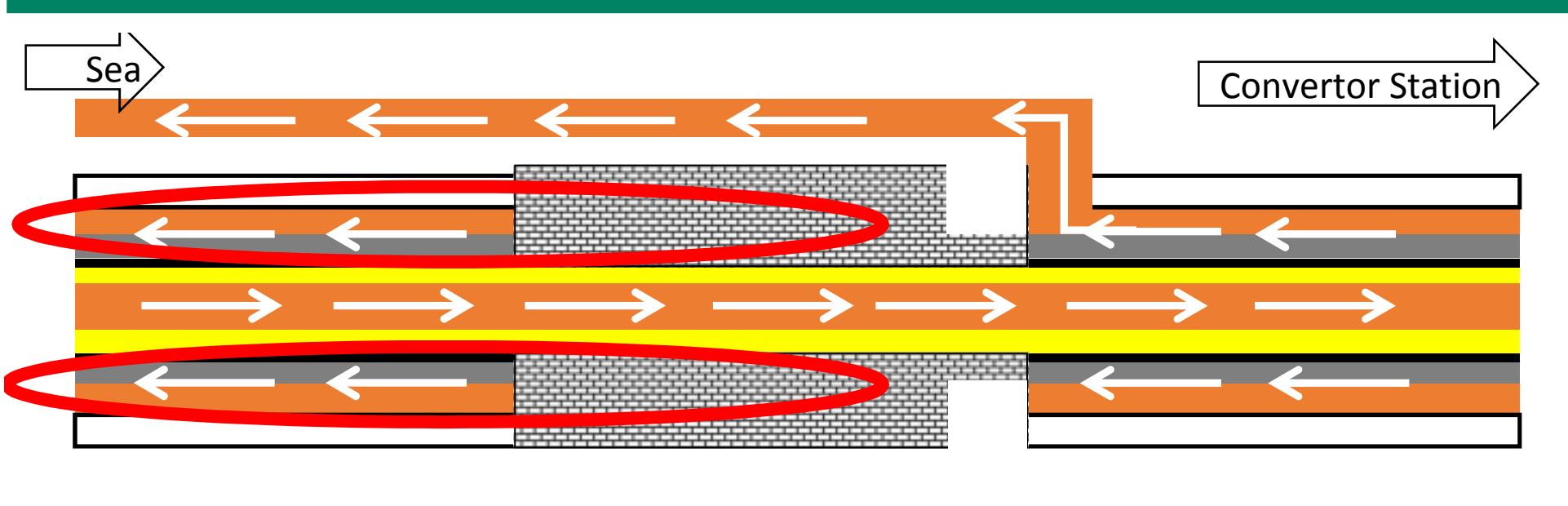
Intertidal Area : Cast Iron Shells & Diver Burial



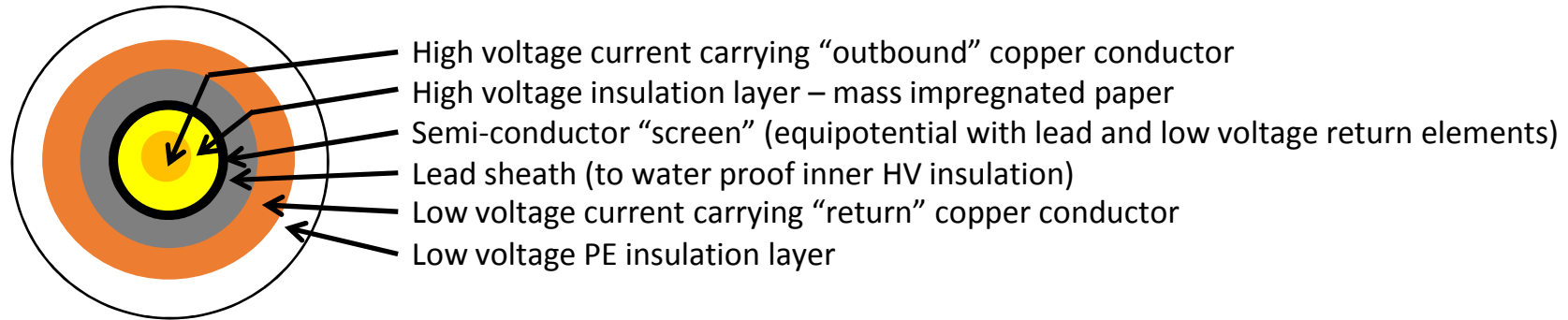
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Transition Joint



IRC Cable Cross Section Showing Relevant Functional Layers



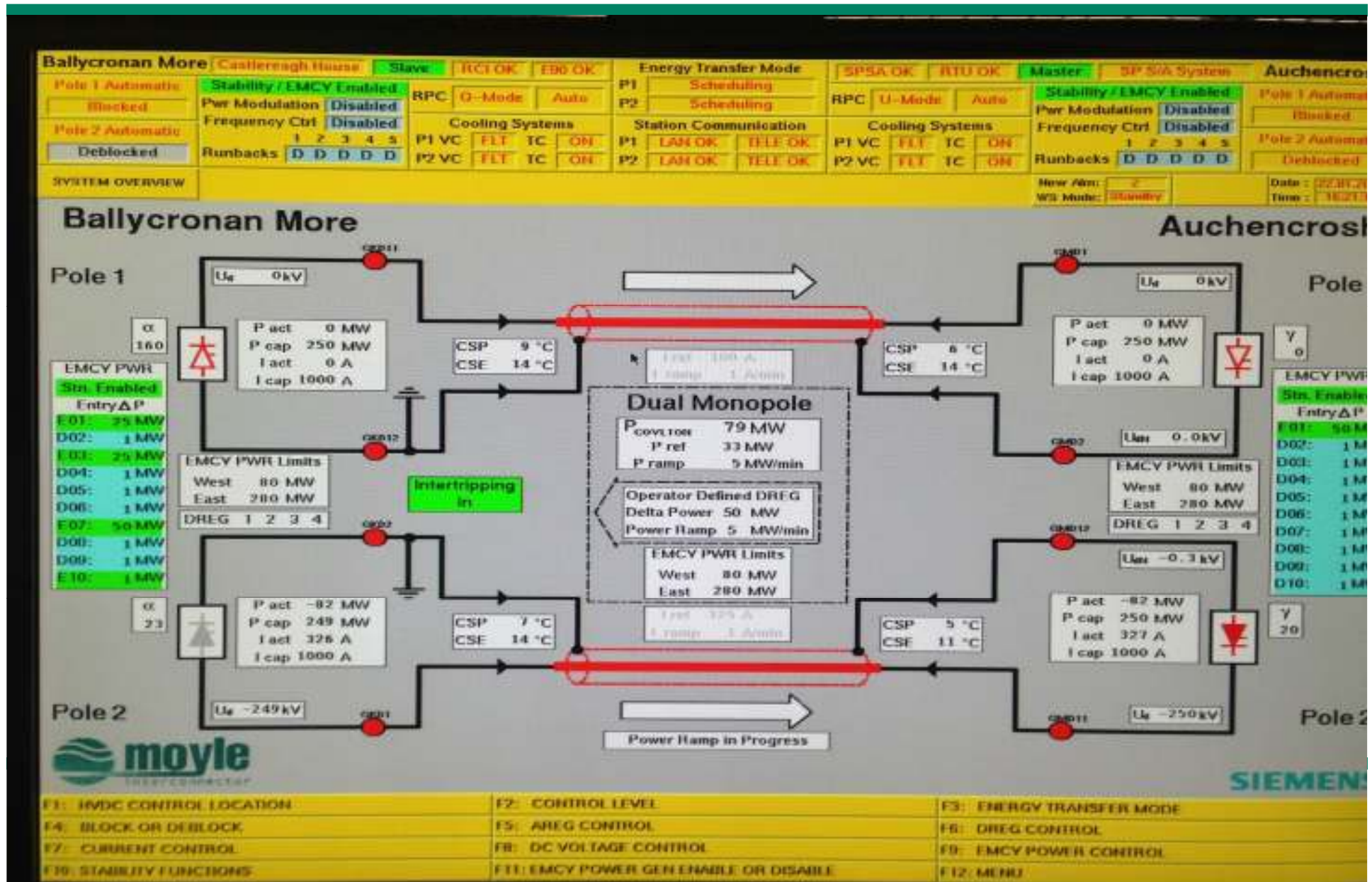
Transition Joint



Transition Joint



22nd January: North Cable “Switch On”



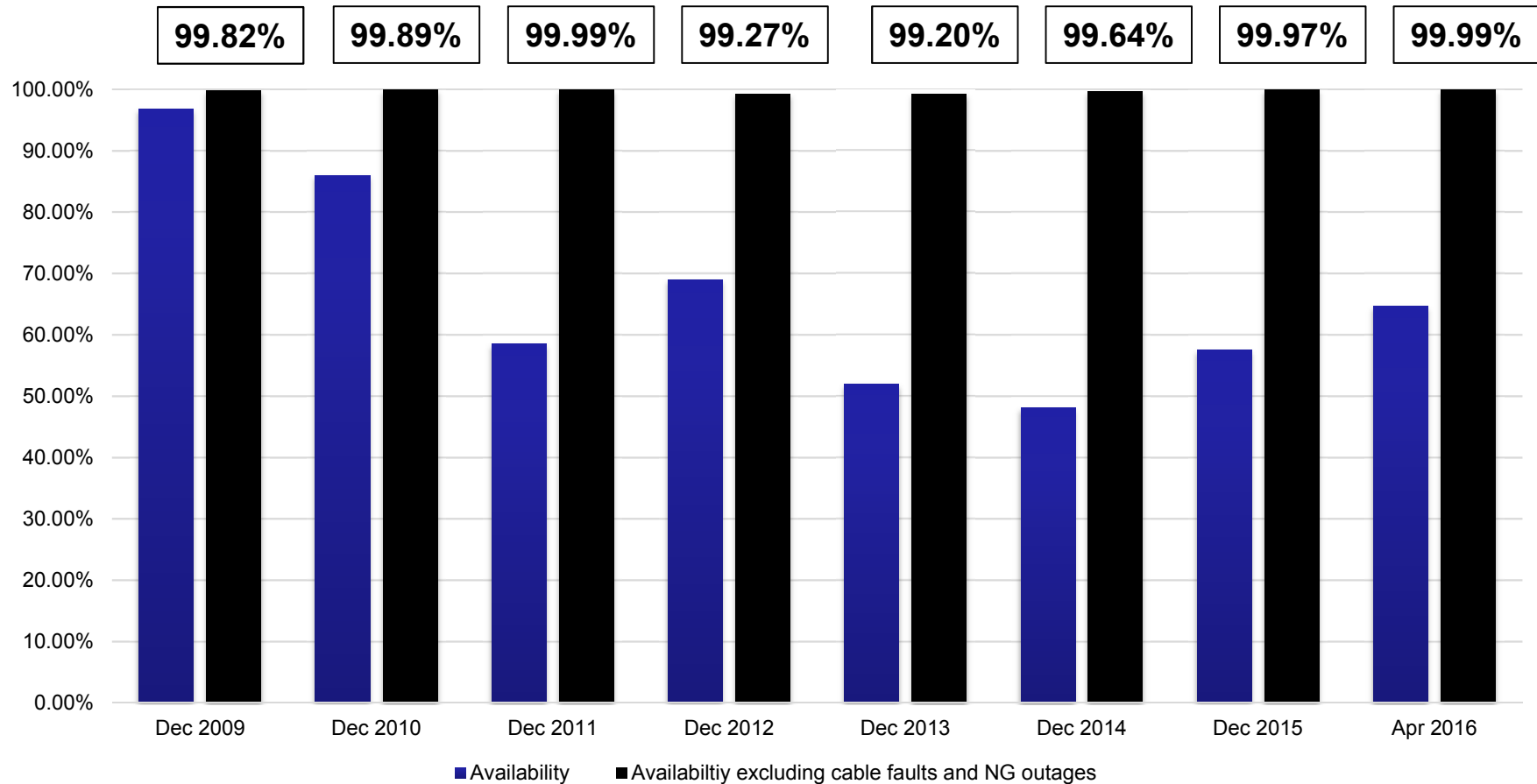
Project Delivery Factors

- Procurement
 - Senior Management commitment & support
 - Short decision making timescales
 - Realistic risk sharing
- Innovative engineering design
- Flexibility on Scheduling
 - Winter 2015/16 concerns
 - NGT 2016 Outage
 - Factory Slots and Availability of Skagerrak
- Stakeholder - Client – Contractor interface management
 - SONI, Siemens, Interconnector Users
- Collaborative & Parallel working
- Experienced teams – Client & Contractor

Availability 2015/16

- MRC Works Planned Outages
 - Rock breaking landfall works at Portmuck
 - Trenching & protection of MRC in close proximity to south IRC
 - Testing
 - Sectional takeover of north cable
 - Driving of sheet piles in Currarie port to construct joint bay
- Scottish Power Planned Outages
 - 7th Aug Repair of an insulator
 - 30th/31st Jan Removal of birds nests
- Converter Station Forced Outages
 - 4th Jun Pole Control Software Malfunction 1.5hrs
 - 2nd Oct Transformer tap changer out of sequence 1.5hrs

Moyle actual availability and adjusted for cable and National Grid outages



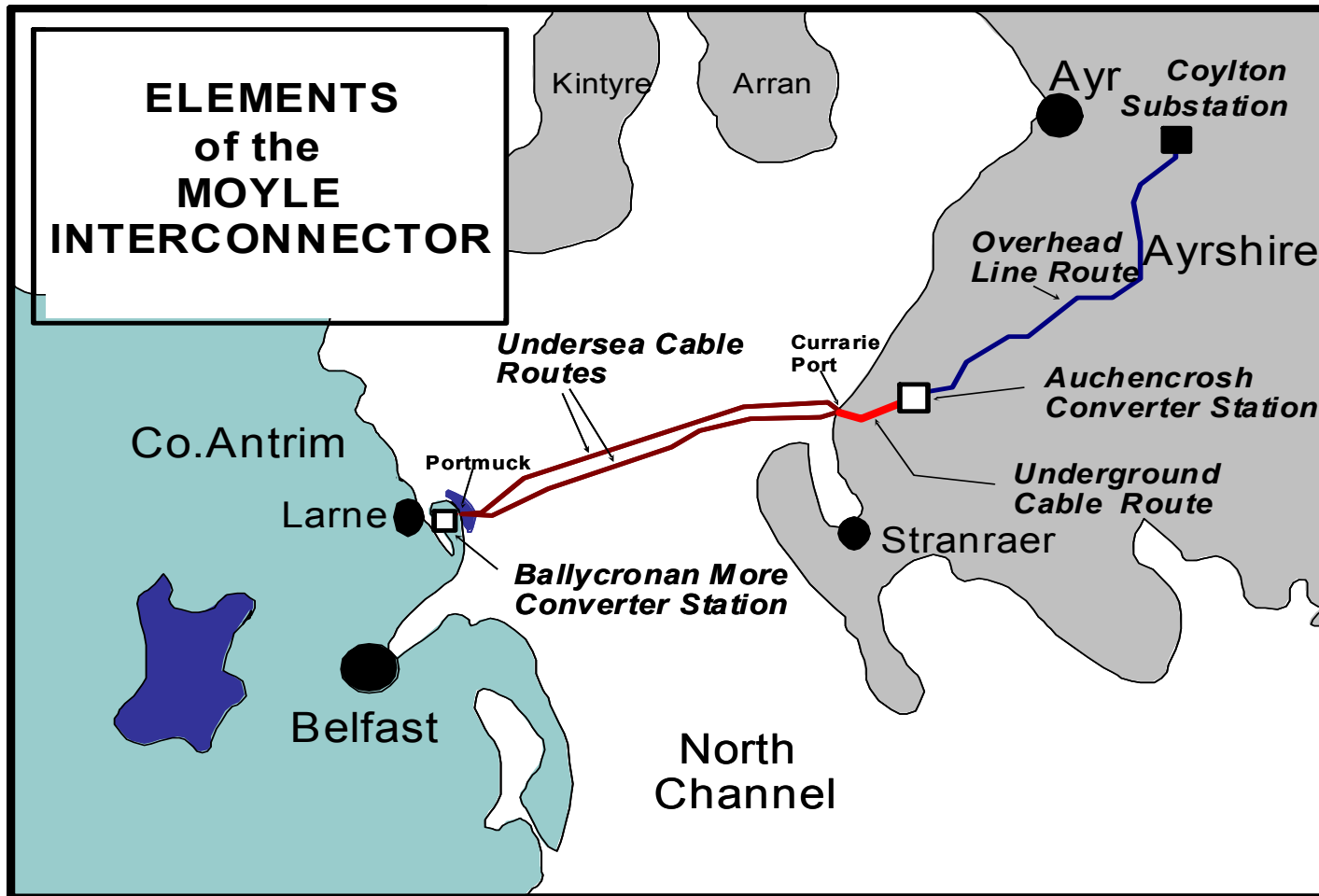
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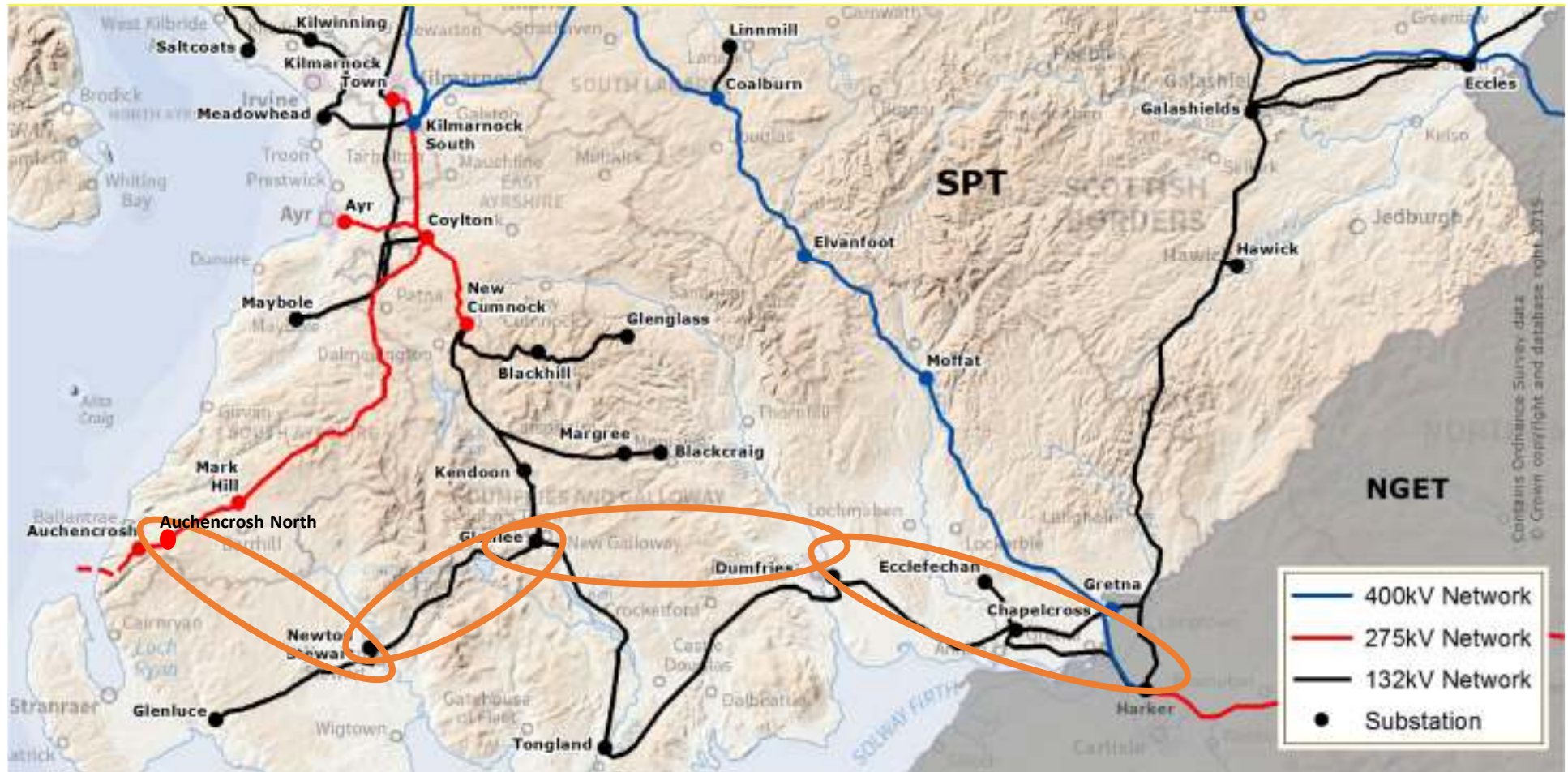
Look Forward

- Maximising Converter Station Maintenance During NGT 16 week Outage
- Control System
 - Replacement
 - Appoint Owners Engineer End 2016
 - Procurement 2017
 - Design 2018
 - Testing 2019
 - Installation & commission 2020
 - Obsolescence management in the interim
- Work required in NI and GB AC Networks to maximize enable full technical capacity of 500MW

Single circuit connection Scotland



Dumfries & Galloway Reinforcement Scheme



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Q&A

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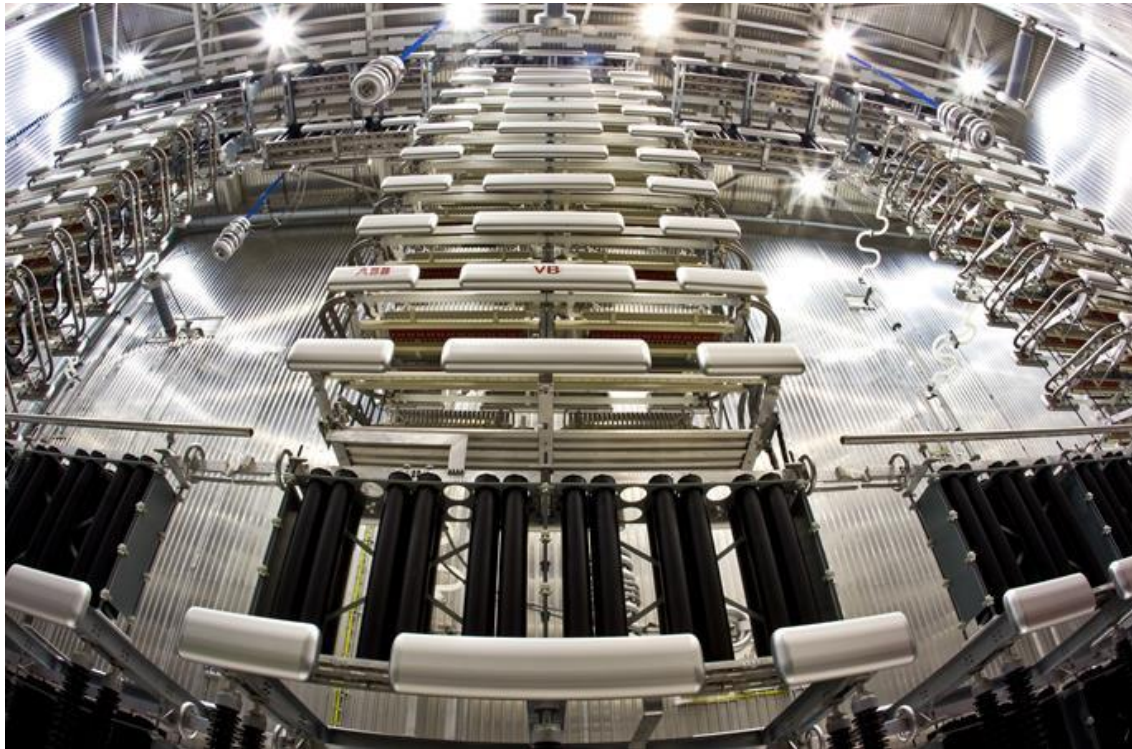


East-West Interconnector and Moyle Interconnector User Forum 2016

EWIC – Asset Management & Marine Survey

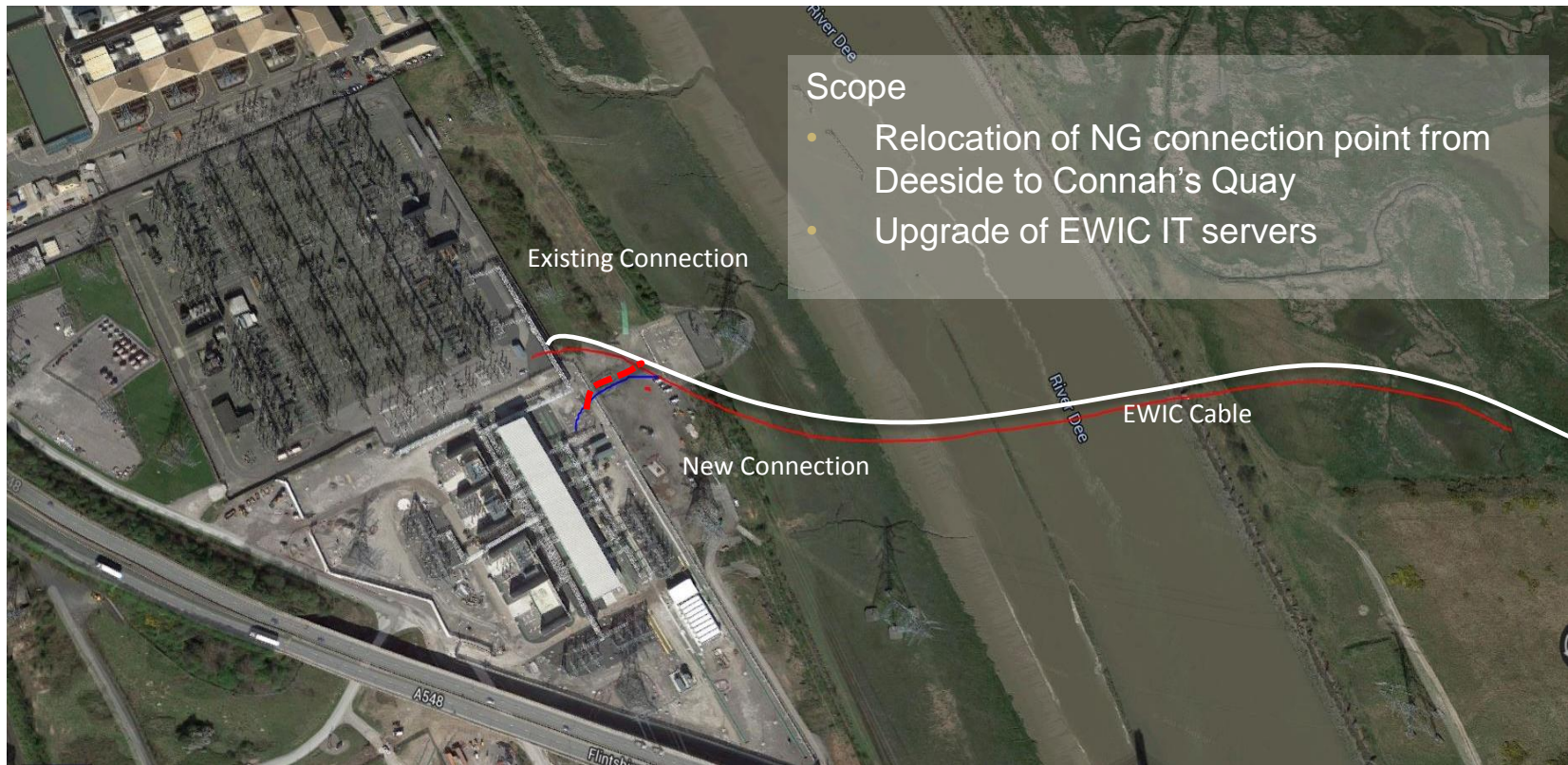
Eamon Carroll & Ray Niland

EWIC Availability



- 2014/15
 - 97.6%
 - 4 Forced Outages 0.4%
 - 4 Scheduled Outages 2%
- 2015/16 to date
 - 99.7%
 - 1 Forced Outage 0.3%
 - 1 Scheduled Outage 0.03%

Connah's Quay Relocation



Managing EWIC to Best Practice



- ISO 55000 is an international standard for asset management of physical assets
- EWIC have developed an asset management system over the last 18 months
- ISO 55001 certification audit to be undertaken in June 2016

Marine Survey 2015

- Overview, Purpose and Approach
- Operations and Technology Overview
- Key Findings
- Recommendations

EWIC

An aerial photograph of the English Channel, showing the coastline of Ireland on the left and Wales on the right. A blue line representing the EWIC cable route is visible, stretching across the water from the coast of Ireland to the coast of Wales. The land is green and brown, and the water is dark blue.

