

European Update



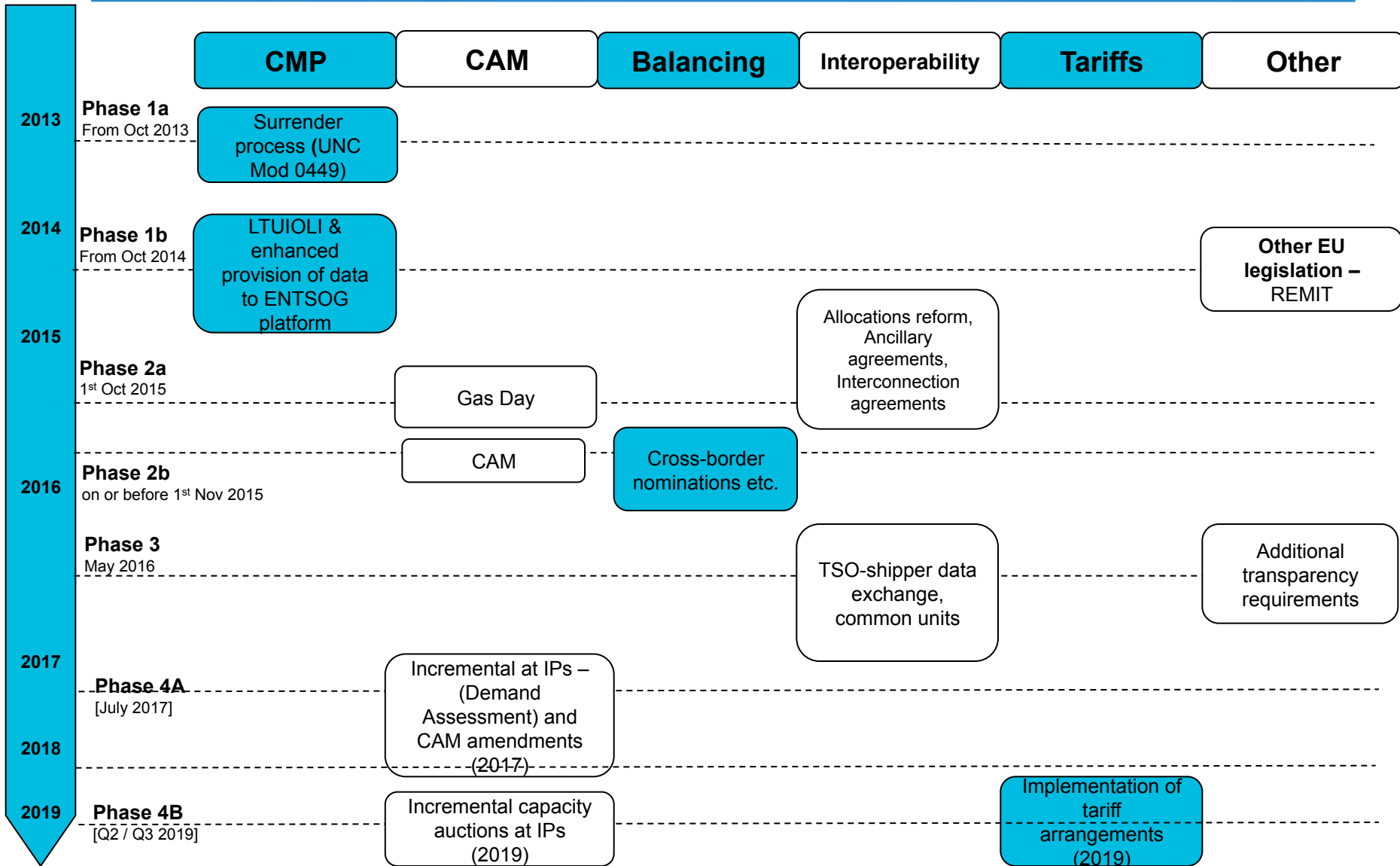
7th July 2016

1. General Update

Code Status Update

Code	Current Status	Implementation date
Congestion Management (CMP)	Implemented	1 st October 2013
Capacity Allocation Mechanism (CAM)	Implemented	1 st November 2015
Gas Balancing (BAL)	Implemented	1 st October 2015
Interoperability & Data Exchange (INT)	Code entered EU Law on 30 th April now Commission Regulation (EU) N0 703/2015	1 st October 2015, 1 st May 2016
Tariffs (TAR)	Under development	Applicable from EIF[April 2017], October 2017, 31 May 2019.
Incremental Capacity (& CAM amendments)	Under development	Applicable from [April 2017] Auctions applicable from [2019]