- 500 MW capacity
- Installed – 2011 & 2012
- +/- 200 kV HVDC cables
- 187 km Marine – Rush Beach (Ire) to Barkby Beach (Wales)
- Bundled (2 x HVDC and 1 F/O)

Overview

- Benchmark Geophysical (seabed/terrain) and Depth of Burial (cable) survey
- Cable live during survey - limited DoB technologies available
- Duration: May 2015 - Oct 2015
- Survey Contractor: Bibby HydroMap

Purpose

- Good Asset Management practice
- Establish integrity of cable – buried / exposed / damaged etc.
- Develop benchmark understanding of seabed mobility
- Rock protection: Definitively establish extent and condition of rock protection

Approach

a) Geophysical (Survey of Seabed)

- **Multibeam Echosounder (MBES)** – Acoustic, Seabed Levels Survey, 50/25m corridor width, measures water depth from vessel, centred on RPL
- **Side Scan Sonar (SSS)** – High Res. Acoustic, Towed 10m from seabed, Captures / Images features on seabed (exposures etc.), also indicates soil/geology of seabed based on reflection

b) Depth of Burial (Survey of Cable)

- **Sub Bottom Imager (SBI)** – V.High Res. Acoustic, ‘looks’ below the seabed, Towed 3.5m from seabed on ROV

Vessels used

Bibby Athena

- Offshore (>10m water depth)

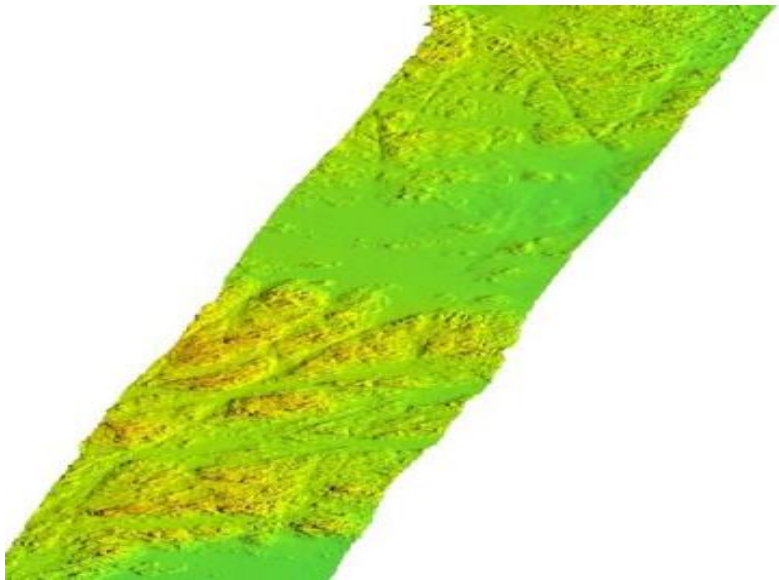
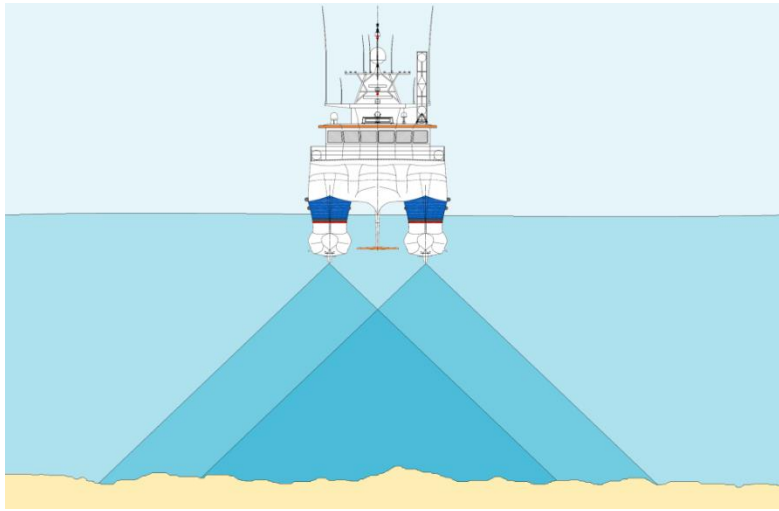


Proteus

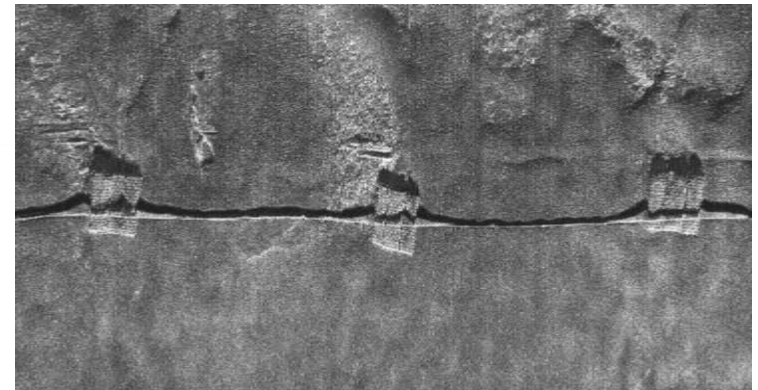
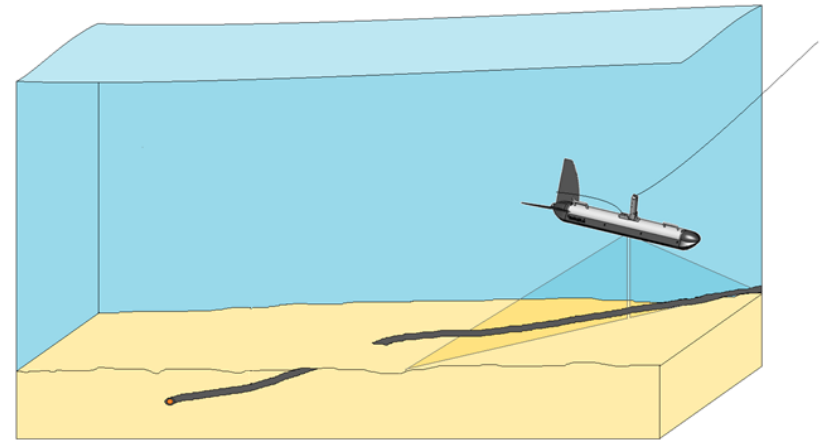
- Nearshore (<10m water depth)

Geophysical survey – Techniques

Multibeam Echo Sounder (MBES)

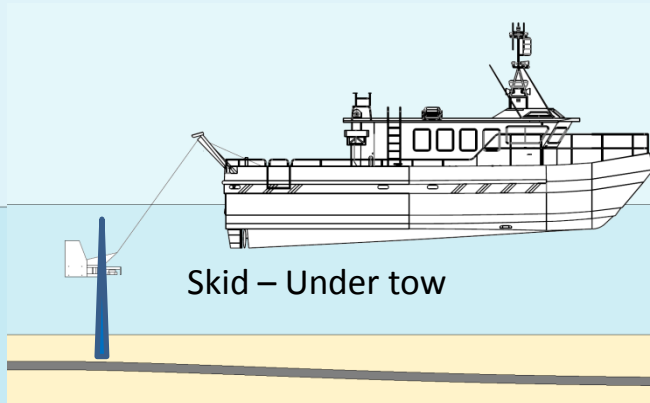


Side Scan Sonar (SSS)



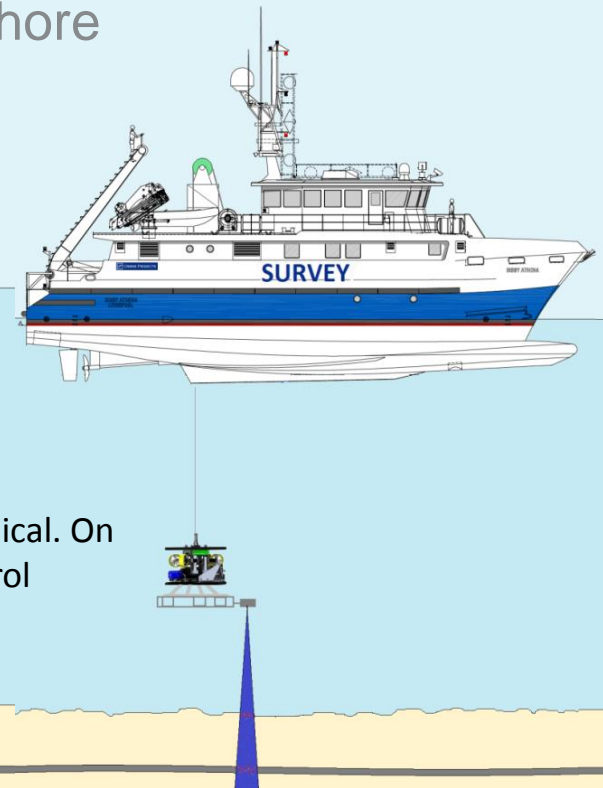
Depth of Burial Survey - Technique

Nearshore



Skid – Under tow

Offshore

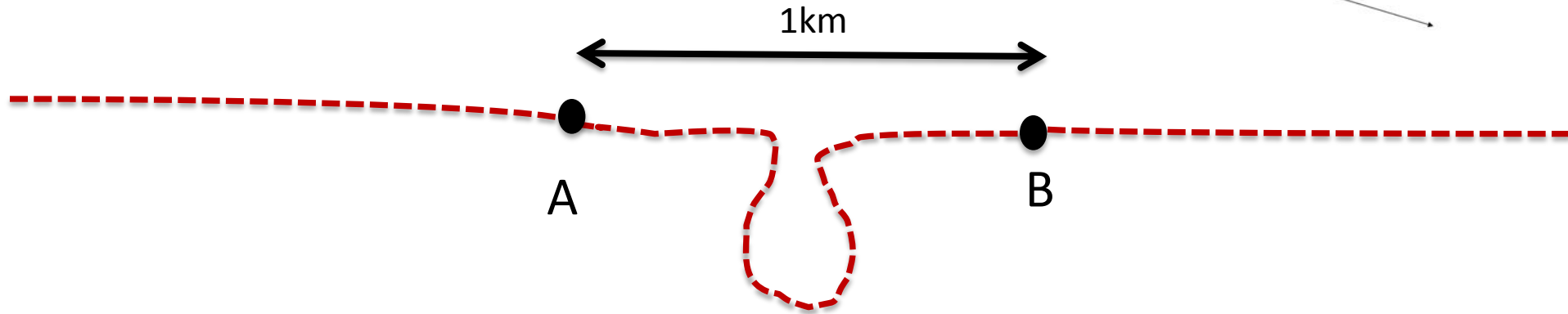
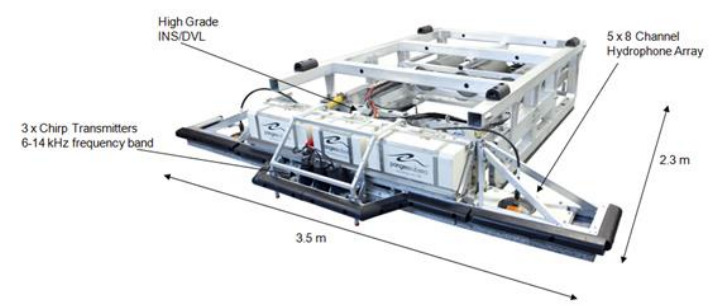


D'ROP – Vertical level controlled with winch compensation via umbilical. On board thrusters to control rotation/alignment.

**Key Technology
provider:
Pangeo Subsea**



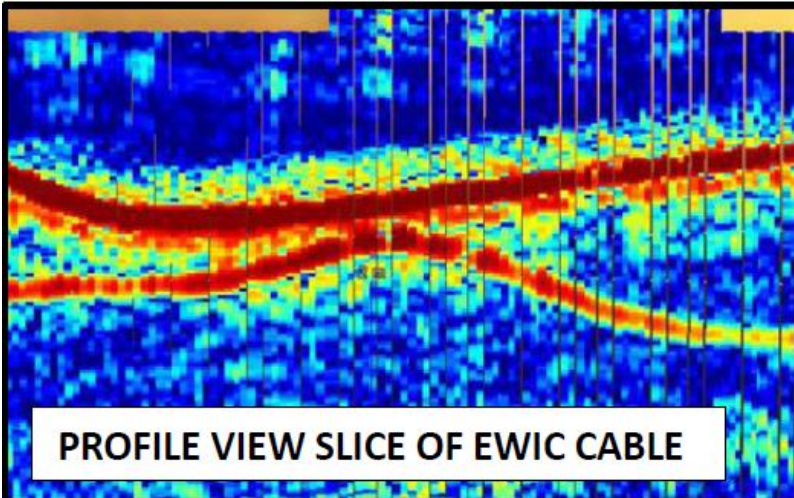
DoB Survey – Trial



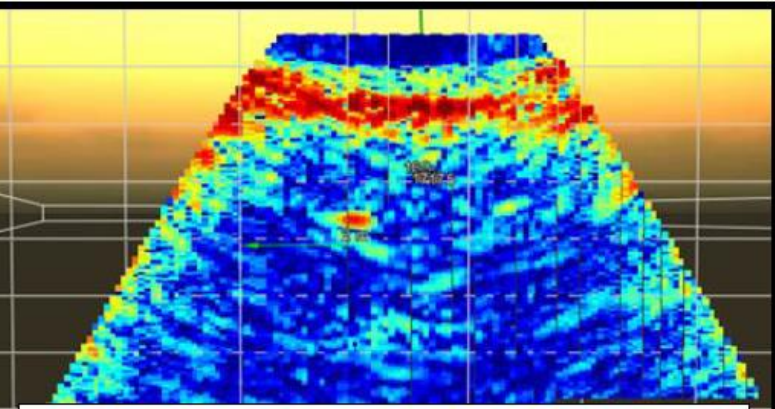
Trial proposed by EirGrid to de-risk unproven technology - Pangeo

1. Challenging 1km section of cable route selected for trial
2. Includes: Omega joint, rock armouring, varying soil conditions and tight turns.
3. 3 runs over required to demonstrate repeatability (+/- 5%)

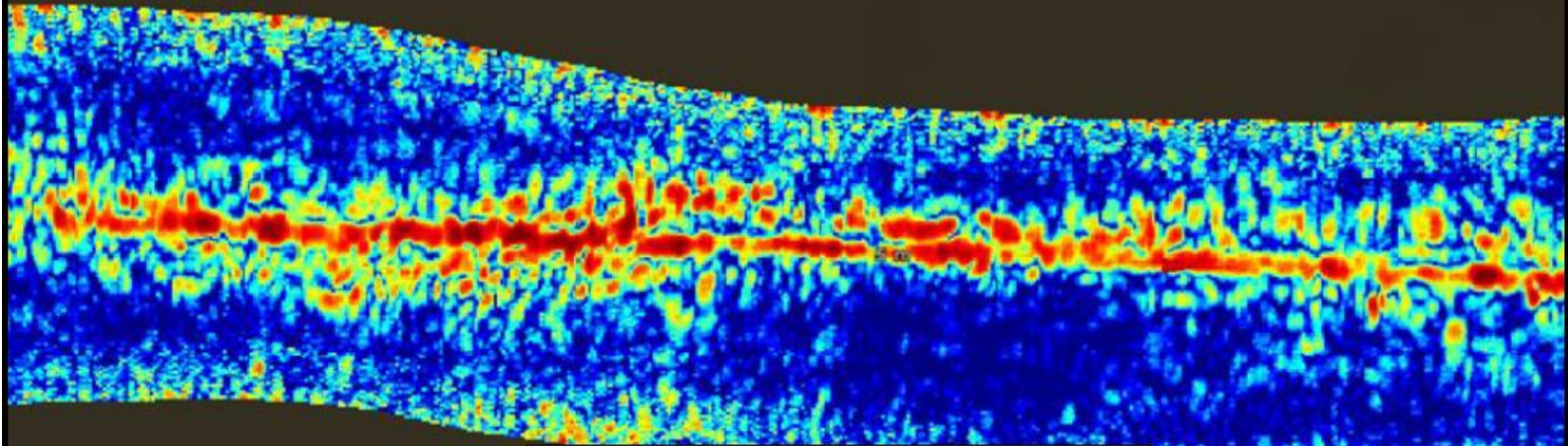
Very successful outcome that demonstrated repeatability of Pangeo



PROFILE VIEW SLICE OF EWIC CABLE



X-SECTION VIEW SLICE OF EWIC CABLE



PLAN VIEW SLICE OF EWIC CABLE

Key Findings

1. Cable remains buried for 100% of length
2. Cable protection remains unchanged where rock berms were installed
3. Fishing trawl scars evident in certain areas
4. Cable crossings in good condition
5. Evidence of seabed scour in areas – strong seabed current and mobility – insignificant to cable integrity at present

Summary of EWIC Cable Bundle Protection

Survey limits:	KP0.019 to KP187.932
Length surveyed:	187913.0m
Length exposed	0m
Percentage exposed	0%
Length under rock protection:	43386.5m
Percentage under rock protection:	23.1%
Length under protective mattress	549.7m
Percentage under protective mattress:	0.3%

Recommendations

1. No areas of concern for immediate intervention
2. Monitor: Consider future geophysical surveys to compare against this benchmark survey. Allows comparison of seabed elevation datasets.

Recap

1. Delivered Benchmark survey
2. Geophysical data quality: Excellent (Dual Head Multibeam)
3. DoB data quality: Exceptional

International reference project for live HVDC DoB surveys

Thank You

EWIC & Moyle Interconnectors Conference

CACM & FCA Guidelines

Mark Lane

4th May 2016



Third Energy Package

Common Rules for the Internal Market in Electricity Directive (2009/72/EC)

Common Rules for the Internal Market in Natural Gas Directive (2009/73/EC)

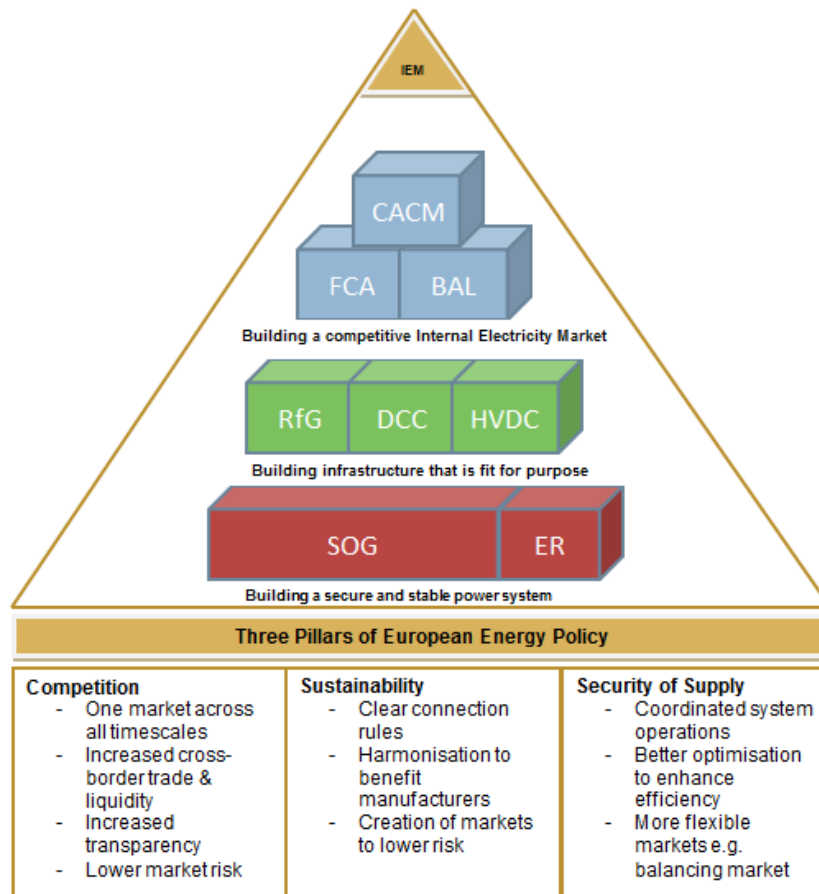
Regulation Establishing an Agency for the Cooperation of Energy Regulators (713/2009/EC)

Regulation on Conditions for Access to the Network for Cross-Border Exchanges in Electricity (714/2009/EC)

Regulation on Conditions for Access to the Natural Gas Transmission Networks (715/2009/EC)

EU Internal Energy Market

- Overarching objective of the Third Package - to create a legislative framework conducive to the creation of an efficient, competitive electricity & gas market
- Regulatory framework of the EU electricity markets will increasingly comprise so-called "network codes"
- Network Codes are effectively the **building blocks** to deliver the Internal Energy Market



Network Code Status

2015

2016

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June		
CACM		Scrutiny						Entry into Force												
FCA	Update Text				Committee and Translation				VOTING	Scrutiny										
EB				Update Text																
RfG		Committee and Translation				VOTING	Scrutiny													
DCC	Update Text				Committee and Translation				VOTING	Scrutiny										
HVDC	Update Text				Committee and Translation				VOTING	Scrutiny										
SOG	Redrafting and Combining							Committee and Translation										VOTING		
ER				Update Text													Committee and Translation			

Regulatory Decisions on IC Obligations

CER

- (SEM-15-079a) Decision to assign TSO obligations under CACM – 7 Oct 2015

UR

- (SEM-15-079b) Decision to assign TSO obligations under CACM – 7 Oct 2015

Ofgem

- Decision to assign TSO obligations under CACM – 14 Oct 2015
- Consultation on Mindful to Position to assign TSO obligations under FCA – 13 May 2016

Scope of CACM & FCA



Pan-European (i.e. IEM)

- "all TSOs" shall ...
- Capacity Calculation Regions, Common Grid Model, Harmonised Allocation Rules, Single Allocation Platform, DA/ID Algorithm, Scheduled Exchanges, ID Capacity Pricing, Congestion Income Distribution, DAFD, IDCZGT



Regional (i.e. Channel-IU)

- "all TSO's within a Capacity Calculation Region" shall ...
- Capacity Calculation, Coordinated Capacity Calculator, Harmonised allocation Rules regional annex, Capacity Splitting, Fallback, Regional Design of Long term Transmission Rights



National/ Local Market or Area (i.e. I-SEM)

- "each TSO" shall ...
- Individual Grid Model; IC Tasks for DA/ID coupling; Inputs/Validation/Results related to capacity calculation, DA/ID algorithm, SAP; Firmness; Data for ENTSO-E monitoring

Approach to CACM & FCA Implementation



Electricity Market - Forwards

2016

EWIC/Moyle – 2 sets of Rules and 1 Platform
JAO – 20 TSOs from 17 countries



Post - 2017

HAR – one European set of Rules*
SAP – one European Platform**



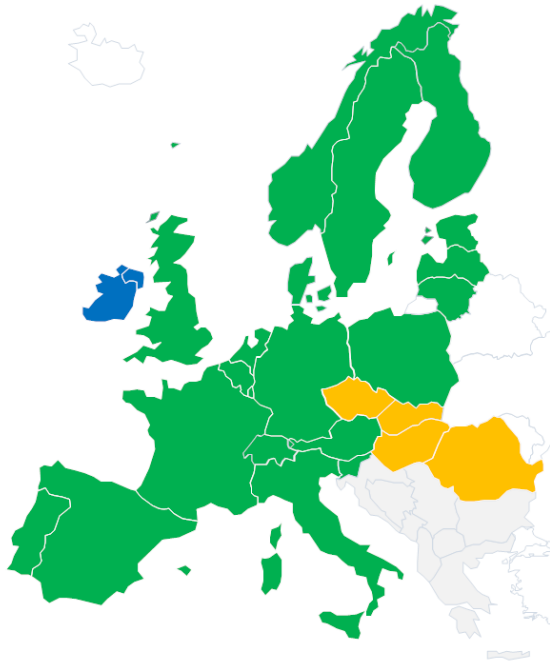
* Regional specificities possible

** expected to be JAO

Electricity Market – DA & ID

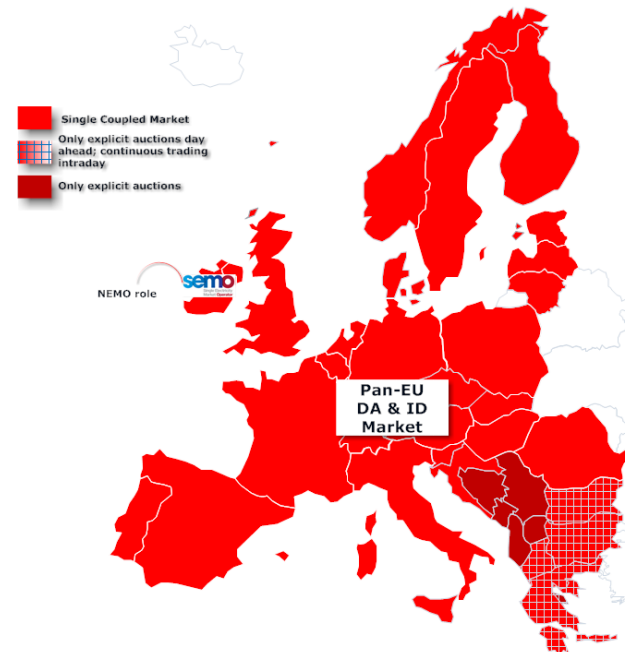
2016

SEM all-island market
Market Coupling in place in MRC
XBID progressing

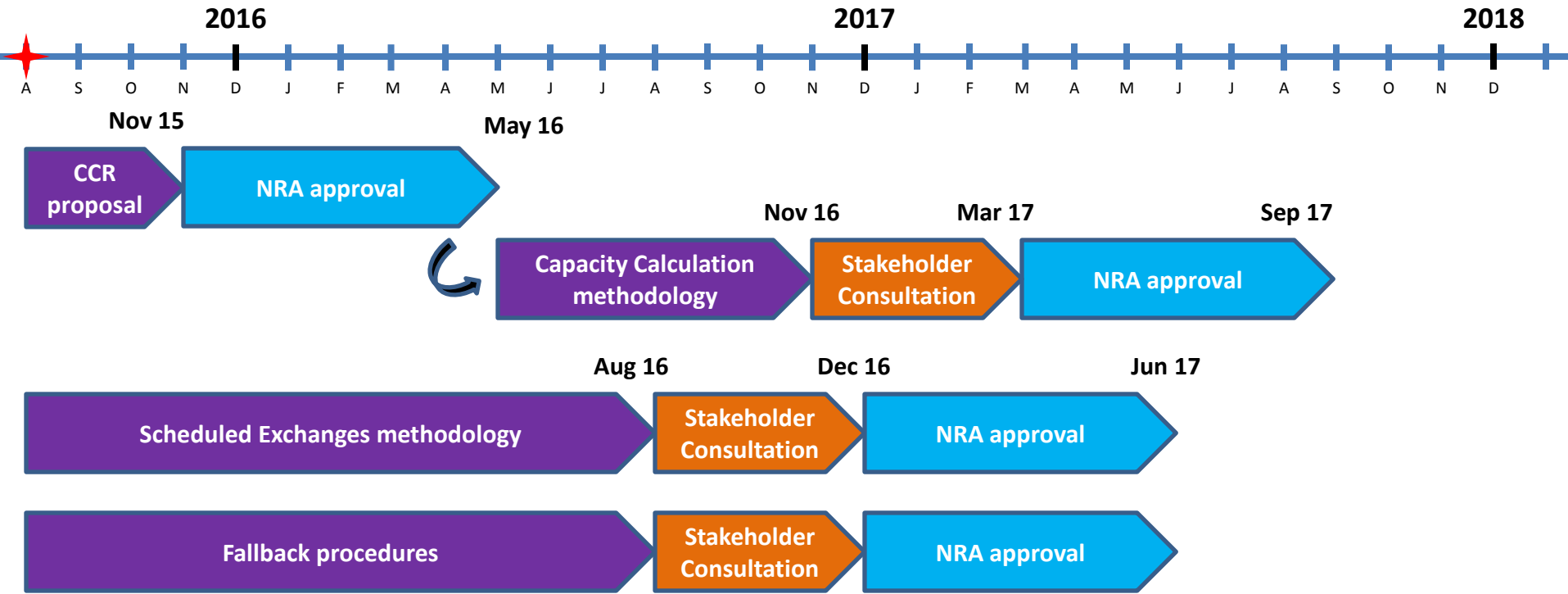


Post-2017

Single Day-ahead and Intraday
market in place in Europe

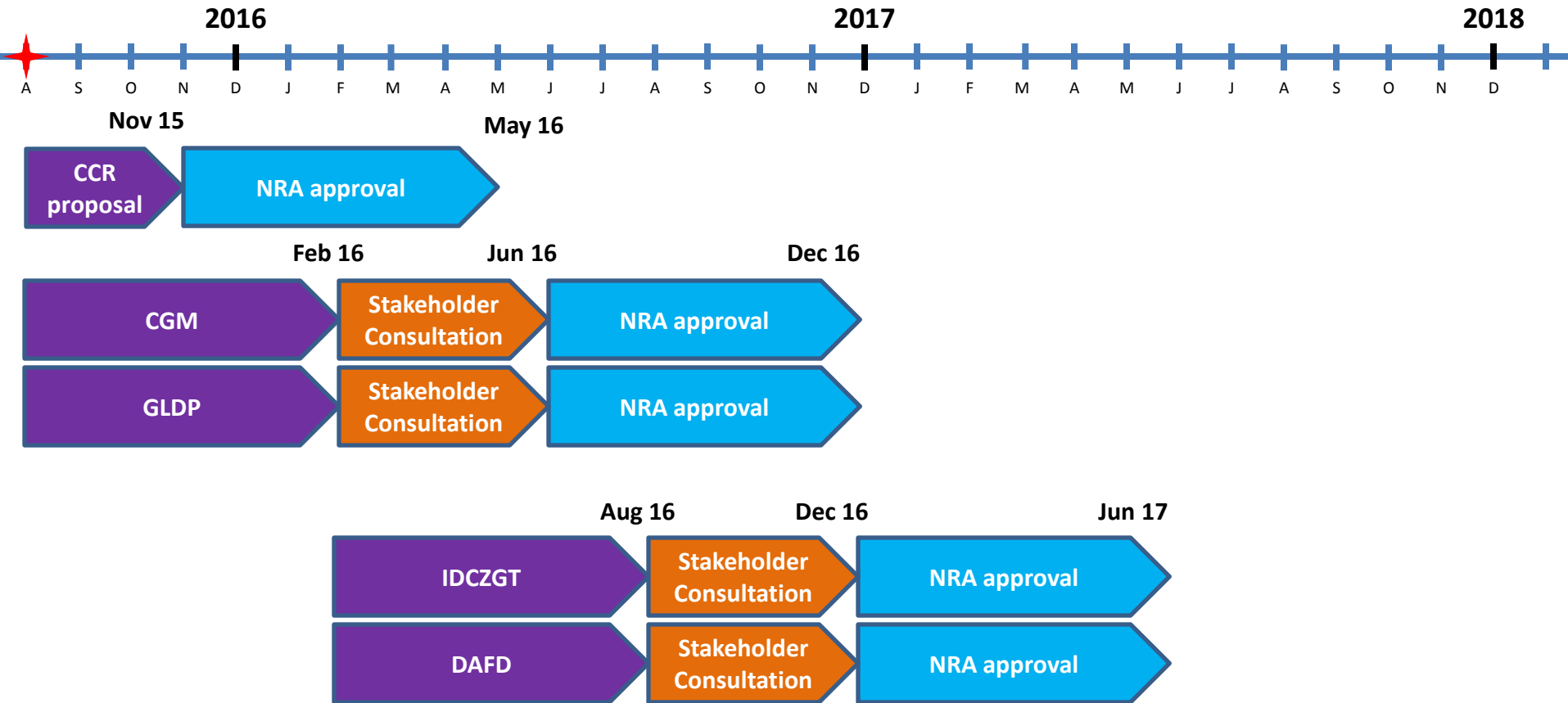


Channel-IU Regional Requirements



FCA requirements start following entry into force – some requirements linked to CACM deliverables

Pan-EU Requirements



FCA requirements start following entry into force – some requirements linked to CACM deliverables

TSO Cooperation – Capacity Calculation Regions

2016

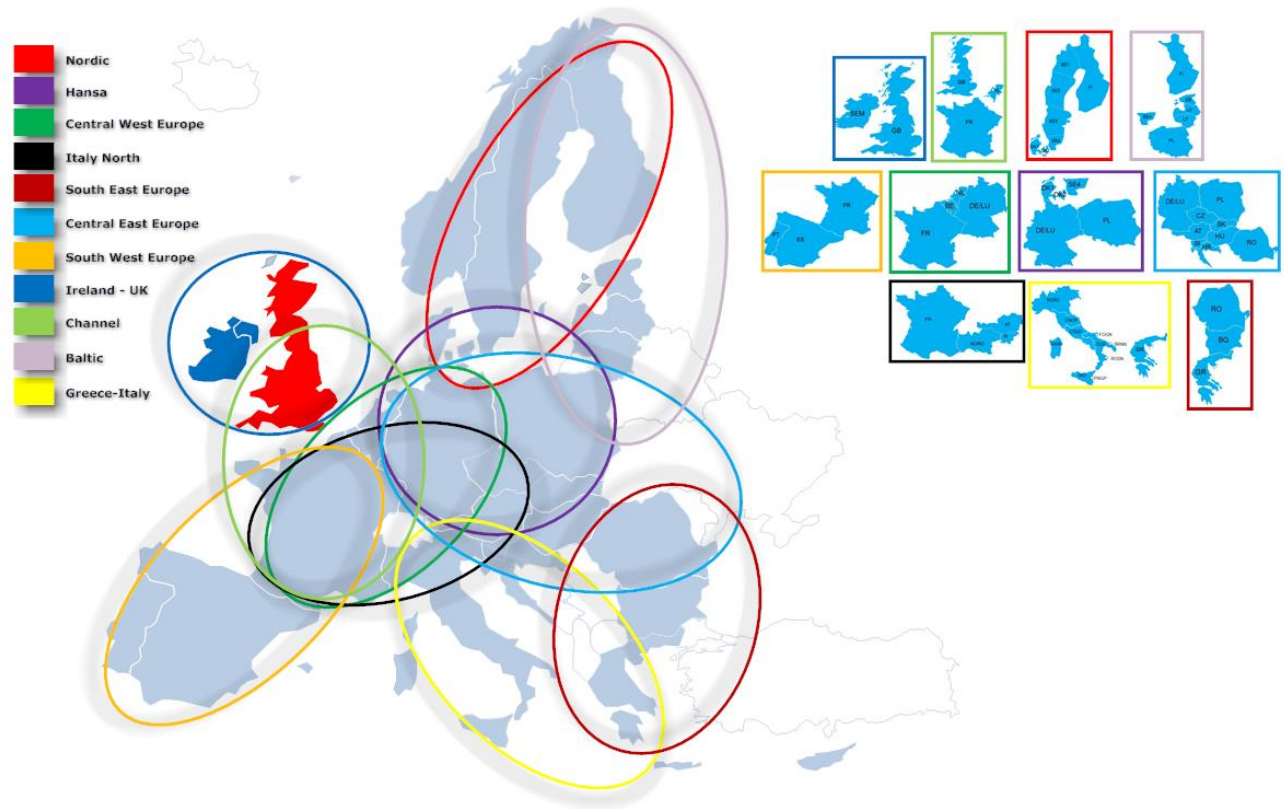
EirGrid/SONI make TSO decisions in SEM

2016-2017

Increased coordination required with other TSOs in CCR

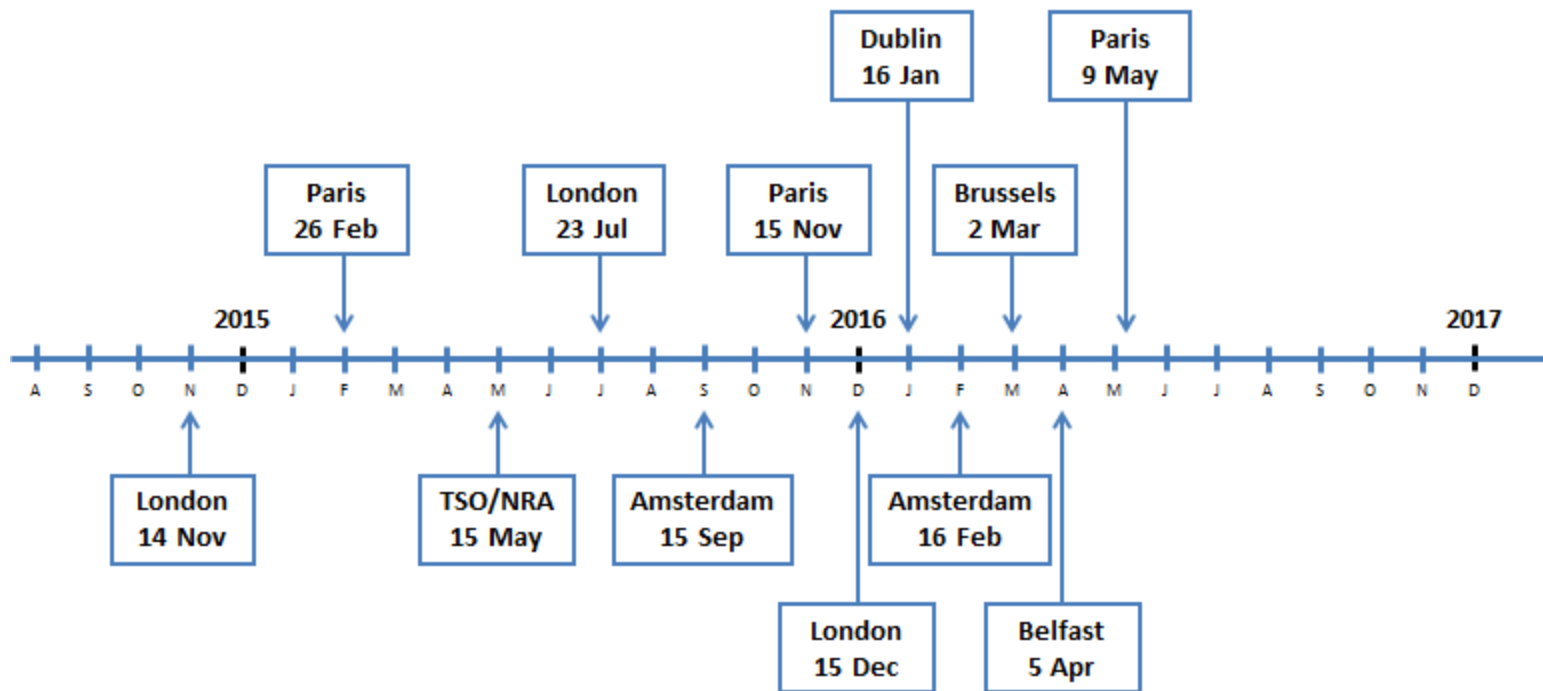
Post-2017

Expected CCRs will merge over time



Channel-IU Coordination Group

2 CCRs working together as a single group on Regional CACM/FCA requirements

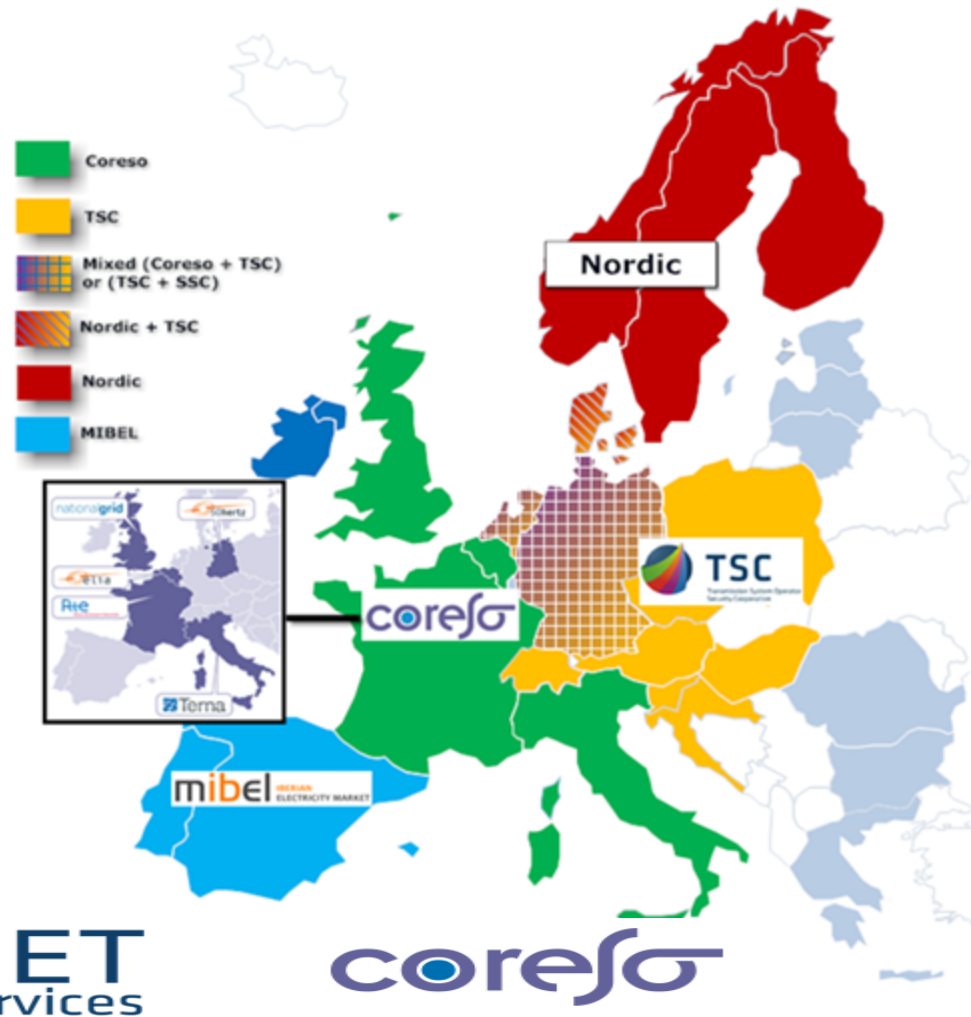


Channel-IU CCR / RSCI

➤ A number of meetings have been held with Coreso/TSC to date

☐ 3 Nov 2015: Paris – introductions/overview of Coreso/TSC

☐ 2 Mar 2016: Coreso office, Brussels – discussion on implementation timescales, lessons learned, technical interfaces, next steps etc



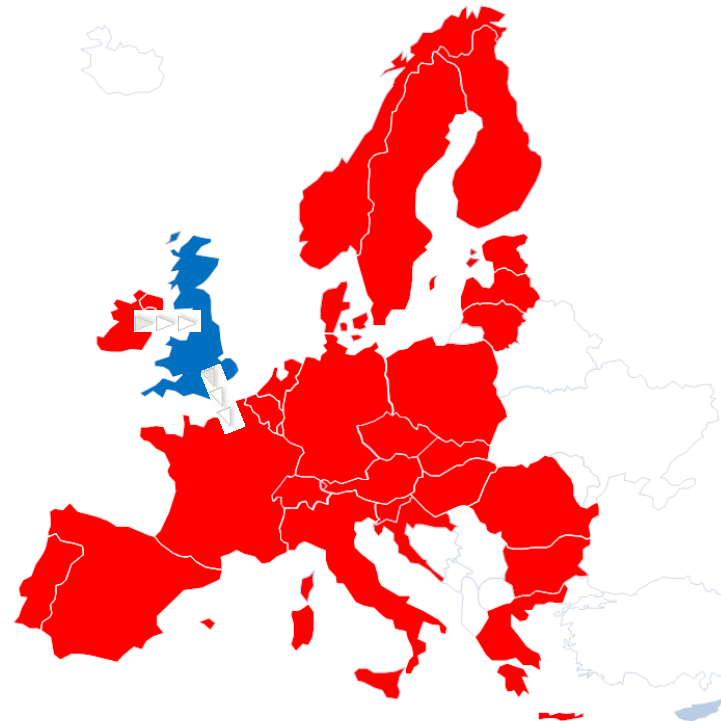
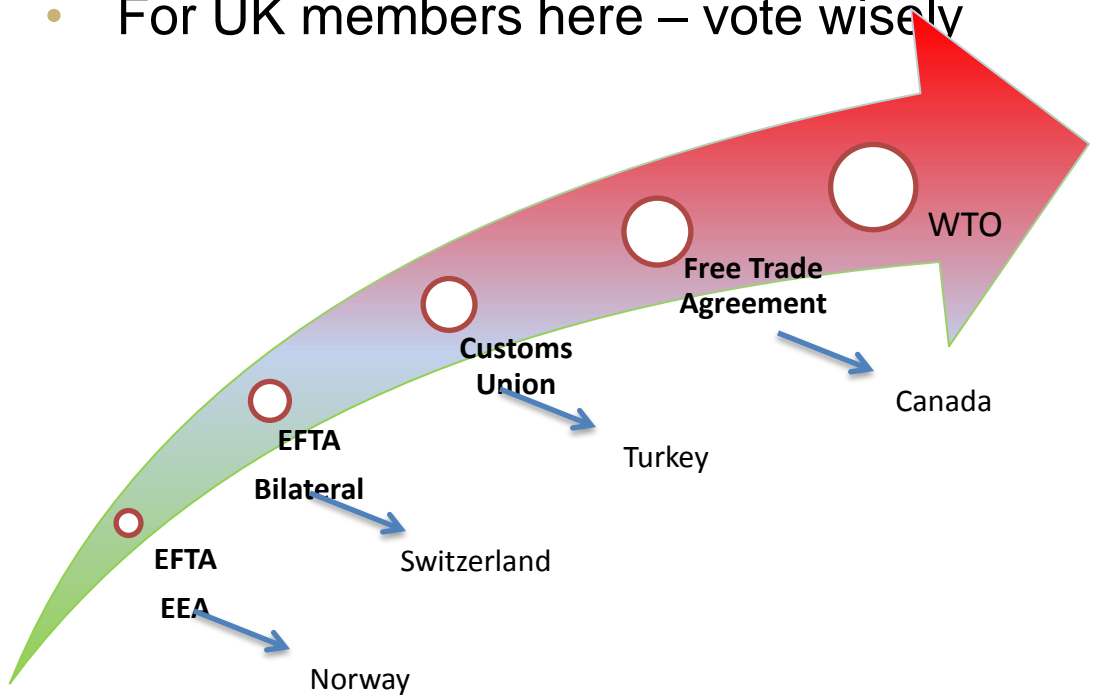
TSCNET
Services

coreso



Brexit – Risk Assessment

- Depends on relationship between UK-Europe after the exit
- Risk increases depending on type of exit
- CACM/FCA impacts linked to relationship post-Brexit & type of exit
- For UK members here – vote wisely