Road Map



Gas Codes Timeline

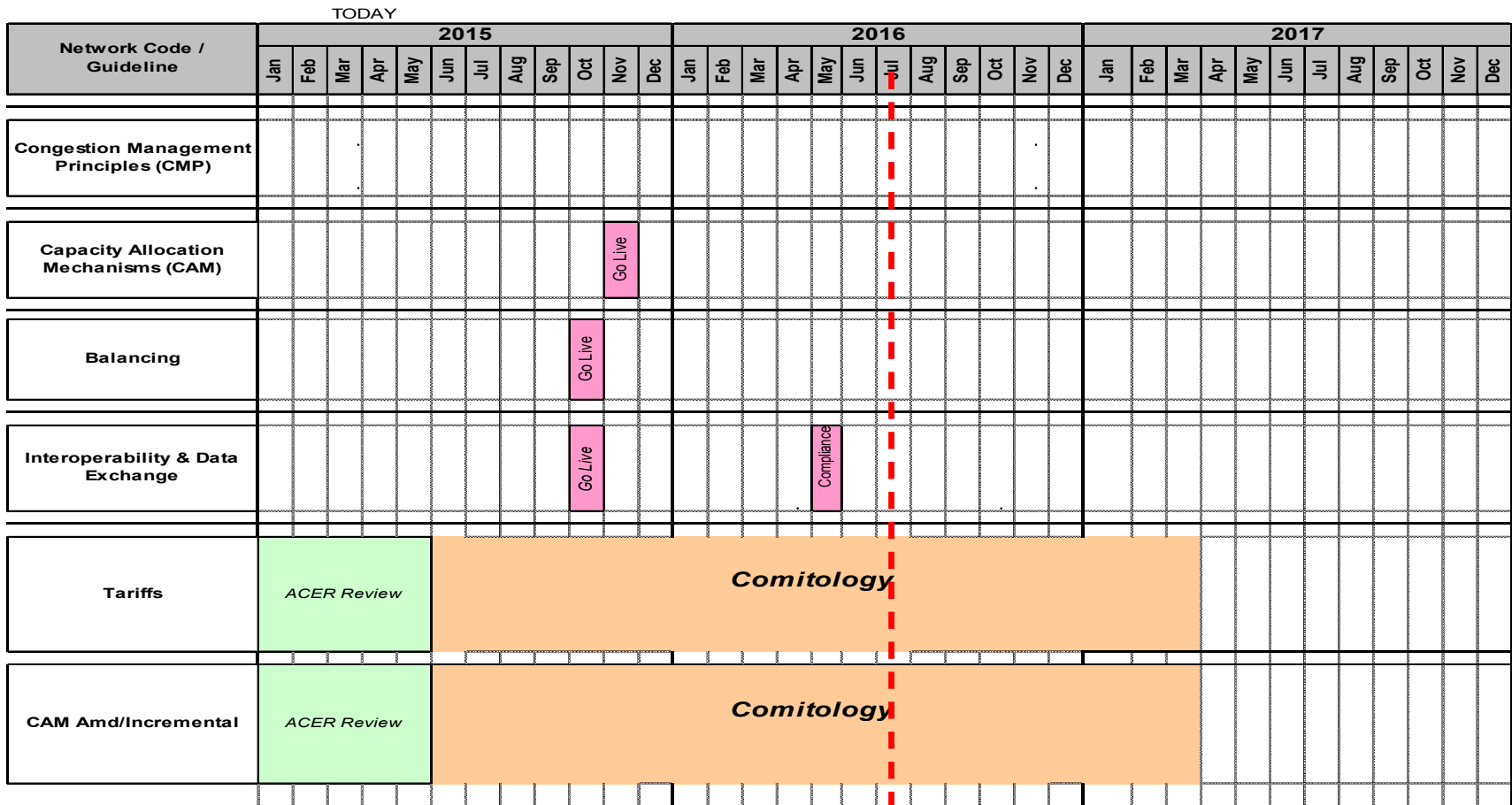
Status of Development of European Gas Network Codes

Future dates are subject to change

Dates shown in *italics* are best approximations based on current understanding.