I-SEM overview

Interconnector Forum

May 4th 2016

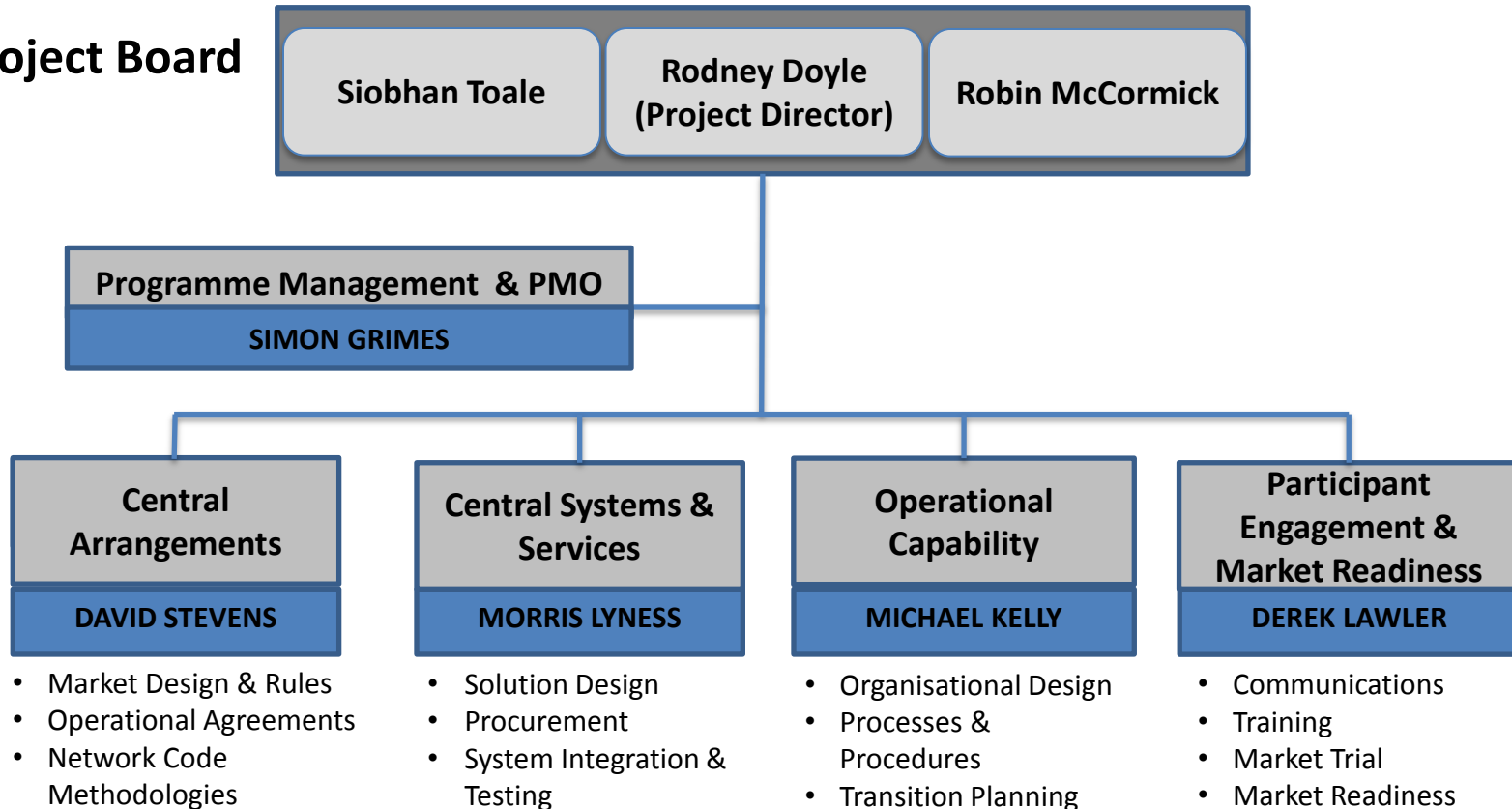


Presentation Overview

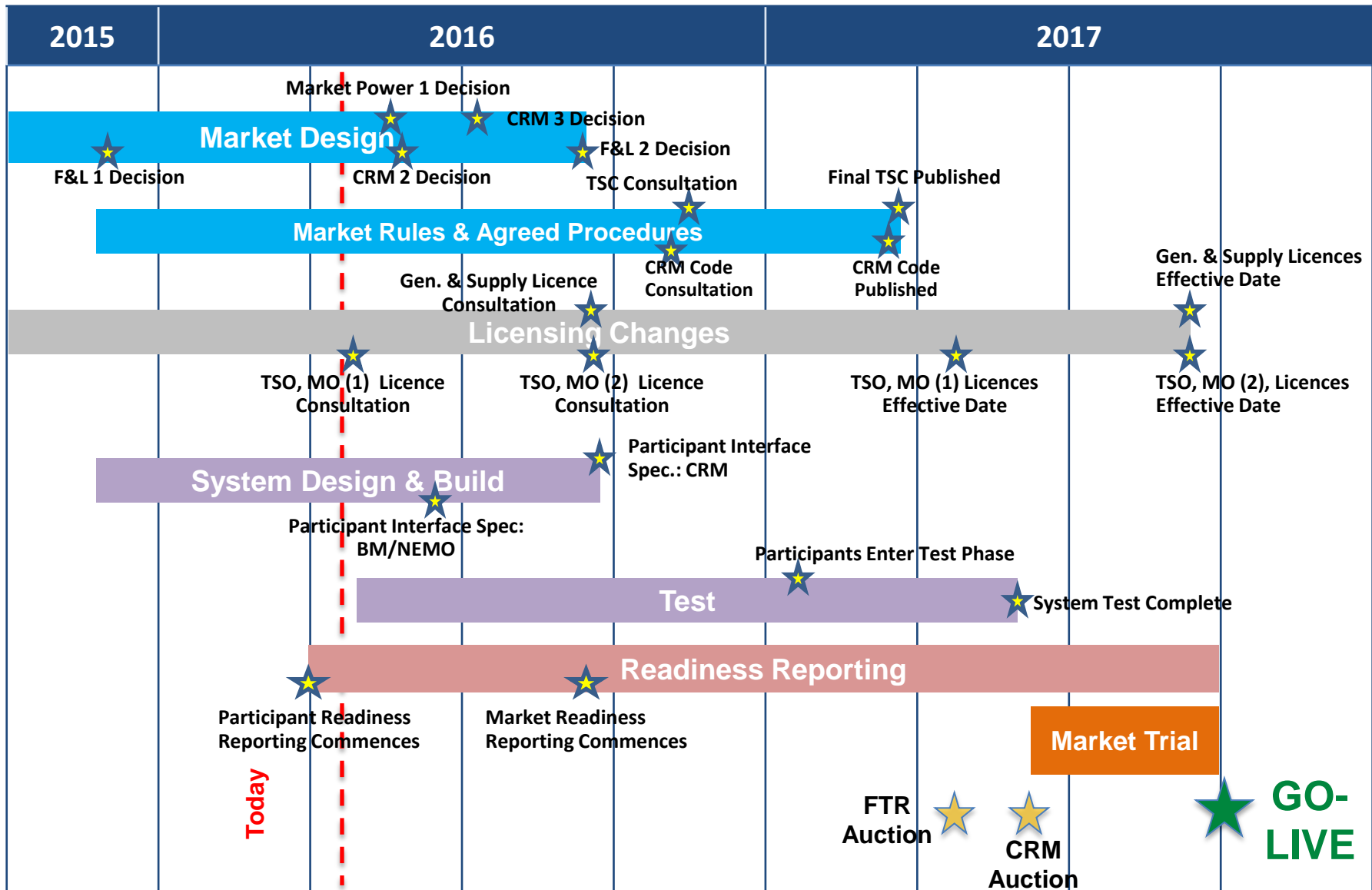
- I-SEM Project
- Market Design
- Interconnector Impacts

I-SEM Project Structure

Project Board

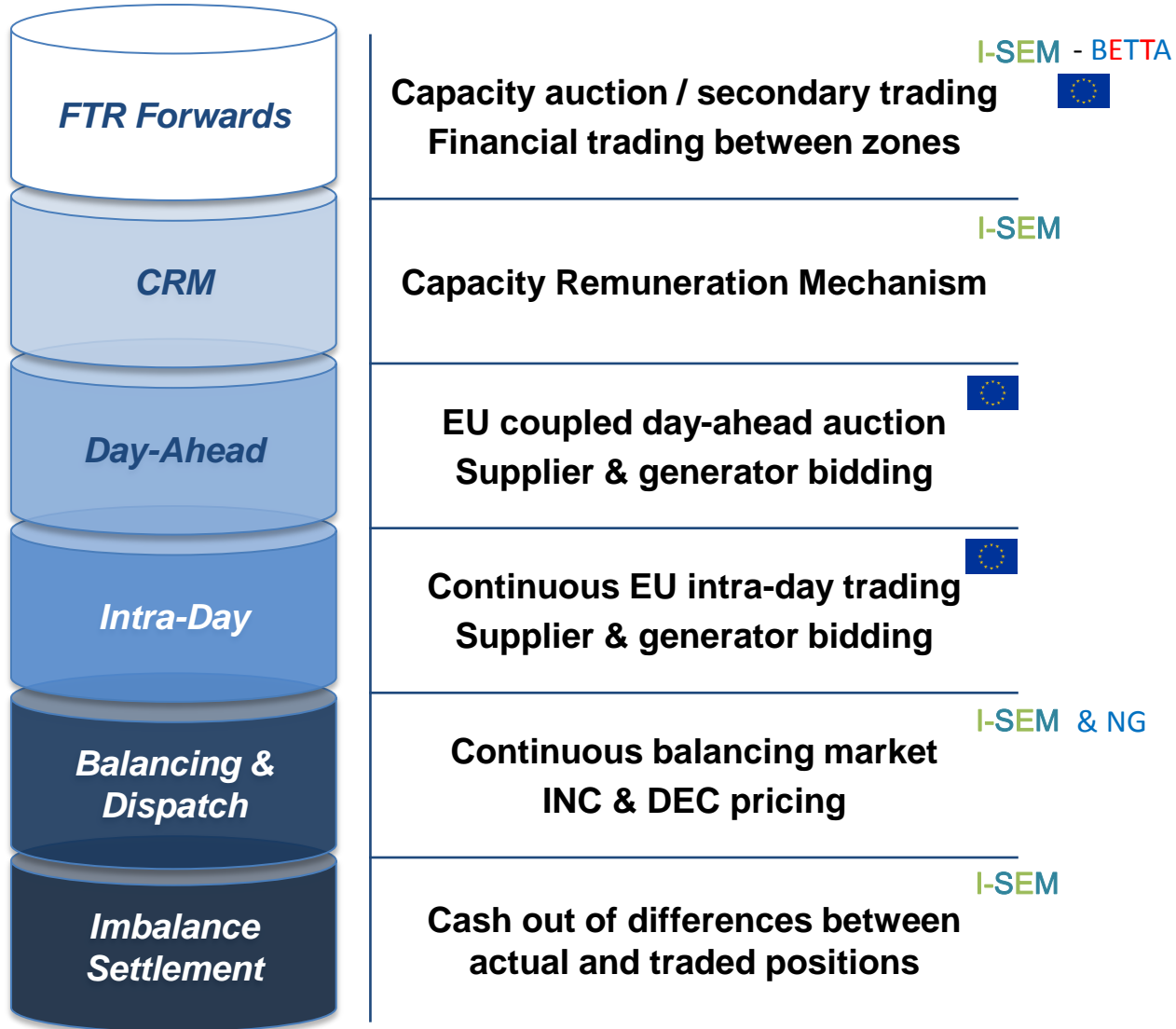


I-SEM Milestone Plan



NEMO= Nominated Electricity Market Operator; **FTR**= Financial Transmission Rights; **CRM**= Capacity Remuneration Mechanism; **BM**= Balancing Market; **F&L**= Forwards & Liquidity; and **TSC**= Trading & Settlement Code.

Implementing the European Target Model



I-SEM Design

Forwards

Day-
ahead

Intraday

Balancing

Imbalance
settlement

- Financial trading within the I-SEM
- No physical forward contracting
- Financial transmission rights for cross border

I-SEM Design

Forwards

Day-ahead

Intraday

Balancing

Imbalance settlement

- Day-ahead market is the “exclusive” route to market for day-ahead physical positions
- Based on EU market coupling
- Unit based participation (both generation and demand)
- Some portfolio participation allowed (including Aggregator of Last Resort)
- Trialling of day-ahead commercial structures reaching a conclusion in the coming months

I-SEM Design

Forwards

Day-ahead

Intraday

Balancing

Imbalance settlement

- Envisaged as the market where participants adjust day-ahead positions based on improved forecasts and other technical information
- SEMC decision based on continuous EU solution (XBID)
- However, XBID project currently planning to go live in same timeframe as I-SEM
- Pre-requirements for SEM joining will not have been completed
- Therefore, interim intraday solution required and being developed
- Same granularity of participation as day-ahead

I-SEM Design

Forwards

Day-ahead

Intraday

Balancing

Imbalance settlement

- Day-ahead positions should be the starting point for physical notifications to the TSO
- Notifications should be technically feasible
- Commercial offers from participants based on Incremental and Decremental prices (Complex before gate closure and then Inc & Dec)
- EU approach is for Balancing actions to be only in the last hour
- In the I-SEM, TSOs will be able to take early actions to secure the system but should be minimised
- Actions classed as “energy” and “non-energy” actions

I-SEM Design

Forwards

Day-
ahead

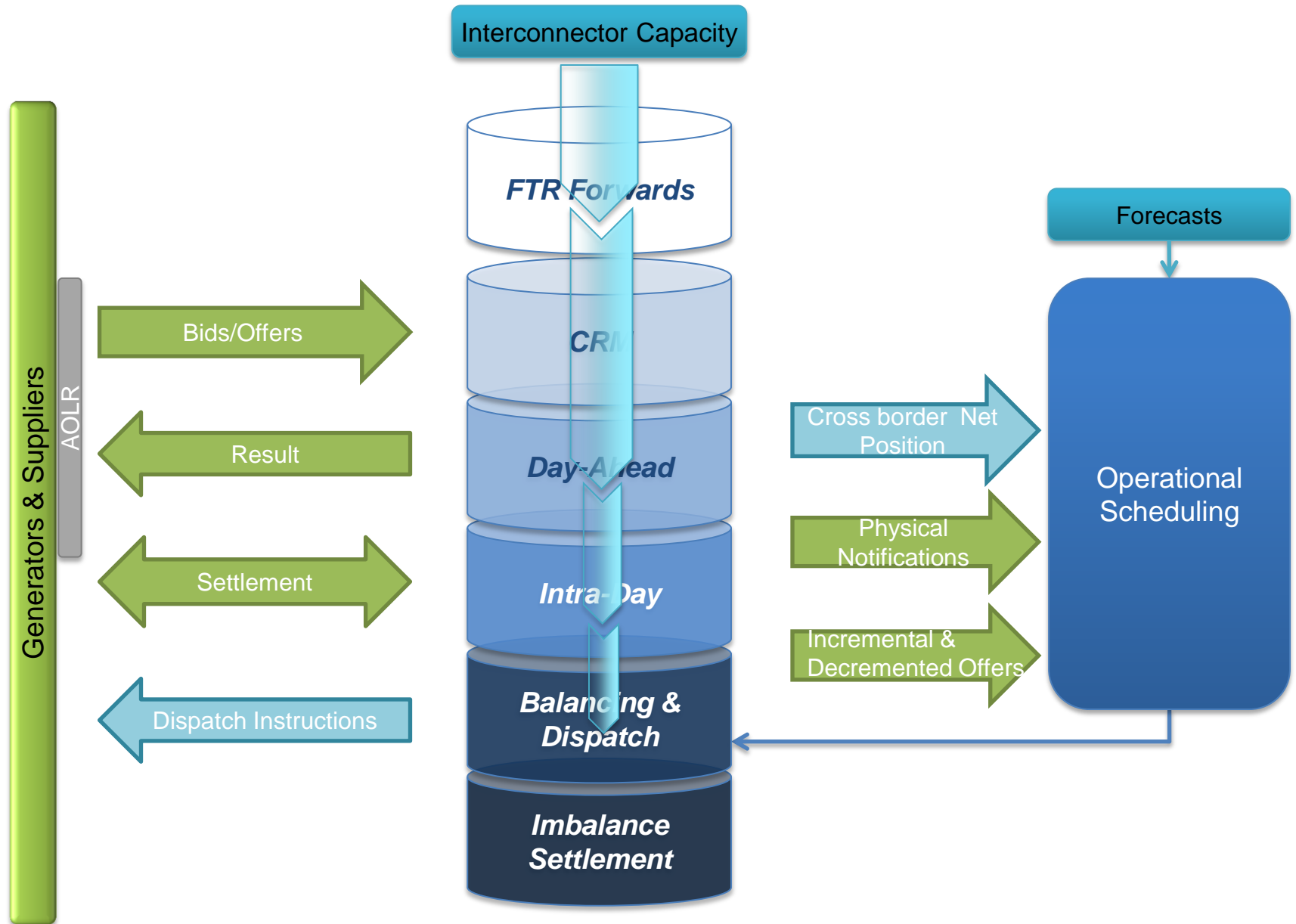
Intraday

Balancing

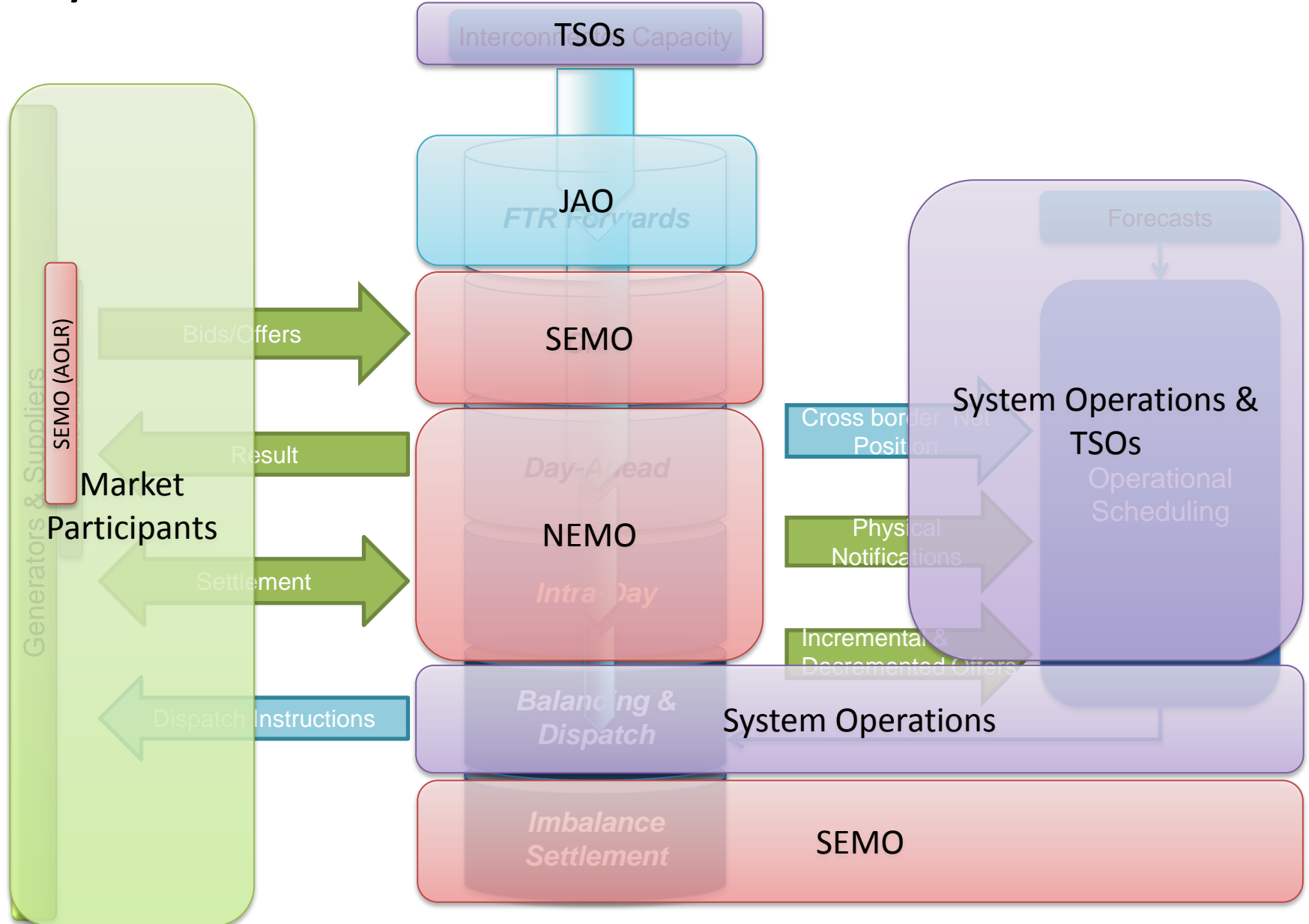
Imbalance
settlement

- Marginal imbalance pricing based on TSO balancing actions
- Non-energy actions excluded from imbalance price calculation
- Balance responsibility (*meaning participants are required to meet their contracted positions or pay for imbalances*)
- Imbalance determined based on final metered positions vs. aggregate contracted positions

Key interactions



Key interactions – Who?



Market Design – SEM Committee Decisions

SEM
committee

**SINGLE ELECTRICITY MARKET
COMMITTEE**

**Integrated Single Electricity Market (I-SEM)
SEM Committee Decision on High Level Design**

SEM-14-085a

17 September 2014

SEM
committee

**Integrated Single Electricity Market
(I-SEM)**

**Energy Trading Arrangements
Detailed Design**

Building Blocks Decision Paper

SEM-15-064

11 September 2015

SEM
committee

**Integrated Single Electricity Market
(I-SEM)**

**Energy Trading Arrangements
Detailed Design**

Markets Decision Paper

SEM-15-065

11 September 2015

Differences for Interconnectors

- Physical transmission rights being replaced by Financial Transmission Right
- Implicit access to interconnector capacity
 - No interconnector units
- Greater trading opportunities
 - Once XBID goes live for I-SEM to GB border
- Transfer capacity between bidding zones
 - Calculated by centralised Regional Security Coordination Initiative
 - Impacted by transmission system capacity
- Role of Central Counter Party and Shipping Agent for Interconnector flows under development



3rd Annual East West Interconnector and Moyle Interconnector User Forum

4 May 2016 Dublin

JAO.EU



- Who is JAO?
- Explicit Auction Platform – eCAT
- Registration process
- Member Test
- JAO User Forum information



Who is JAO?

- Recent history

On 24 June 2015 the General Assemblies of CAO and CASC.EU, the two regional allocation offices for cross border electricity transmission capacities, approved the merger agreement to create the Joint Allocation Office (JAO).

- General Information

JAO is a joint service company of twenty Transmission System Operators from seventeen countries. It performs the yearly, monthly and daily auctions of transmission rights on 27 borders in Europe and acts as a fall-back for the European Market Coupling

Who is JAO?

- JAO S.A is composed of twenty shareholders:
 - 50 Hertz Transmission GmbH, Germany
 - Amprion GmbH, Germany
 - Austrian Power Grid AG, Austria
 - ČEPS, a.s., Czech Republic
 - CREOS Luxembourg S.A., Luxembourg
 - ELES, Ltd., Electricity Transmission System Operator, Slovenia
 - Elia System Operator S.A., Belgium
 - Energinet.dk, Denmark
 - HOPS Croatian Transmission System Operator Ltd., Croatia
 - Independent Power Transmission Operator S.A., Greece
 - MAVIR Hungarian Independent Transmission Operator Company Ltd., Hungary
 - Polskie Elektroenergetyczne S.A., Poland
 - RTE Réseau de Transport d'électricité, France
 - SEPS Slovenská elektrizačná sústava, a.s., Slovak Republic
 - Statnett SF., Norway
 - TenneT TSO BV, Netherlands
 - TenneT TSO GmbH, Germany
 - Terna – Rete Elettrica Nazionale Società per Azioni, Italy
 - TransnetBW GmbH, Germany
 - Swissgrid AG, Switzerland

Who is JAO?

- Rules Governance
 - CACM network code (EU 2015/1222) sets the guidelines to the day ahead activities performed by JAO
 - FCA sets the guidelines for the long term activities performed by JAO
- JAO Rules
 - Allocation Rules for Forward Capacity Allocation from 27 November 2015
 - Shadow Allocation Rules from 8 January 2016
 - Different regional short term allocation rules (daily and intraday)

Who is JAO?

- Capacity Allocation Related Services
 - Explicit market
 - Explicit Auction Allocation (FTR Options & PTRs)
 - Secondary Market
 - Publication
 - Settlement
 - Fall-back solution for MC
 - Implicit market
 - Day ahead results validation
 - Cross zonal flow calculation
 - Congestion revenue distribution

Table of content

- Who is JAO
- Explicit Auction Platform – eCAT
- Registration process
- Member Test
- JAO User Forum information

Explicit Auction Platform - eCAT

- Working Area for Explicit Auctions



Explicit Auction Platform - eCAT

- eCAT in figures for 2016
 - 210 registered parties
 - 762 registered users
 - 31 yearly auctions
 - 96 monthly auctions in Q1
 - 990 daily auctions in Q1
 - 1440 intraday auctions in Q1
 - 56 oriented borders
- More Information:
 - Participants User Guide and Information System Rules available on our website

Explicit Auction Platform eCAT

Auction Display

Credit Limit per horizon:

Intraday: 8 855 308 68 EUR

Daily: 8 855 308 68 EUR

Less than a month: N/A

Monthly: 8 855 308 68 EUR

More than a month: N/A

Filtering criteria

Refresh

- All (35 corridors)
 - AT-CH
 - AT-IT
 - BE-FR
 - BE-NL
 - CEE - CEE
 - CH-AT
- Published
 - Open
 - Closed
 - Published results
 - Suspended
 - Cancelled
 - Pre-open

Horizon: Monthly Year: 2016 Month: April

List: 39 Entities found, displaying 12 entities, from 1 to 12. Page 1 / 4

Corridor	Horizon	Market Period Start	Market Period Stop	Auction identification	Nb of Bids	Current state	Bid time left	Action
CH-DE	Monthly	01-04-2016 00:00	01-05-2016 00:00	CH-DE-M-BASE-----160401-01	0	Published results		View Bids
CH-DE	Monthly	01-04-2016 00:00	01-05-2016 00:00	CH-DE-M-PEAK-----160401-01	0	Published results		View Bids
DE-CH	Monthly	01-04-2016 00:00	01-05-2016 00:00	DE-CH-M-PEAK-----160401-01	0	Published results		View Bids
DE-CH	Monthly	01-04-2016 00:00	01-05-2016 00:00	DE-CH-M-BASE-----160401-01	0	Published results		View Bids
AT-CH	Monthly	01-04-2016 00:00	01-05-2016 00:00	AT-CH-M-BASE-----160401-01	0	Published results		View Bids
AT-IT	Monthly	01-04-2016 00:00	01-05-2016 00:00	AT-IT-M-PEAK-----160401-01	0	Published results		View Bids
AT-IT	Monthly	01-04-2016 00:00	01-05-2016 00:00	AT-IT-M-BASE-----160401-02	0	Published results		View Bids
CH-AT	Monthly	01-04-2016 00:00	01-05-2016 00:00	CH-AT-M-BASE-----160401-01	0	Published results		View Bids
CH-IT	Monthly	01-04-2016 00:00	01-05-2016 00:00	CH-IT-M-PEAK-----160401-02	0	Published results		View Bids
CH-IT	Monthly	01-04-2016 00:00	01-05-2016 00:00	CH-IT-M-BASE-----160401-02	0	Published results		View Bids
FR-IT	Monthly	01-04-2016 00:00	01-05-2016 00:00	FR-IT-M-BASE-----160401-02	0	Published results		View Bids
FR-IT	Monthly	01-04-2016 00:00	01-05-2016 00:00	FR-IT-M-PEAK-----160401-01	0	Published results		View Bids

Explicit Auction Platform eCAT

Auction Display

Credit Limit per horizon:

Intraday: 8 855 308.68 EUR Daily: 8 855 308.68 EUR Less than a month: N/A Monthly: 8 855 308.68 EUR More than a month: N/A

Filtering criteria

▶ Refresh

<ul style="list-style-type: none"> D2-D1 D2-DE DE-CH DE-D1 DE-D2 DE-FR DE-NL 	<ul style="list-style-type: none"> Published Open Closed Published results Suspended Cancelled Pre-open 	Horizon: Monthly Year: 2016 Month: April
--	---	--

List: 1 Entities found, displaying 1 entities, from 1 to 1. Page 1 / 1

Corridor	Horizon	Market Period Start	Market Period Stop	Auction identification	Nb of Bids	Current state	Bid time left	Action
DE-FR	Monthly	01-04-2016 00:00	01-05-2016 00:00	DE-FR-M-BASE-----160401-01	0	Published results		View Bids



Details

Auction identification

Auction parameters Bidding parameters Gates Products Allocation Constraints Auction results Maintenance Periods Comments

Auction identification : DE-FR-M-BASE-----160401-01

Corridor : DE-FR

Market period : 01-04-2016 00:00 / 01-05-2016 00:00

Horizon : Monthly

Auction state

State name	Creation time
Created	05-03-2016 14:30
Published	05-03-2016 14:58
Open	17-03-2016 13:01
Closed	17-03-2016 15:01
Published results	17-03-2016 15:21

Explicit Auction Platform eCAT

Bid Display

























Filtering criteria

Refresh

ALL (56 corridors)	ALL(8 states)	ALL (156 versions)
AT - CZ	Created	LAST
AT - HU	Fully accepted	1
AT - SI	Partially accepted	2
AT-CH	Fully rejected	3
AT-IT	Cancelled	4
BE-FR	Fully selected	5
BE-NL	Partially selected	6
CH-AT	Unselected	7
CH-DE		8

Horizon Year
Yearly 2016

List: 15 Entities found, displaying 12 entities, from 1 to 12. Page 1 / 2

Bid identification	Version	Corridor	TSO border	Auction identification	Divisible	Product	Qty (MW)	Price	Price unit of measurement	Current state	Action
BID00001-AT-CH	1	AT-CH		AT-CH-Y-BASE-----160101-01	YES	Every day 00:00-24:00	10.0	8.65	EUR/MWH	Fully accepted	 
BID00001-AT-CH	2	AT-CH		AT-CH-Y-BASE-----160101-01	YES	Every day 00:00-24:00	25.0	9.02	EUR/MWH	Fully accepted	 
BID00001-AT-CH	3	AT-CH		AT-CH-Y-BASE-----160101-01	YES	Every day 00:00-24:00	15.0	9.02	EUR/MWH	Fully accepted	 
BID00006-AT-CH	1	AT-CH		AT-CH-Y-BASE-----160101-01	YES	Every day 00:00-24:00	25.0	8.0	EUR/MWH	Fully accepted	 
BID00006-AT-CH	2	AT-CH		AT-CH-Y-BASE-----160101-01	YES	Every day 00:00-24:00	25.0	8.0	EUR/MWH	Fully accepted	 
BID00006-AT-CH	3	AT-CH		AT-CH-Y-BASE-----160101-01	YES	Every day 00:00-24:00	25.0	8.0	EUR/MWH	Fully accepted	 
BID00007-AT-CH	1	AT-CH		AT-CH-Y-BASE-----160101-01	YES	Every day 00:00-24:00	25.0	7.75	EUR/MWH	Fully accepted	 
BID00007-AT-CH	2	AT-CH		AT-CH-Y-BASE-----160101-01	YES	Every day 00:00-24:00	25.0	7.75	EUR/MWH	Fully accepted	 
BID00007-AT-CH	3	AT-CH		AT-CH-Y-BASE-----160101-01	YES	Every day 00:00-24:00	25.0	7.75	EUR/MWH	Fully accepted	 
BID00008-AT-CH	1	AT-CH		AT-CH-Y-BASE-----160101-01	YES	Every day 00:00-24:00	25.0	7.5	EUR/MWH	Fully accepted	 
BID00008-AT-CH	2	AT-CH		AT-CH-Y-BASE-----160101-01	YES	Every day 00:00-24:00	25.0	7.5	EUR/MWH	Fully accepted	 
BID00008-AT-CH	3	AT-CH		AT-CH-Y-BASE-----160101-01	YES	Every day 00:00-24:00	25.0	7.5	EUR/MWH	Fully accepted	 

Navigation icons: Home, Previous, Next, Last

Details

Bid identification Bid blocks Bid parameters

Bid identification	Version
Bid identification : BID00001-AT-CH	Version : 1
Corridor : AT-CH	Last Version : NO
Market period : 01-01-2016 00:00 / 01-01-2017 00:00	Creation time : 07-12-2015 10:18

Explicit Auction Platform eCAT

New Bid

Edit/View Bids

Credit Limit:

Deposits: 1 772 345.06 EUR

Bank Guarantees: 10 000 000.00 EUR

Potential liabilities (Total): 0.00 EUR
Potential liabilities (Filtered): 0.00 EUR

Credit Limit: 8 855 308.68 EUR

Auction selection

Corridor

FR-IT

Horizon

Monthly

Year

2016

Month

May

Auction Identification

FR-IT-M-BASE-----160501-01

Bid List

To paste from Excel press CTRL-V

Reset to current bid values

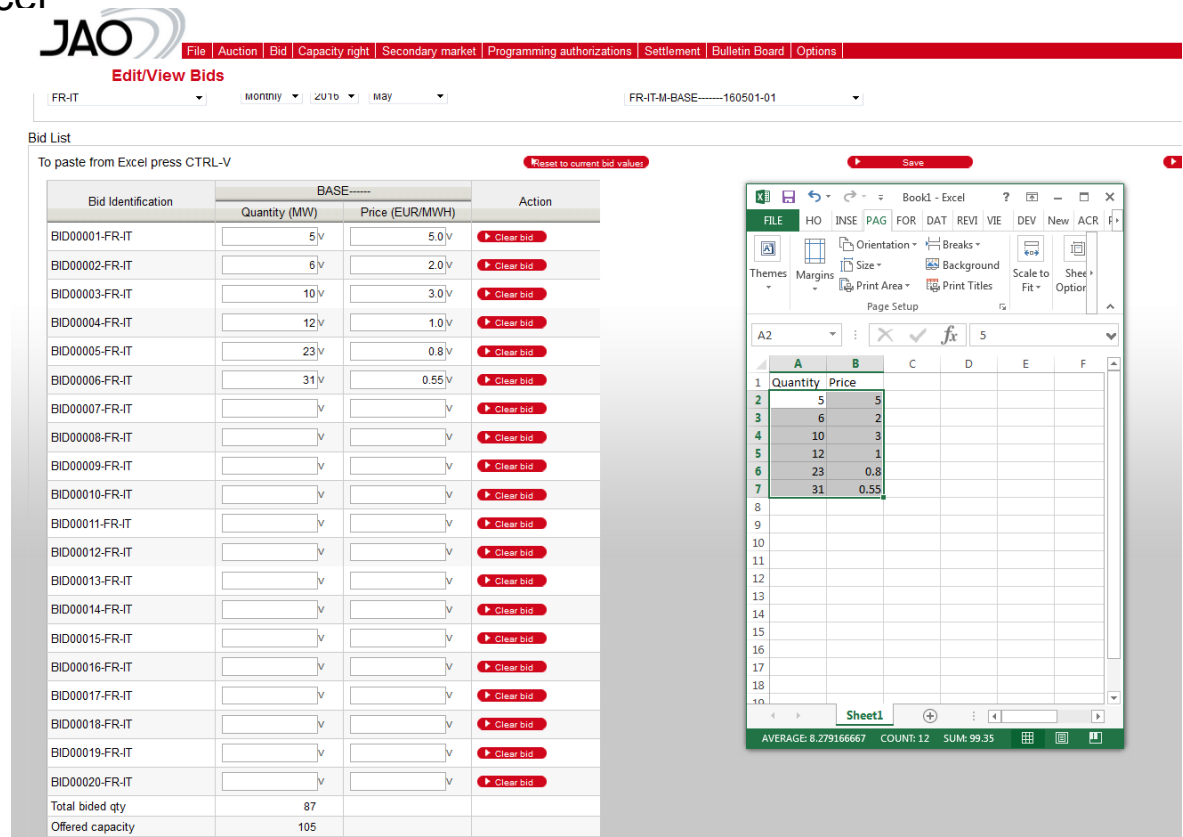
Save

Clear all bids

Bid Identification	BASE-----		Action
	Quantity (MW)	Price (EUR/MWH)	
BID00001-FR-IT	<input type="text"/>	<input type="text"/>	Clear bid
BID00002-FR-IT	<input type="text"/>	<input type="text"/>	Clear bid
BID00003-FR-IT	<input type="text"/>	<input type="text"/>	Clear bid
BID00004-FR-IT	<input type="text"/>	<input type="text"/>	Clear bid
BID00005-FR-IT	<input type="text"/>	<input type="text"/>	Clear bid
BID00006-FR-IT	<input type="text"/>	<input type="text"/>	Clear bid
BID00007-FR-IT	<input type="text"/>	<input type="text"/>	Clear bid
BID00008-FR-IT	<input type="text"/>	<input type="text"/>	Clear bid
BID00009-FR-IT	<input type="text"/>	<input type="text"/>	Clear bid
BID00010-FR-IT	<input type="text"/>	<input type="text"/>	Clear bid
BID00011-FR-IT	<input type="text"/>	<input type="text"/>	Clear bid
BID00012-FR-IT	<input type="text"/>	<input type="text"/>	Clear bid
BID00013-FR-IT	<input type="text"/>	<input type="text"/>	Clear bid

Explicit Auction Platform eCAT

- New Bid
 - entering through Trader Interface
 - copy past from excel
 - Via Web service



The screenshot displays the JAO eCAT interface for editing bids. The main window is titled "Edit/View Bids" and shows a "Bid List" table. The table has columns for Bid Identification, Quantity (MW), Price (EUR/MWh), and Action. The data is as follows:

Bid Identification	Quantity (MW)	Price (EUR/MWh)	Action
BID00001-FR-IT	5	5.0	Clear bid
BID00002-FR-IT	6	2.0	Clear bid
BID00003-FR-IT	10	3.0	Clear bid
BID00004-FR-IT	12	1.0	Clear bid
BID00005-FR-IT	23	0.8	Clear bid
BID00006-FR-IT	31	0.55	Clear bid
BID00007-FR-IT			Clear bid
BID00008-FR-IT			Clear bid
BID00009-FR-IT			Clear bid
BID00010-FR-IT			Clear bid
BID00011-FR-IT			Clear bid
BID00012-FR-IT			Clear bid
BID00013-FR-IT			Clear bid
BID00014-FR-IT			Clear bid
BID00015-FR-IT			Clear bid
BID00016-FR-IT			Clear bid
BID00017-FR-IT			Clear bid
BID00018-FR-IT			Clear bid
BID00019-FR-IT			Clear bid
BID00020-FR-IT			Clear bid
Total bided qty	87		
Offered capacity	105		

An Excel spreadsheet is overlaid on the right side of the interface, showing the same data as the table above. The spreadsheet has columns A and B, with A labeled "Quantity" and B labeled "Price". The data in the spreadsheet is:

Quantity	Price
5	5
6	2
10	3
12	1
23	0.8
31	0.55

Explicit Auction Platform eCAT

Credit Limit Information

Edit/View Bids

Credit Limit:

Deposits: 1 772 345.06 EUR	Bank Guarantees: 10 000 000.00 EUR	Potential liabilities (Total): 35 600.40 EUR Potential liabilities (Filtered): 35 600.40 EUR	Credit Limit: 8 855 308.68 EUR
----------------------------	------------------------------------	---	--------------------------------

Auction selection

Corridor: Horizon: Year: Month: Auction Identification:

Bid List

To paste from Excel press CTRL-V

Reset to current bid values

Save

Bid Identification	BASE-----		Action
	Quantity (MW)	Price (EUR/MWH)	
BID00001-FR-IT	<input type="text" value="5"/>	<input type="text" value="5.0"/>	<input type="button" value="Clear bid"/>
BID00002-FR-IT	<input type="text" value="6"/>	<input type="text" value="2.0"/>	<input type="button" value="Clear bid"/>
BID00003-FR-IT	<input type="text" value="10"/>	<input type="text" value="3.0"/>	<input type="button" value="Clear bid"/>
BID00004-FR-IT	<input type="text" value="12"/>	<input type="text" value="1.0"/>	<input type="button" value="Clear bid"/>
BID00005-FR-IT	<input type="text" value="23"/>	<input type="text" value="0.8"/>	<input type="button" value="Clear bid"/>
BID00006-FR-IT	<input type="text" value="31"/>	<input type="text" value="0.55"/>	<input type="button" value="Clear bid"/>
BID00007-FR-IT	<input type="text" value=""/>	<input type="text" value=""/>	<input type="button" value="Clear bid"/>
BID00008-FR-IT	<input type="text" value=""/>	<input type="text" value=""/>	<input type="button" value="Clear bid"/>
BID00009-FR-IT	<input type="text" value=""/>	<input type="text" value=""/>	<input type="button" value="Clear bid"/>

Explicit Auction Platform eCAT

Allocation Result Display

Allocation results

Auction selection

Corridor: | Horizon: | Year: | Month: | Auction Identification:

Allocation results list

Bid Identification	BASE-----			
	Awarded Quantity (MW)	Clearing price (EUR/MWH)	Bid Quantity (MW)	Bid Price (EUR/MWH)
TOTAL	71	0.55	87	-
BID00001-FR-IT	5	0.55	5	5.0
BID00002-FR-IT	6	0.55	6	2.0
BID00006-FR-IT	15	0.55	31	0.55
BID00004-FR-IT	12	0.55	12	1.0
BID00005-FR-IT	23	0.55	23	0.8
BID00003-FR-IT	10	0.55	10	3.0

Contract identification: 300416D3-FR-IT-NJ01

Explicit Auction Platform eCAT

Capacity Right Display

Capacity right list

Filtering criteria

[Refresh](#)

DE-D1
DE-D2
DE-FR
DE-NL
ES-FR
FR-BE
FR-CH
FR-DE
FR-ES
FR-IT

Contract type: Year: Month:

List: 1 Entities found, displaying 1 entities, from 1 to 1. Page 1 / 1

Corridor	Contract type	Contract identification	Auction identification	Product name	Status
FR-IT	Monthly	300416D3-FR-IT-NJ01	FR-IT-M-BASE-----160501-01	Every day 00:00-24:00	Active

Details

Day: In Out ITR: ITR:

Explicit Auction Platform eCAT

New Return

New Resale Notification

▼ **Resale Notification General Parameters**

▶ Refresh

Corridor	Source horizon	Target horizon	Year	Month
<input type="text" value="FR-IT"/>	<input type="text" value="Yearly"/>	<input type="text" value="Monthly"/>	<input type="text" value="2016"/>	<input type="text" value="May"/>

<p>Capacity right identification</p> <p>Source Auction identification (Product Id)</p> <input type="text" value="FR-IT-Y-BASE-----160101-01(BASE-----)"/> <p>Target Auction identification (Product Id)</p> <input type="text" value="FR-IT-M-BASE-----160501-01(BASE-----)"/>	<p>Resale notification Schedule</p> <p><input type="text" value="0.0"/> % of available releasable capacity ▶ Set for whole period</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr style="background-color: #f0f0f0;"> <th style="width: 20%;">Product id</th> <th style="width: 30%;">Product name</th> <th style="width: 15%;">Available Releasable Capacity</th> <th style="width: 15%;">Quantity (MW)</th> <th style="width: 10%;"></th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>BASE-----</td> <td>Every day 00:00-24:00</td> <td>10.0</td> <td><input type="text" value="5"/></td> <td></td> <td>v</td> </tr> </tbody> </table>	Product id	Product name	Available Releasable Capacity	Quantity (MW)			BASE-----	Every day 00:00-24:00	10.0	<input type="text" value="5"/>		v
Product id	Product name	Available Releasable Capacity	Quantity (MW)										
BASE-----	Every day 00:00-24:00	10.0	<input type="text" value="5"/>		v								

▶ Save

Explicit Auction Platform eCAT

New Transfer

New Transfer Notification

Transfer Notification General Parameters

▶ Refresh

Corridor: Horizon: Transfer period start: Transfer period stop:

Transfer notification Parameters

Auction identification (Product Identification)

Transferee

Days

Exclude maintenance periods

▶ Save

Transfer notification Schedule

% of available transferable capacity ▶ Set for whole period

	Time Interval	Available Transferable Capacity	Quantity (MW)		
	00:00 - 01:00	71.0	<input type="text" value="5.0"/>	v	<div style="border-left: 1px solid #ccc; border-right: 1px solid #ccc; height: 100px; width: 10px;"></div>
	01:00 - 02:00	71.0	<input type="text" value="5.0"/>	v	
	02:00 - 03:00	71.0	<input type="text" value="5.0"/>	v	
	03:00 - 04:00	71.0	<input type="text" value="5.0"/>	v	
	04:00 - 05:00	71.0	<input type="text" value="5.0"/>	v	
	05:00 - 06:00	71.0	<input type="text" value="5.0"/>	v	
	06:00 - 07:00	71.0	<input type="text" value="5.0"/>	v	

Explicit Auction Platform eCAT

Programming Authorization / CUA

Programming Authorization

Filtering criteria

Refresh

Contract type:
 Day:

List: 20 Entities found, displaying 12 entities, from 1 to 12. Page 1 / 2

Market Day	TSO border	Rights Holder	Out Party	In Party	Contract type	Contract identification	Auction identification	Capacity type
12-04-2016 00:00	RTE-TERNA				Periodic			Physical Transmission Rights
12-04-2016 00:00	CEPS - PSE				Monthly		CEEXD-M-BASE----- 160401-04	Physical Transmission Rights
12-04-2016 00:00	ELES - APG				Yearly		CEEXD-Y-BASE----- 160101-01	Physical Transmission Rights
12-04-2016 00:00	MAVIR - APG				Yearly		CEEXD-Y-BASE----- 160101-01	Physical Transmission Rights
12-04-2016 00:00	CEPS - APG				Yearly		CEEXD-Y-BASE----- 160101-01	Physical Transmission Rights
12-04-2016 00:00	MAVIR - SEPS				Yearly		CEEXD-Y-BASE----- 160101-01	Physical Transmission Rights
12-04-2016 00:00	CEPS - 50HZ				Yearly		CEEXD-Y-BASE----- 160101-01	Physical Transmission Rights
12-04-2016 00:00	CEPS - TENNETDE				Yearly		CEEXD-Y-BASE----- 160101-01	Physical Transmission Rights
12-04-2016 00:00	HOPS - MAVIR				Yearly		CEEXD-Y-BASE----- 160101-01	Physical Transmission Rights
12-04-2016 00:00	ELES - HOPS				Yearly		CEEXD-Y-BASE----- 160101-01	Physical Transmission Rights
12-04-2016 00:00	APG - ELES				Yearly		CEEXD-Y-BASE----- 160101-01	Physical Transmission Rights
12-04-2016 00:00	AMPRION-SWISSGRID				Yearly		DE-CH-Y-BASE----- 160101-02	Physical Transmission Rights



Explicit Auction Platform eCAT

File Upload



[File](#) | [Auction](#) | [Bid](#) | [Capacity right](#) | [Secondary market](#) | [Programming authorizations](#) | [Settlement](#) | [Bulletin Board](#) | [Options](#)

File Upload

Select the file that you want to upload

No file selected.