It has been necessary to 'round' some dates for the benefits of the diagram

KEY	
	Activities undertaken by ACER
	Activities undertaken by ENTSOG
	Activities undertaken by European Commission



2. EU Code Updates

EU Draft Timelines

CAM / TAR Timelines (expected)

- Comitology process:
 - Voting of MS on CAM and TAR 15/16th September
 - European Parliament: Oct – Jan (expected)
 - Publication in EU Journal: Feb 17 (expected)
 - Entering into force: Mid March 17
 - CAM applicable from: 1st April 17
 - TAR applicable from: 1st Oct 17 (part) 31st May 19 (full)

CAM / TAR Codes

- Updated texts to be circulated 1st September

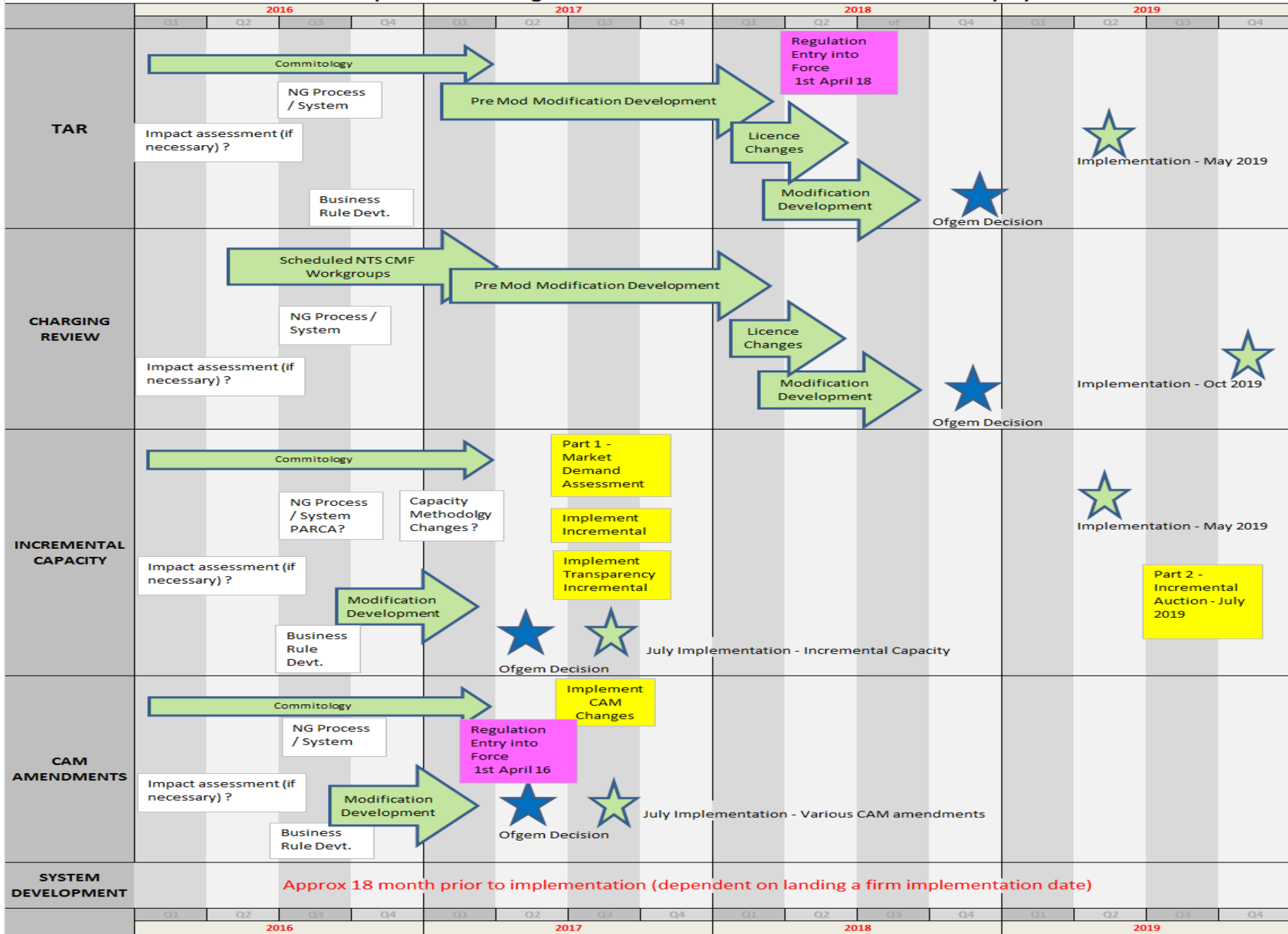
- 2nd Formal comitology meeting 15th-16th September
 - Translated versions
 - Member States to vote
 - No third meeting planned

- EC want this stage complete by Madrid Forum on 6th-7th October

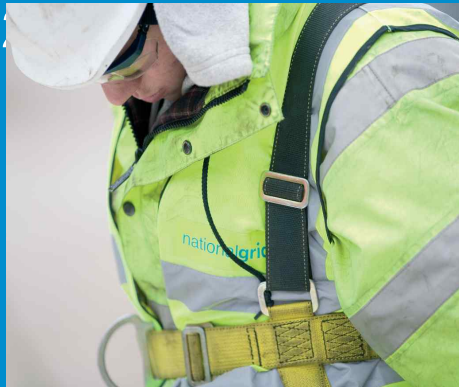
EU CAM & TAR Codes

- Codes now in comitology process
- Text published 17th June 2016 (2 days late)
 - <http://www.gasgovernance.co.uk/Tx/070716>
- 1st Formal comitology meeting held 29th-30th June
 - Discussion on English language text
 - Non-voting meeting
- Translation to take place during summer