Logging time	Message	Status	Market Period Start	Market Period Stop	Ack.
--------------	---------	--------	---------------------	--------------------	------

Explicit Auction Platform eCAT

File Download

File Download

Filtering criteria

▶ Refresh

Type	Domain	Status	Horizon	Date start	Date stop
All (15)	ALL (17)	All (5)	ALL (4)	12.03.2016	11.05.2016
Allocation results	CWE-AREA	A01 - Message fully accepted	Long-Term		
Approved transfer	FRANCE-ITALY-BORDER	A02 - Message fully rejected	Daily		
Bid	FRANCE-ITALY-BORDER	A03 - Message contains errors at the times series	Intraday		
Capacity curtailment	FRANCE-ITALY-BORDER	Z01 - Message fully accepted under reserve	Undefined		
Capacity rights portfolio	FRANCE-ITALY-BORDER	Z03 - Message contains errors at the times series			
Daily programming authorization	FRANCE-ITALY-BORDER				
ETSO status request	FRANCE-ITALY-BORDER				
ITR Designation	FRANCE-ITALY-BORDER				
Intraday programming authorization	FRANCE-ITALY-BORDER				

▼ List: 463 Entities found, displaying 13 entities, from 1 to 13. Page 1 / 36

Registration time	Domain	Market period start	Market period stop	Horizon	Identification	Version	Document type	Status	Related document identification	Related document version	User	Action	Ack.
12-04-2016 15:10	CEE_DOMAIN	13-04-2016 00:00	14-04-2016 00:00	Long-Term	P_A-LT-CEE--20160413	1	A23				SYSTEM		
12-04-2016 15:10	SLOVENIA-ITALY-BORDER	14-04-2016 00:00	15-04-2016 00:00	Long-Term	P_A-LT-SHT-20160414	1	A23				SYSTEM		
12-04-2016 15:10	SLOVENIA-ITALY-BORDER	13-04-2016 00:00	14-04-2016 00:00	Long-Term	P_A-LT-SHT-20160413	1	A23				SYSTEM		
12-04-2016 15:10	SWITZERLAND-GERMANY-BORDER	13-04-2016 00:00	14-04-2016 00:00	Daily	P_A-MAX_AUTH_AAC-CH-DE-20160413	1	A23				SYSTEM		
12-04-2016 15:10	SWITZERLAND-GERMANY-BORDER	13-04-2016 00:00	14-04-2016 00:00	Daily	P_A-MIN_AUTH_AAC-CH-DE-20160413	1	A23				SYSTEM		
12-04-2016 15:10	SLOVENIA-ITALY-BORDER	12-04-2016 00:00	13-04-2016 00:00	Long-Term	P_A-LT-SHT-20160412	1	A23				SYSTEM		
12-04-2016 15:10	SWITZERLAND-GERMANY-BORDER	12-04-2016 00:00	13-04-2016 00:00	Daily	P_A-MAX_AUTH_AAC-CH-DE-20160412	1	A23				SYSTEM		
12-04-2016 15:10	SWITZERLAND-GERMANY-BORDER	12-04-2016 00:00	13-04-2016 00:00	Daily	P_A-MIN_AUTH_AAC-CH-DE-20160412	1	A23				SYSTEM		
12-04-2016 15:10	SLOVENIA-ITALY-BORDER	11-04-2016 00:00	12-04-2016 00:00	Long-Term	P_A-LT-SHT-20160411	1	A23				SYSTEM		
12-04-2016 15:10	CEE_DOMAIN	12-04-2016 00:00	13-04-2016 00:00	Long-Term	P_A-LT-CEE--20160412	1	A23				SYSTEM		
12-04-2016 15:10	SWITZERLAND-GERMANY-BORDER	11-04-2016 00:00	12-04-2016 00:00	Daily	P_A-MAX_AUTH_AAC-CH-DE-20160411	1	A23				SYSTEM		
12-04-2016 15:10	SWITZERLAND-GERMANY-BORDER	11-04-2016 00:00	12-04-2016 00:00	Daily	P_A-MIN_AUTH_AAC-CH-DE-20160411	1	A23				SYSTEM		
12-04-2016 15:10	SWITZERLAND-GERMANY-BORDER	10-04-2016 00:00	11-04-2016 00:00	Daily	P_A-MAX_AUTH_AAC-CH-DE-20160410	1	A23				SYSTEM		

⏪ ⏩ 1 2 3 4 ⏪ ⏩



Explicit Auction Platform eCAT

Export Settlement



File Auction Bid Capacity right Secondary market Programming authorizations Settlement

Export of settlement results

Invoicing year	Invoicing month	Charge type	Corridor
2016	April	Allocation	All
▶ Export to Excel...		<ul style="list-style-type: none">AllocationResaleCompensation for UIOSICompensation for auction cancellationCompensation for capacity curtailmentCompensation for nomination curtailment	

Explicit Auction Platform eCAT

Export Settlement



File | Auction | Bid | Capacity right | Secondary market | Programming authorizations | Settlement

Export of settlement results

Invoicing year:
 Invoicing month:
 Charge type:
 Corridor:

- Allocation
- Resale
- Compensation for UIOSI
- Compensation for auction cancellation
- Compensation for capacity curtailment
- Compensation for nomination curtailment

	A	B	C	D	E	F	G	H	I	J	K
	Corridor	Contract ID	Source Horiz	Source Produc	Source Auction ID	Charge Type	Qty(MW)	Price(EUR/MWh)	Overall due Amount(EUR)	Invoiced Amount(EUR)	Paid C
1	AT-CH	010316D3-AT-CH-ED01	Daily	B01-----	AT-CH-D-DAILYPRODU-160302-01	Allocation	0	10.280	0.00	0.00	
2	AT-CH	010316D3-AT-CH-ED01	Daily	B02-----	AT-CH-D-DAILYPRODU-160302-01	Allocation	0	9.800	0.00	0.00	
3	AT-CH	010316D3-AT-CH-ED01	Daily	B03-----	AT-CH-D-DAILYPRODU-160302-01	Allocation	0	10.260	0.00	0.00	
4	AT-CH	010316D3-AT-CH-ED01	Daily	B04-----	AT-CH-D-DAILYPRODU-160302-01	Allocation	0	10.840	0.00	0.00	
5	AT-CH	010316D3-AT-CH-ED01	Daily	B05-----	AT-CH-D-DAILYPRODU-160302-01	Allocation	1	9.970	9.97	9.97	
6	AT-CH	010316D3-AT-CH-ED01	Daily	B06-----	AT-CH-D-DAILYPRODU-160302-01	Allocation	25	10.980	274.50	274.50	
7	AT-CH	010316D3-AT-CH-ED01	Daily	B07-----	AT-CH-D-DAILYPRODU-160302-01	Allocation	25	11.190	279.75	279.75	
8	AT-CH	010316D3-AT-CH-ED01	Daily	B08-----	AT-CH-D-DAILYPRODU-160302-01	Allocation	25	9.210	230.25	230.25	
9	AT-CH	010316D3-AT-CH-ED01	Daily	B09-----	AT-CH-D-DAILYPRODU-160302-01	Allocation	0	9.450	0.00	0.00	
10	AT-CH	010316D3-AT-CH-ED01	Daily	B10-----	AT-CH-D-DAILYPRODU-160302-01	Allocation	0	9.360	0.00	0.00	
11	AT-CH	010316D3-AT-CH-ED01	Daily	B11-----	AT-CH-D-DAILYPRODU-160302-01	Allocation	0	9.630	0.00	0.00	
12	AT-CH	010316D3-AT-CH-ED01	Daily	B12-----	AT-CH-D-DAILYPRODU-160302-01	Allocation	0	8.080	0.00	0.00	
13	AT-CH	010316D3-AT-CH-ED01	Daily	B13-----	AT-CH-D-DAILYPRODU-160302-01	Allocation	0	7.040	0.00	0.00	
14	AT-CH	010316D3-AT-CH-ED01	Daily	B13-----	AT-CH-D-DAILYPRODU-160302-01	Allocation	0	7.040	0.00	0.00	


Explicit Auction Platform eCAT


Bulletin Board

Message List

▼ Filtering criteria


▶ Refresh

Party: Contract period start: 







Need to: Contract period stop: 

Corridor:

▼ List: 1 Entities found, displaying 1 entities, from 1 to 1. Page 1 / 1



Message posted on	Party	Need to	Corridor	Contract Start	Contract Stop	Product	Qty (MW)	Action
14-04-2016 13:05	/	SELL	FR-IT	01-05-2016 00:00	01-06-2016 00:00	Base	10.0	▶ Edit/View ▶ Delete



- Who is JAO
- Explicit Auction Platform – eCAT
- Registration process
- Member Test
- JAO User Forum information

Registration process

- Registration under Harmonized Auction Rules
 - 1st step – contracts
 - 2 original copies from the Participation Agreement
 - 2 original copies from the Financial Agreement
 - Commercial Extract/ Constitution DeedJAO checks and countersigns the documents within 7 working days

 - 2nd step – registration in the Auction platform
 - User Account form
 - Public parts of the electronic certificate
 - ID copy
 - Power of Attorney
 - Signatory Specimen Form
 - Bank Guarantee

Based on above mentioned documents JAO registers MP in Auction tool.
Registration process will be published on JAO website under Support >
JAO Registration



- Who is JAO
- Explicit Auction Platform – eCAT
- Registration process
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- JAO User Forum information

Member test

- Prior to Go Live of the FTR on EWIC and Moyle interconnectors there will be a Member Test organized in order to train MPs on the Auction Platform
 - The prerequisite to participate in the test is successful registration based on the form provided by JAO
 - Details information will be published on JAO website as well sent by email at least two weeks before test starts including:
 - Registration process
 - Test scenarios
 - Test timings
 - Sample file



- Who is JAO
- Explicit Auction Platform – eCAT
- Registration process
- Member Test
- JAO User Forum information

JAO User Group

- JAO organises quarterly user group meetings with key users representing all geographic areas of JAO
- Both federations representing market participants (EFET) and individual market participants participate in the User Group
- Objectives are
 - to gather feedback and requests from system users
 - to create awareness of future evolutions of the system, provide information to stakeholders and receive constructive feedback
 - provide a coordinated forum through which learning points are shared, and could be used by JAO in the future



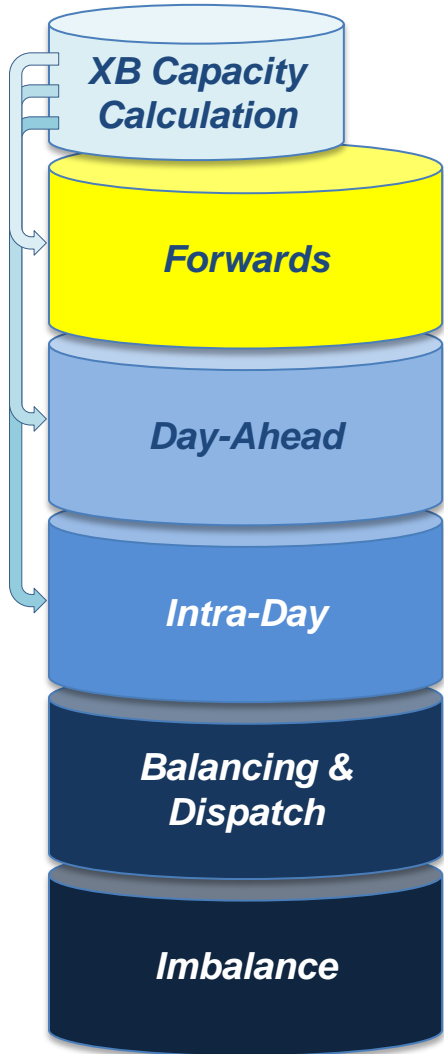
Joint Allocation Office (JAO) Implementation for I-SEM

5th May, 2016

Agenda



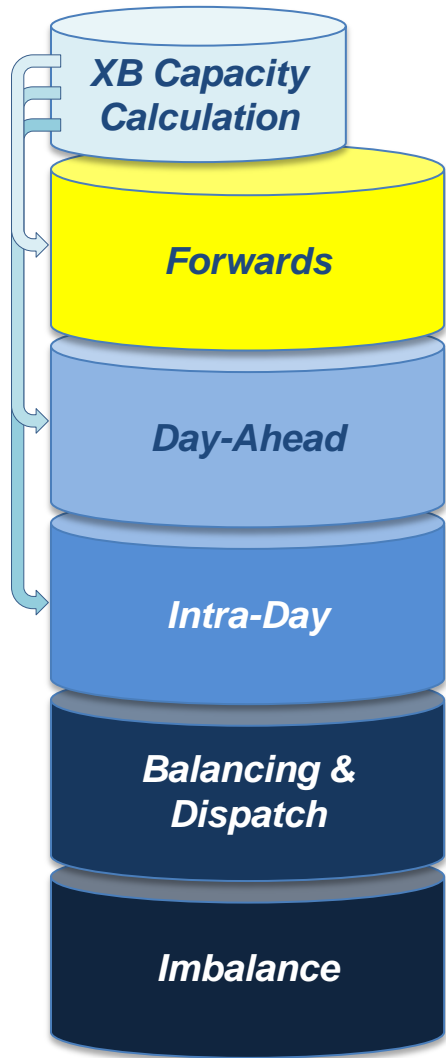
- I-SEM Markets and Forwards – decisions
- I-SEM Cross-border Forwards – implementation
- Joint Allocation Office (JAO) overview
- FTR Go-live Timelines



I-SEM & Forward Decisions



- Within Zone
 - I-SEM decision: Financial Trading Instruments
- Cross-Border
 - EU & Regional
 - 1222/2015 Capacity Allocation & Congestion Management
 - Capacity Calculation
 - Forward Capacity Allocation (FCA) Guideline, mid-2016
 - Harmonised Allocation Rules (HAR)
 - Single Allocation Platform
 - Design of long term transmission rights
 - I-SEM
 - HLD: Financial Transmission Rights
 - FTR Decision, December 2015

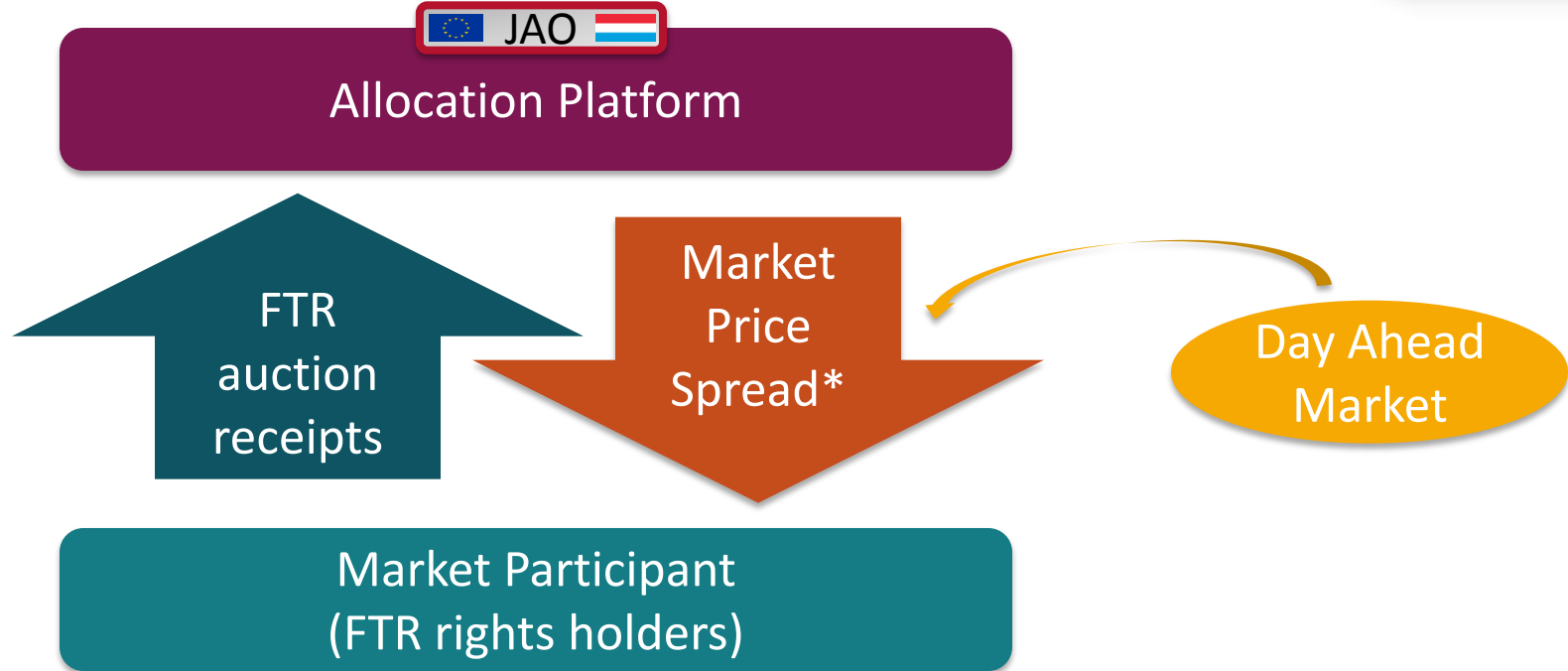


I-SEM Implementation

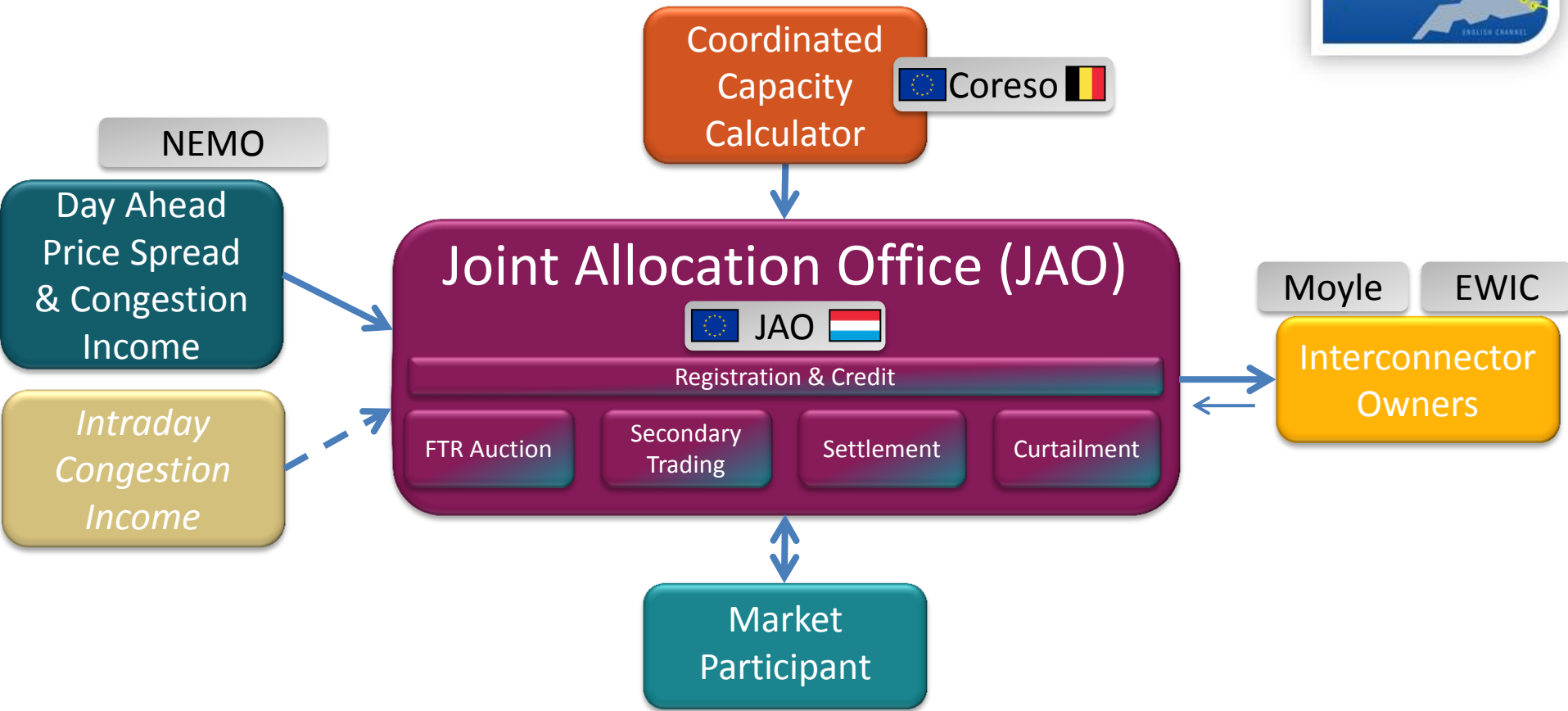


- Auctions
 - JAO: Joint Allocation Office
- Products
 - Financial Transmission Rights – Options
 - Payout based on loss-adjusted price spread
 - Delivery timescales: Annual through to Monthly
 - Under consideration: Weekly and base/peak options

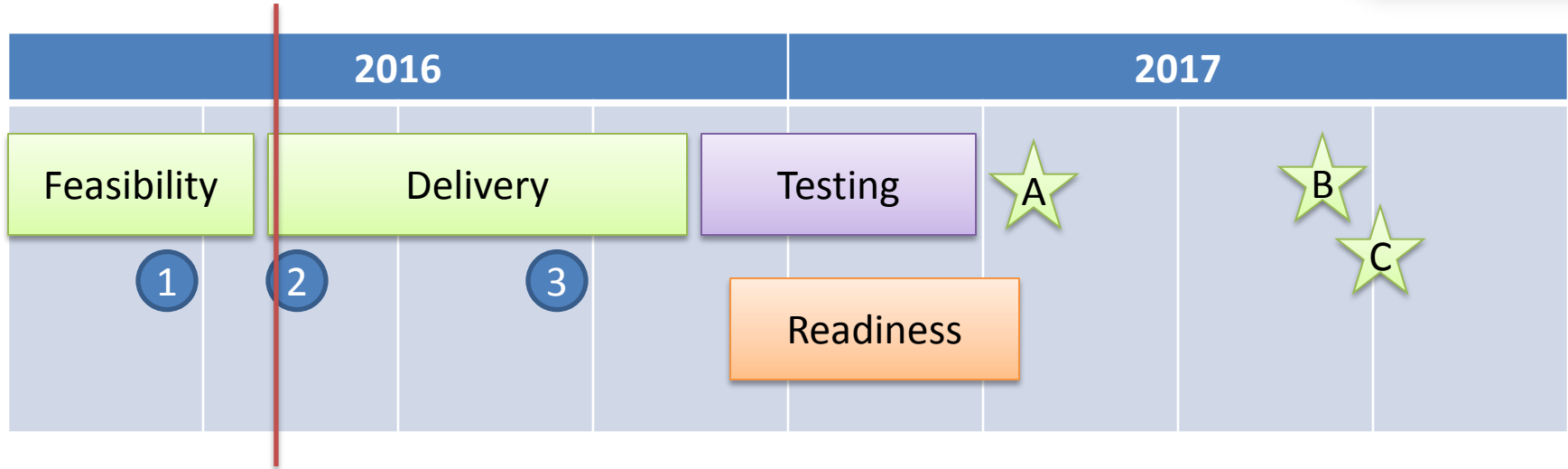
FTR Money Flow



JAO and FTR interactions



FTR Go-live Timelines



- 1. FUIN Agreement; 2. JAO interim agreement; 3. JAO service level agreement
- A. First auction (Oct-Dec); B. First monthly auction; C. First FTR Payout

Questions



I-SEM NEMO

Peter Lantry

4th May 2016



Agenda

- NEMO Solution Overview
- Day-Ahead Solution Overview
- Clearing Arrangements
- PCR/MRC Workstream
- Cross-Border Intraday Project (XBID)
- Interim Intraday Design Proposal

I-SEM NEMO

NEMO

- Traders operate across all of these timeframes
- EirGrid Group has responsibility for market operations in all timeframes
- NEMO's operate the DA and ID markets across Europe mostly through PX's
- EPEX Spot has been selected to provide the service of the PX systems
- For ID market, XBID will be unavailable for I-SEM go-live. An interim solution is proposed

Time
1 Year

*FTR &
Forwards
Market*

*CRM
Market*

*Day-Ahead
Market*

*Intraday
Market*

*Balancing &
Dispatch*

*Imbalance
Settlement*

Financial Transmission Rights between zones and Financial Forwards within zone

Capacity Remuneration Mechanism

EU price coupled day-ahead auction supplier & generator bidding

Continuous local trading and regional auctions with supplier & generator bidding

Mandatory continuous balancing market with INC & DEC pricing

Cash out of differences between actual and traded positions

**N
E
M
O**

Real Time

NEMO – What is it?

Capacity Market	FTR Market	Day Ahead / Intraday	Balancing & Dispatch
Operational Planning & Forecasting			
		Common Grid Model Operations	
		DAM/IDM Operational Scheduling	Balancing & Dispatch
Advise Capacity Quantity	Advise FTR Quantity	Publish System Information	
CRM Customer Care	FTR Customer Care	DAM/IDM Customer Care	Balancing & Imbalance Customer Care
CRM Registration	FTR Registration	DAM/IDM Registration	Balancing Market Registration
CRM Auction	FTR Auction	DAM/IDM Trading	Balancing Market Operations
		EU Market Coupling	
CRM Settlement Calculation	FTR Settlement Calculation	DAM/IDM Settlement Calculation	Balancing & Imbalance Settlement Calculation
CRM Clearing	FTR Clearing	DAM/IDM Clearing	Balancing & Imbalance Clearing
CRM Market Surveillance	FTR Market Surveillance	DAM/IDM Market Surveillance	Balancing & Imbalance Market Surveillance
		Aggregator of Last Resort	

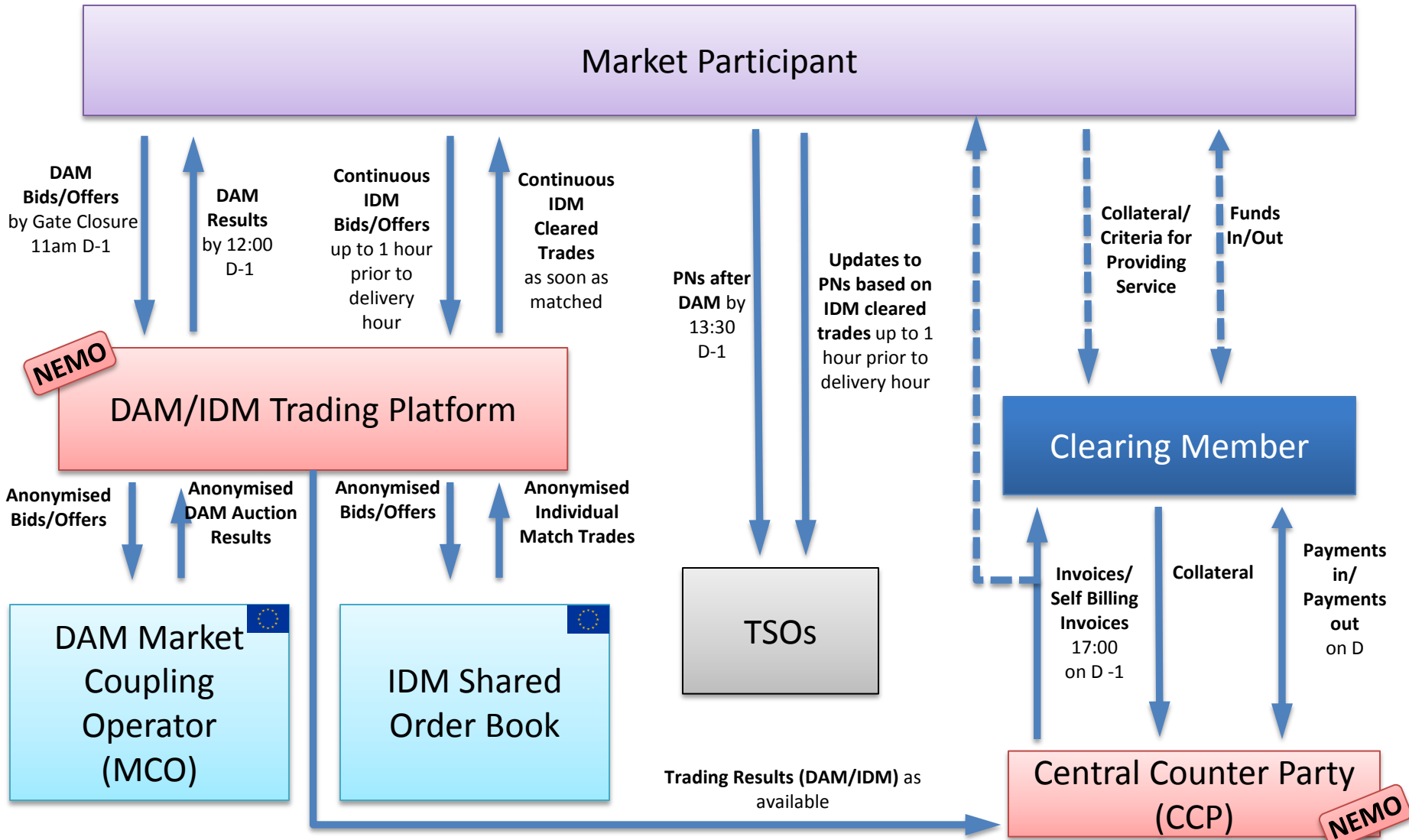


Key

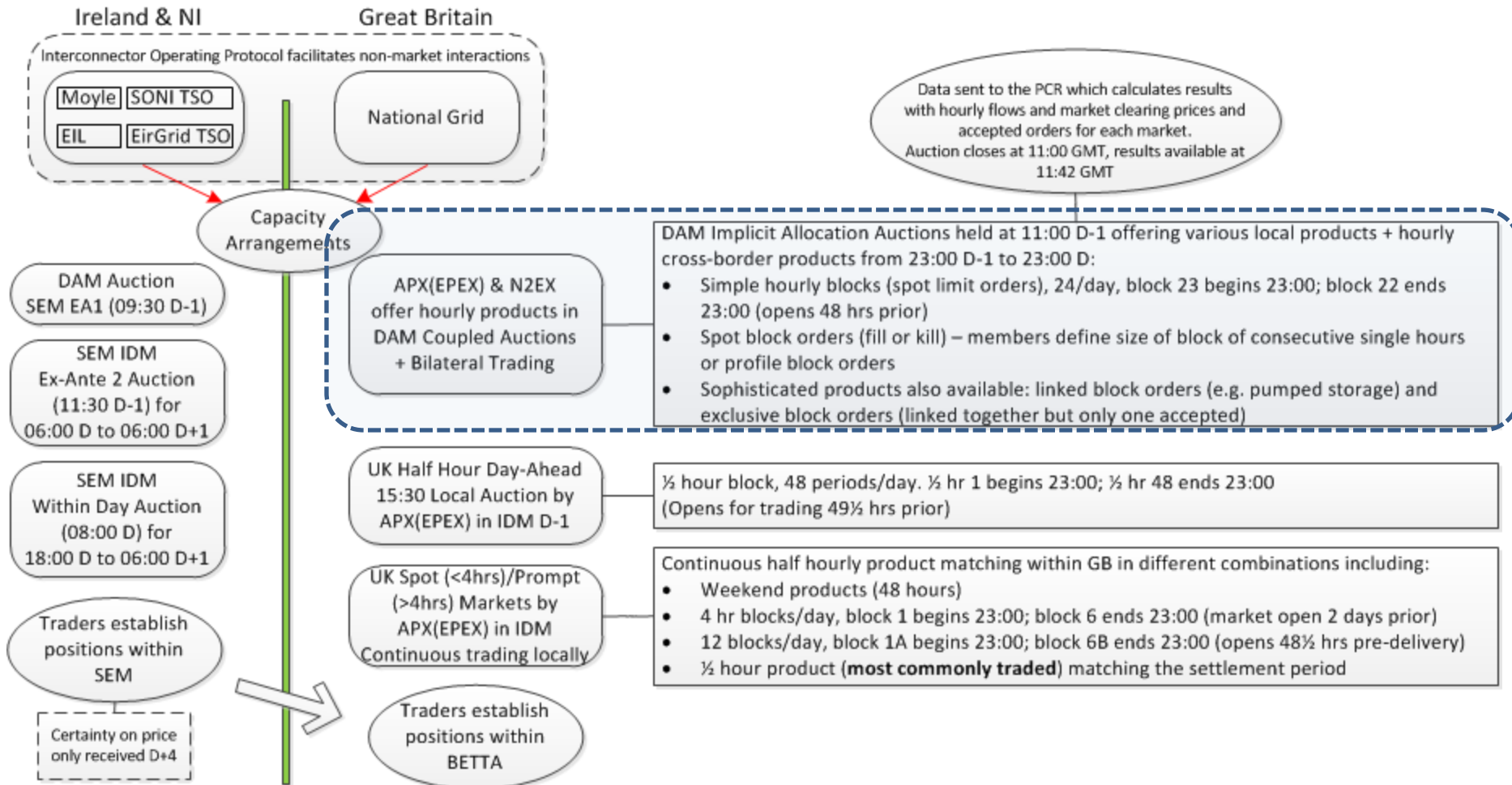
- System Functions
- NEMO Functions
- Wider Market Functions

NEMO – Provides access to European Electricity Market and acts as counter party to trades

DAM/IDM – How it works?



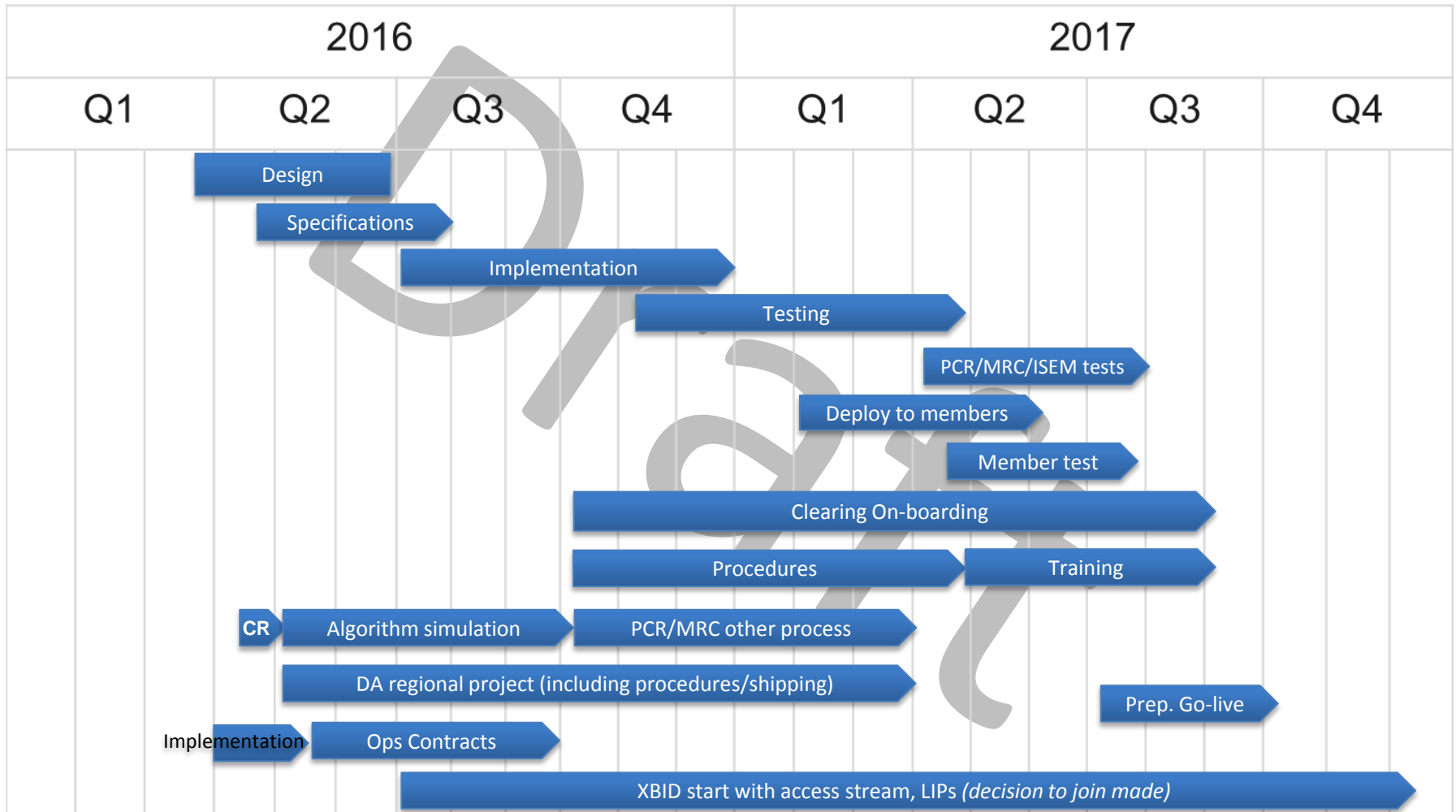
Current Cross-Border Arrangements



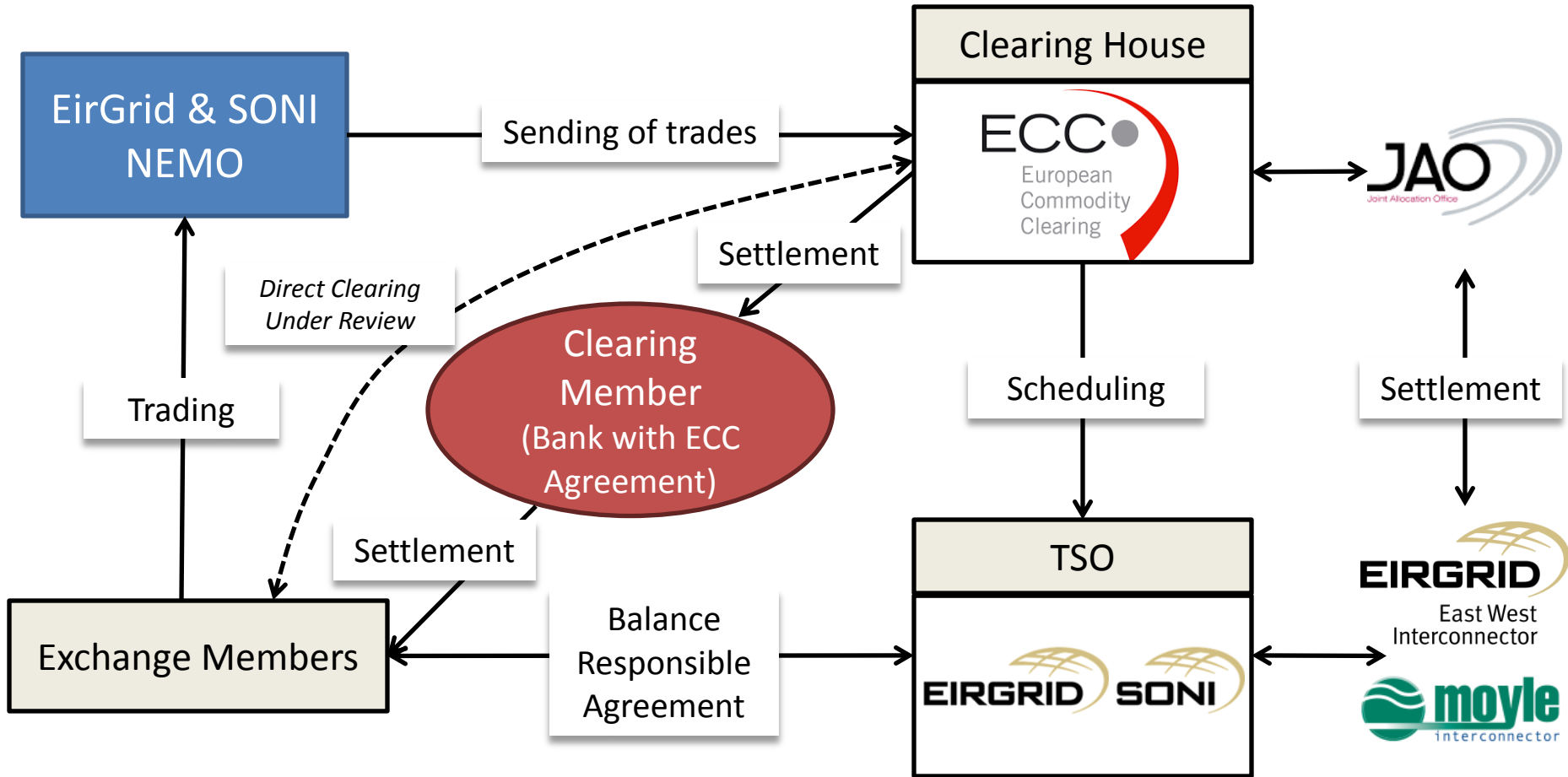
I-SEM DAM Arrangements

- Participants will submit orders into the Day-Ahead Market via their NEMO trading platform
 - Utilising existing EPEX platform configured to I-SEM requirements
 - Output of Euphemia trial will inform products offered
- Orders will be anonymised and submitted by NEMOs to the Market Coupling Operator (MCO) of the Price Coupled Region (PCR)
- Prices will be set based on matched orders in the Euphemia algorithm run by the MCO
 - Fully price coupled across Europe as required by CACM
- The MCO will send results back to the NEMO
 - Participants will be informed of their traded volumes and prices
- ECC will carry out the clearing and settlement function
 - Addressing dual currency requirement

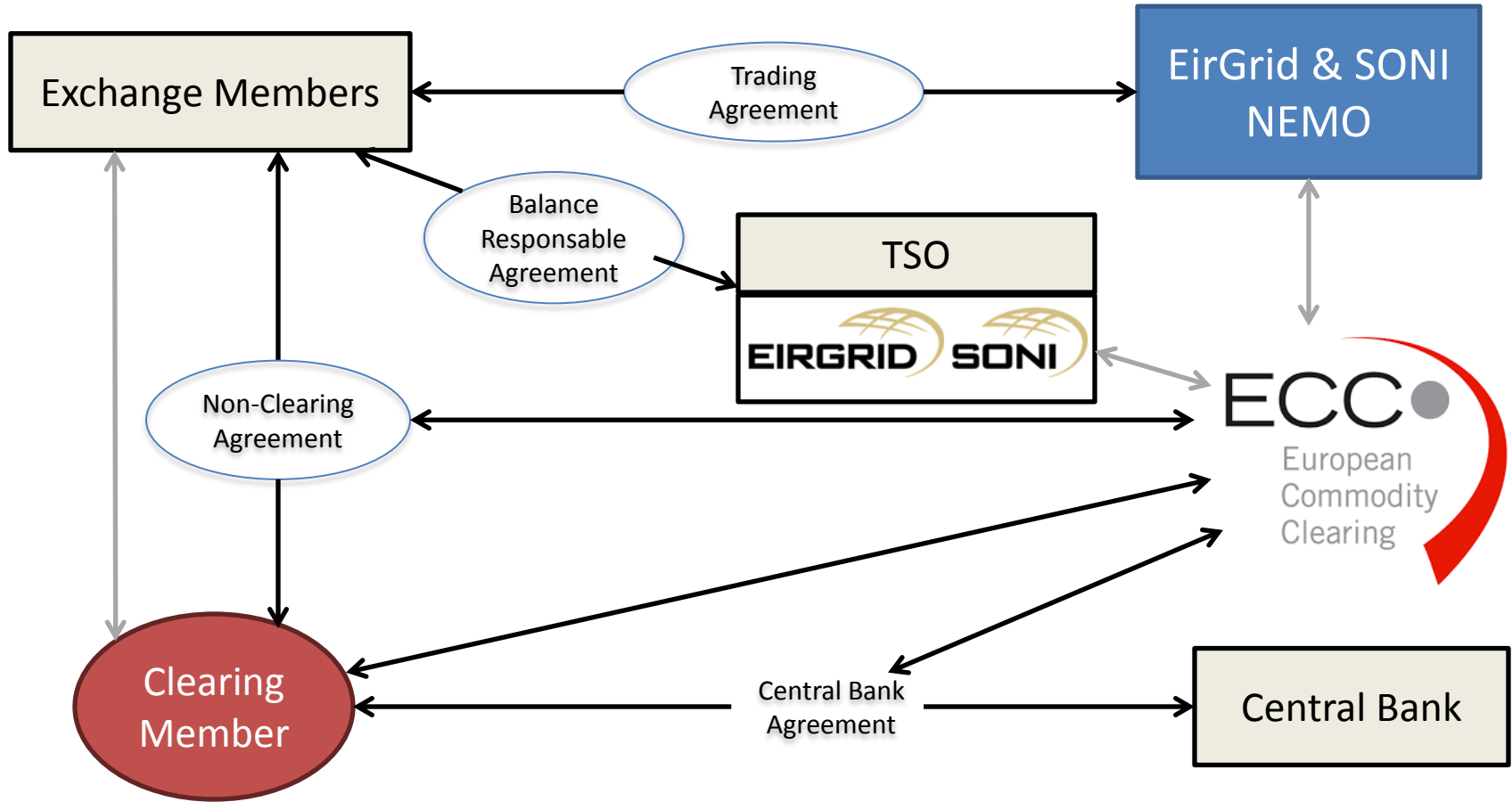
Draft DA Implementation Programme



Relationships between parties



Necessary agreements (1/2)



Necessary agreements (2/2)

Trading Agreement

- Between exchange member (“Market Participant”) and EirGrid/SONI NEMO
- Pertains to the relationship in terms of responsibility (trading, behaviour in the market), requirements (technical, training of traders organization) and property (license)

Non-Clearing Agreement

- Between ECC, the clearing member and the exchange member
- Corresponding NCM agreement with the cooperating clearing member and ECC
- Each product has to be included in this agreement

Balance Responsible Agreement

- Between the exchange member and EirGrid/SONI TSO
- At least one for each market area
- Includes all contractual agreements between the TSO and the grid user regarding the settlement of power imbalances recorded on balance perimeters

Access to ECC

Trilateral Relationship between CM – NCM – ECC

- Non-Clearing Members (NCM)
 - are trading participants of the exchange that only need to fulfill basic clearing requirements.
 - sign a trilateral agreement between the NCM, Clearing Member (CM) and ECC to provide for the necessary infrastructure.

Trilateral Non-Clearing Member Agreement

Clearing Member

- Payment Agent
- Guarantor

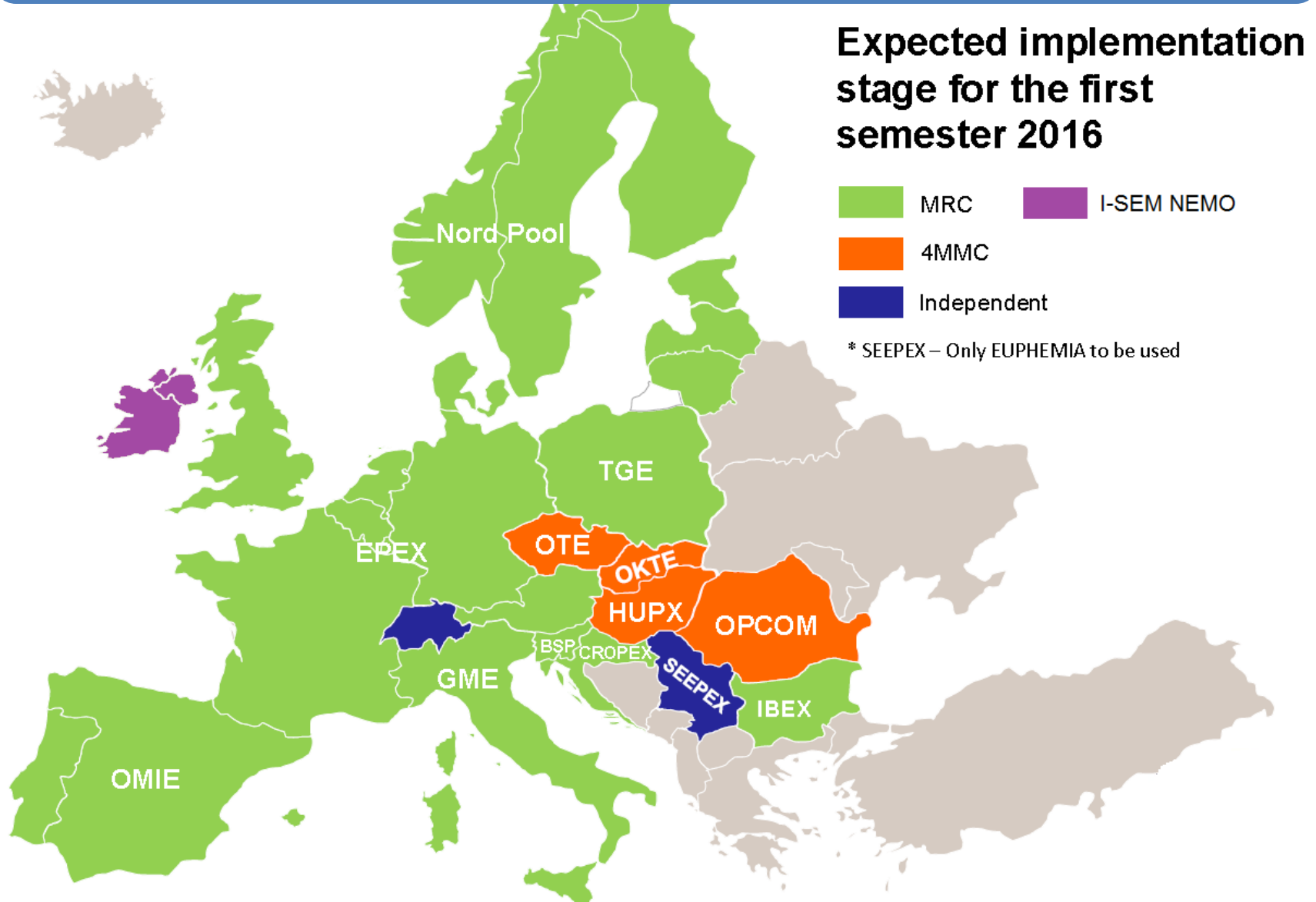
NCM

- Conclude a balance group agreement
- Find a CM and conclude NCM Agreement
- Become a trading participant

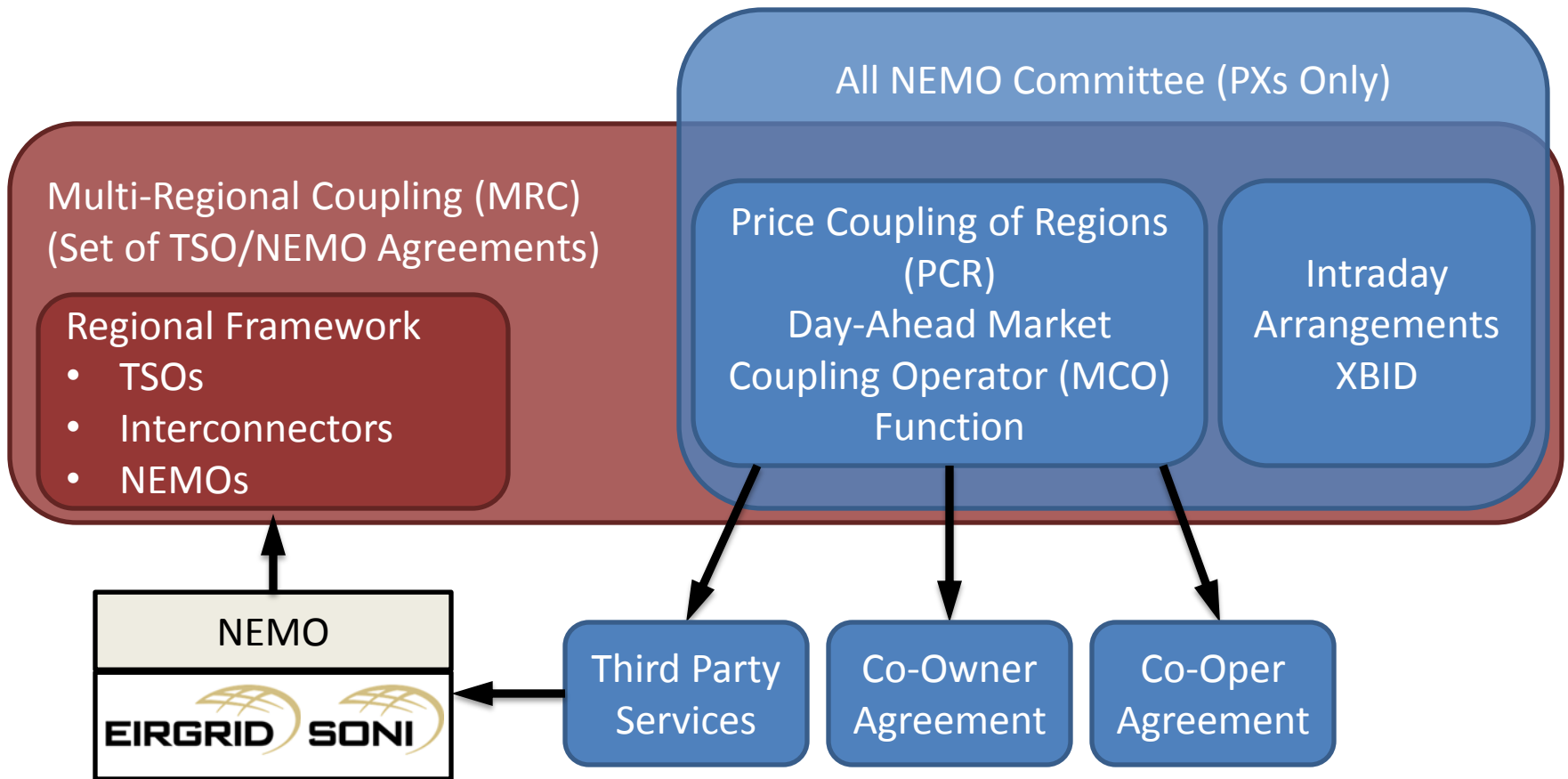
ECC

- Responsible for contracted quantity submission
- Performs margining, financial settlement and accounting transactions

Implementation of PCR



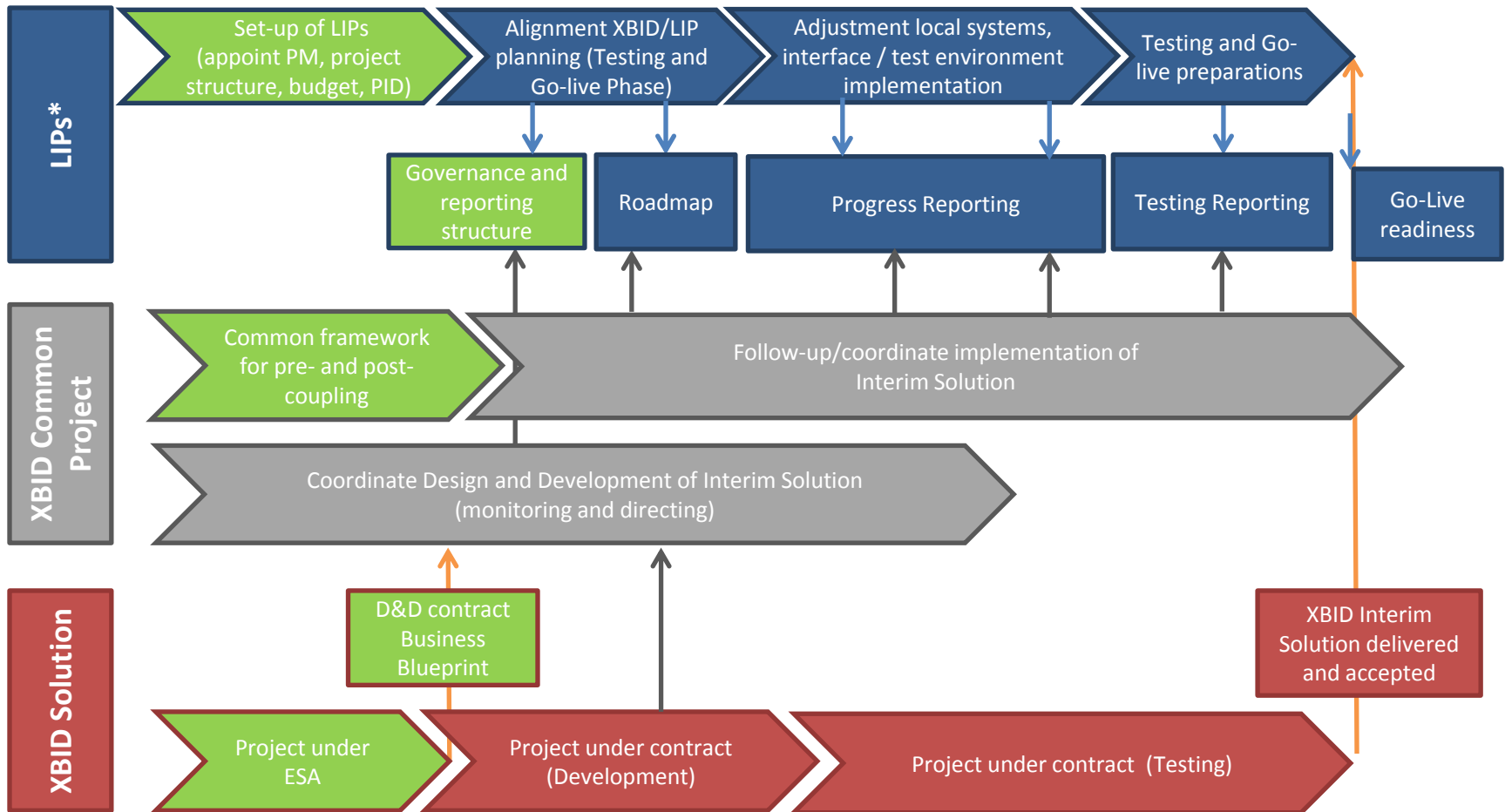
Contractual Landscape



Implications for I-SEM NEMOs

- The Day-Ahead Market will be coupled with the Multi-Regional Coupling (MRC) solution known as Price Coupling of Regions (PCR)
- This involves parties across Europe who are CACM compliant in the DAM
- I-SEM parties must sign-up to and adhere to the Day-Ahead Operating Agreement and its associated procedures and obligations
 - E.g. in the case of fall-back decoupling, we will have the ability to run a second Euphemia session to handle matching of CWE-GB-I-SEM areas
- We will need to submit a Change Request to the PCR to incorporate the needs of the I-SEM
 - We will need to work together with the PCR Committee to test and approve the solution for I-SEM (i.e. we can not dictate the solution)

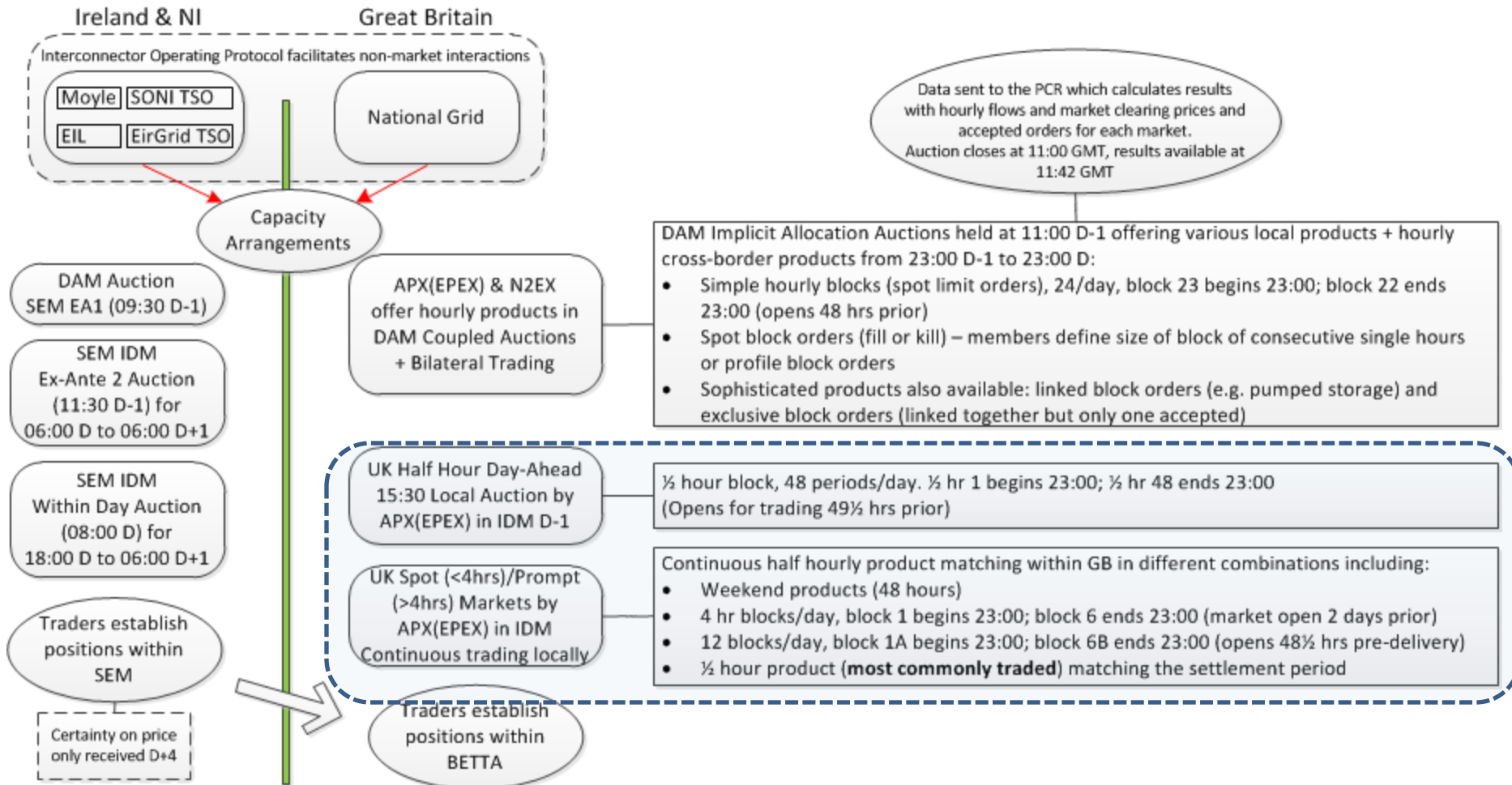
XBID Project Approach



Driver for Interim Intraday Solution

- XBID project is not available for I-SEM go-live
- A programme of work is required to deliver CACM compliance
- An interim intraday solution must provide sufficient liquidity for market participants to establish balance responsible positions
- EMIP programme is challenging and quick action is necessary
- Proposal to Regulatory Authorities for the interim intraday solution to be developed by EirGrid/SONI

Current Cross-Border Arrangements

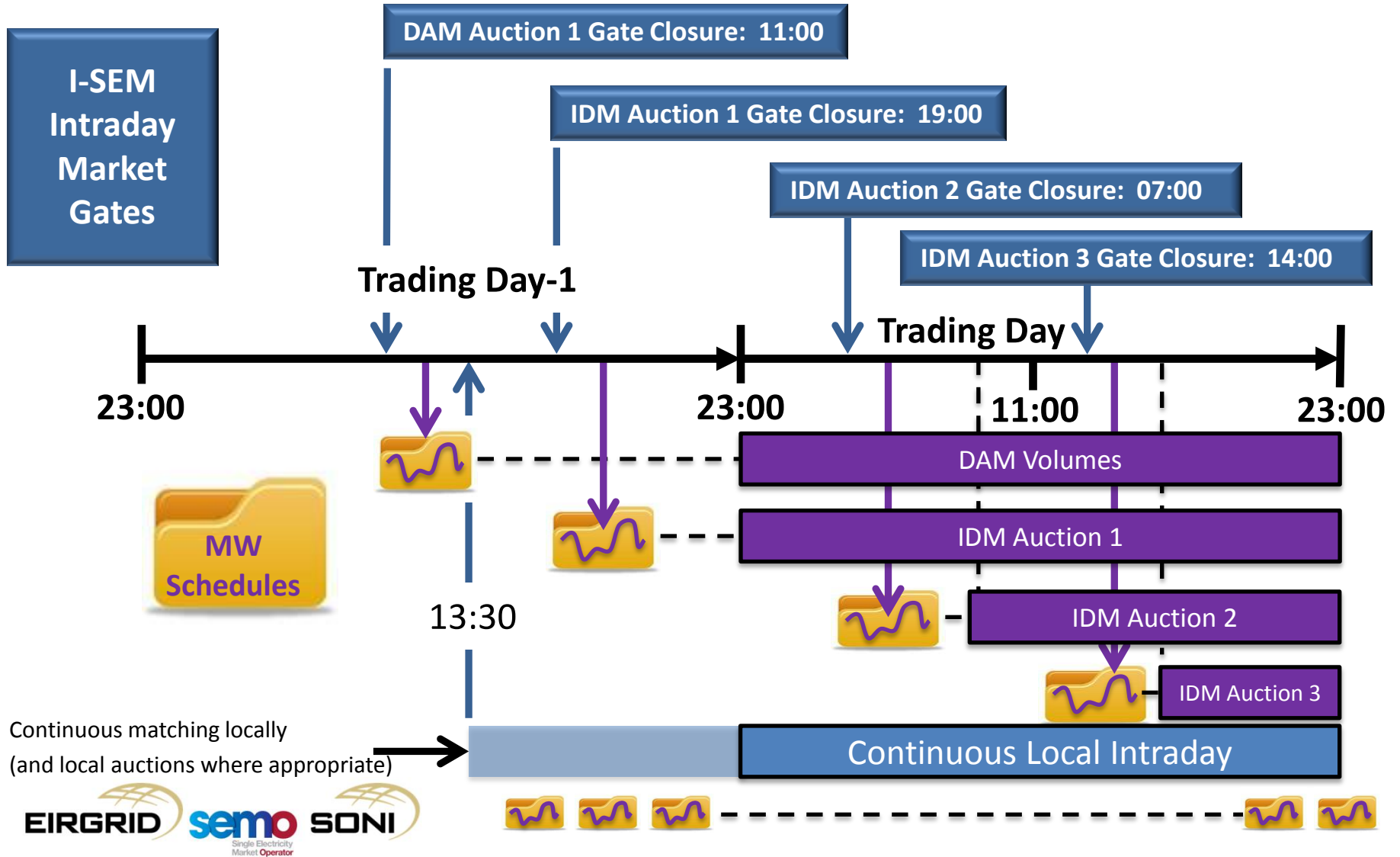


Interim Intraday Arrangements Proposal

- Three Cross-border intraday implicit auctions with half hourly products
 - IDM Auction 1 – 48 ½hr periods with auction at 19:00 D-1
 - IDM Auction 2 – 28 ½hr periods with auction on morning of D
 - IDM Auction 3 – 14 ½hr periods with auction on afternoon of D
- Local intraday (i.e. not cross-border)
 - Continuous trading on half hourly trading periods
 - *Additional local auctions (where appropriate/required)*

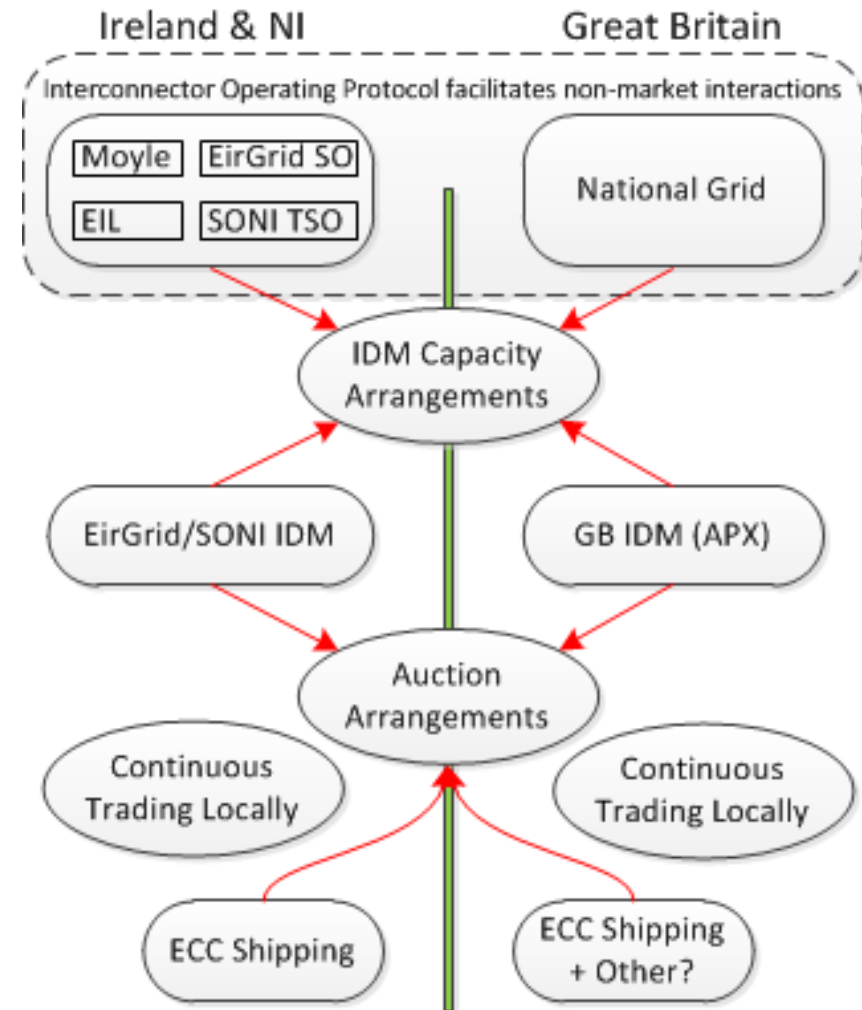
Go-Live	CB Auctions	Local Continuous	Regional Continuous	Notes
I-SEM 2017	Yes	Yes	No	If no local continuous available, consideration of number of auctions and the need for a larger PAR* is required.
LIP for XBID 2018/2019	Yes	Fall Back	Yes	To join XBID we must first couple through a Local Implementation Project (LIP). Parallel work is required during I-SEM delivery in the XBID Accession Stream to achieve go-live.
XBID+ 2020?	Yes	Fall Back	XBID+	Consideration of auctions as a long term solution in addition to continuous trading within Europe currently ongoing

Interim Intraday Arrangements Proposal



Benefits of Proposed Solution

- Access to implicit cross-border intraday auctions capacity between I-SEM and GB
 - Assume we will initially contract with APX in GB for cross-border arrangements as APX currently manages all IDM volumes
- Continuous trading locally – using similar arrangements to GB, participants can:
 - Coordinate adjustment of commercial positions from previous auctions
 - Run and plan power generation closer to delivery
 - Manage unforeseen events such as power outages
- Introduction of continuous local trading will facilitate moving to XBID LIP



Capacity calculation and Harmonised allocation rules

Paul McGuckin

4th May 2016

Capacity calculation: current capacity on Moyle



Direction	Month	Capacity available to interconnector users	Capacity limit set by
West to East	May – August	287 MW	NG/ GB System
	September – April	295 MW	SONI/ NI System
East to West	April – October	410 MW	SONI/ NI System
	November – March	450 MW	NG/ GB System

Moyle contract export/West to East capacity falls to 80MW in November 2017



Capacity calculation: future arrangements

- CACM articles 14-30 concern day ahead and intraday capacity calculation
- FCA articles 8-26 concern long term capacity calculation
 - CCRs, CCM, CCC, CGM
- One-off calculation with fixed limits as per previous slides will no longer apply

Capacity calculation: future arrangements



- Simple example:
 - Moyle TEC in Scotland 80MW November 2017
 - Driven by wind connecting and contracting for TEC
 - TEC represents firm entry capacity in GB
 - Windy day, Moyle day ahead NI-GB capacity \approx 80MW
 - Still day, Moyle day ahead NI-GB capacity \approx 500MW

2 extreme examples but point is variability.

Drivers and background to HAR

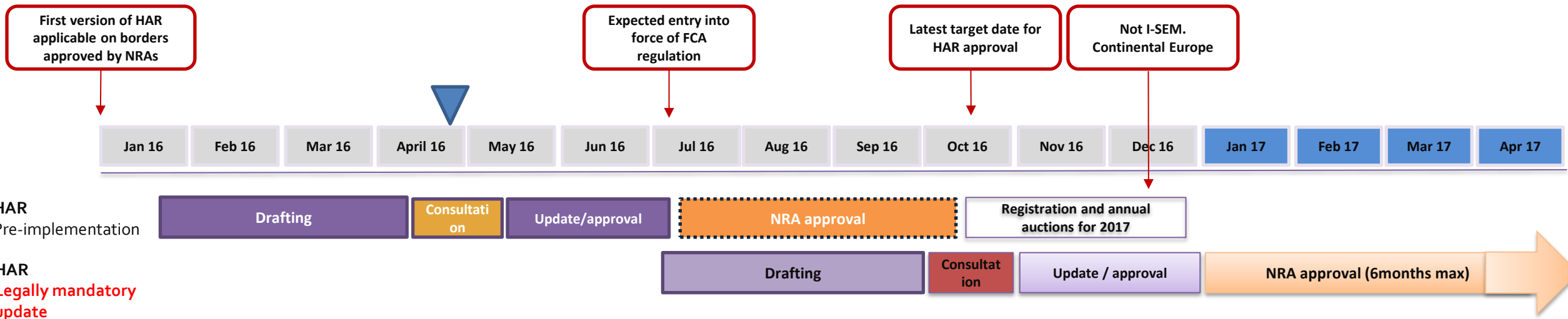
- FG Capacity Allocation and Congestion Management (ACER – 2011)
- Forward Capacity Allocation Network Code
- Requirement for all TSOs to produce Harmonised Allocation Rules for LT allocations
- FCA not expected in force until mid 2016 - Harmonized Allocation Rules to NRAs within six months after entry into force of the FCA Regulation
- **HAR are voluntary early implementation project at this stage**

Drivers and background to HAR

- First early implementation version of HAR drafted and approved October 2015
- New version of FCA in meantime
- Stakeholders requested TSOs to update the HAR for 2017 allocations
- This early implementation will not be the mandatory implementation required by the draft FCA Regulation.
- Key changes to current HAR relate to the firmness regime

Timeline for early and mandatory implementation

- Working group has prepared updated version of the HAR
- Public consultation period 18/04/2016-18/05/2016
- Legally mandatory update to start after entry into force of FCA



HAR for Moyle and EWIC

- Will only apply for FTR options in I-SEM
- Current rules apply for products until I-SEM go-live
- These provisions set out in 'regional annex' to the HAR
- Latest version of HAR expected to be used for first FTR auctions

Summary of changes in HAR

Alignment
to FCA as
voted
upon by
Member
States

- Deletion/change of definitions
- Changes in return and transfer chapters
- Changes in curtailment and settlement chapters

Changes to the HAR main body: curtailment triggering events

- FCA Article 53 (1): “All TSOs shall be entitled to curtail long-term transmission rights to ensure operation remains within operational security limits prior to the day-ahead firmness deadline.”

HAR 2015 Art. 56

- a) Curtailments to ensure System Security and due to Emergency Situation before the Day Ahead Firmness Deadline
- b) Curtailments to ensure Force Majeure and due to Emergency Situation after the Day Ahead Firmness Deadline

HAR update Art. 56

- a) Curtailments to ensure operation remains within operational security limits and in case of force majeure before the Day Ahead Firmness Deadline
- b) Curtailments to ensure Force majeure and due to Emergency Situation after the Day Ahead Firmness Deadline

Changes to the HAR main body : deletion of Long-term firmness deadline



- FCA Article 53 (2): “The concerned TSOs on the bidding zone border where long-term rights have been curtailed shall compensate the holders of curtailed long-term transmission rights with the market spread.”
 - FCA does not define Long-term firmness deadline
 - Long-term firmness deadline removed from the HAR

Changes to the HAR main body: deletion of Long-term firmness deadline

LT Auction	Send rights document	Gate closure LT nominations	Gate closure DA market	Intraday trading	Realisation
	D-2, 13:00	D-1, 10:00	D-1, 12:00		

Long Term Firmness deadline
(D-1, 10:00)

Day-ahead Firmness Deadline
(D-1, 11:30)

System security

Compensation	Positive DA market spread at the concerned border in the concerned direction (Marginal price if DA prices are not calculated)	Positive DA market spread at the concerned border in the concerned direction	not applicable
Cap for compensation	LT (Auction) congestion income in the month of curtailment at the concerned border in both directions	Congestion income (LT Auction + DA) in the month of curtailment at the concerned border	not applicable

Emergency Situation

Compensation	Positive DA market spread at the concerned border in the concerned direction	Positive DA market spread at the concerned border in the concerned direction	Positive market spread of the relevant market at the concerned border in the concerned direction
Cap for compensation	LT (Auction) congestion income in the month of curtailment at the concerned border in both directions	Congestion income (Auction + DA) in the month of curtailment at the concerned border	No Cap

Force Majeure

Compensation	Marginal price of the initial Auction	Marginal price of the initial Auction (Weighted avg. of marginal prices of all auctions if no marginal price)	Marginal price of the initial Auction
Cap for compensation	No Cap	No Cap	No Cap

Changes to the HAR main body: deletion of Long-term firmness deadline

LT Auction	Send rights document	Gate closure LT nominations	Gate closure DA market	Intraday trading	Realisation
	D-2, 13:00		D-1, 12:00		

Ensure operation remains within operational security limits

Day-ahead Firmness Deadline (D-1, 11:30)

Compensation	market spread	not applicable
Cap for compensation	congestion income in the relevant calendar year	not applicable
For DC interconnector		
Cap for compensation	congestion income in the relevant calendar month	not applicable
Force Majeure		
Compensation	Marginal price of the initial Auction	Marginal price of the initial Auction
Cap for compensation	No Cap	No Cap

Changes to the HAR main body: caps and compensation



- FCA Article 54 (2): “The cap shall not be lower than the total amount of congestion income collected by the concerned TSOs on the bidding zone border in the relevant calendar year. In case of Direct Current interconnectors, TSOs may propose a cap not lower than the total congestion income collected by the concerned TSOs on the bidding zone border in the relevant calendar month.”
 - Annual caps introduced in updated HAR for AC interconnectors.
 - Monthly caps are introduced for DC interconnectors.

I-SEM regional annex changes

- HAR only apply for I-SEM
- Reference to FTR obligations removed
- Third party involvement in remuneration removed (now expected to be JAO)
- Ramping and losses provisions removed
- 'Capacity shortage' for curtailment retained

Summary

- Access rules for FTRs in I-SEM very close to finalised
- New HAR about refinement rather than major change
- ENTSO-E consultation closes 18th May 2016