National Grid - Implementation - High Level View of Potential Timescale - Draft as of 15/06/2016



EU CAM Code



Recap on CAM Amendments Previously Notified

TxWG	
April 16	<p>Restriction on use of condition firm capacity Restriction on use of “interruptible capacity” at IPs (longer duration) Offering of existing and incremental capacity (over different 15 year periods) Design phase start of process for incremental projects at any time rather than just biennial market demand assessment</p>
Mar 16	<p>EU Russia Study – “reality check “ of incremental amendment NG looking at comparison with PARCA and how setting aside of 10/20% incremental will work, Validity of NPV test, TSO/TSO and NRA/NRA coordination, role of PRISMA</p>
Feb 16	<p>EC wants incremental process to start July 2017 (Demand Assessment phase) Less than 3 months from entry into force to moving the auction Not all changes required until 2019 (actual auction)</p>
Jan16	<p>EC may propose to amend CAM such that all firm must be sold before interruptible is released</p>
2015	<p>Process for offering Incremental Capacity Market Demand Phase (non binding), Design Phase (non binding), Allocation Procedure (Binding) Need to protect option to offer fixed price in order to have meaningful incremental test TSOs develop a Market Demand Assessment Report every two years to analyse demand for incremental capacity per entry exit system border</p> <p>Changes to default auction calendar:</p> <ul style="list-style-type: none"> • Annual yearly capacity auction to start on the first Monday of July each year (previously March) • Annual quarterly capacity auction to start on first Monday of August (previously June)

EU CAM Code – update

■ **New Recitals added to CAM:**

- Not legally binding as such, but does provide context and interpretation by setting out the purpose of the relevant legislation

■ **Article 6:** Additional text for TSOs to guarantee the availability of firm capacity available at IPs with priority over other points. References to SoS Regulation (which is currently being amended)

- Question whether this should be in CAM?
- Could provide capacity to IPs to the detriment of non IPs
- Need to assess impacts to SMP / Licence obligations to offer Baseline etc..

EU CAM Code – update

- **Article 7a:** Freely allocable and path based firm capacity - text deleted
 - Not an issue from a GB perspective as such products are not offered
 - Standard Firm and Interruptible remain but new Art 20 obligation introduced
- **Article 8:** (Moved from previous Art 20a) Capacity created via non-market based procedures and for which the final investment decision has been taken without prior commitments from network users shall be offered and allocated as available standard capacity products as set out in this Regulation
 - Refers to PCI projects? No detail on how this interacts with rest of CAM (and TAR) other than needs to be offered in standard auctions
- In the case of incremental capacity, an amount at least equal to 10% of the technical capacity at each interconnection point shall be set aside.

EU CAM Code – update

- **Article 12:** Single annual quarterly auction replaced by:
- Four annual quarterly capacity auctions shall be held during each gas year
 - 1st auction in Aug covering 4 quarters:
 - Oct-Dec, Jan-Mar, Apr-Jun, July-Sep
 - 2nd auction in Nov covering 3 remaining quarters:
 - Jan-Mar, Apr-Jun, July-Sep
 - 3rd auction in Feb covering 2 remaining quarters:
 - Apr-Jun, July-Sep
 - 4th auction in May covering remaining quarter:
 - July-Sep

EU CAM Code – update

- **Article 20:** Within nine months from the entry into force ENTSOG shall review and create a catalogue of the applicable terms and conditions of the transport contract(s) of the transmission system operators for bundled capacity products, identifying and categorising differences between the existing terms and conditions and the reasons for such differences and publish its findings in a report
- Within three months after the publication of the report any NRA, having due regard to applicable EU and mandatory national legislation, may provide an opinion to ENTSOG and to the Agency indicating the differences which they consider may be addressed through common terms and conditions as well as those that may not be reconciled
- On the basis of the ENTSOG report and any opinions of NRAs, ENTSOG, consulting network users, shall within 12 months after the publication of the report develop and publish a template for common terms and conditions, covering all contractual provisions which are not affected by fundamental differences in principles of national law, for the offer of bundled capacity products.

EU CAM Code – update

- **Article 20:** The Agency, having due regard to the opinions of the NRAs, shall provide an opinion on the common terms and conditions within a further three months. Taking into account the opinion provided by the Agency, ENTSOG shall publish on its website the final template for the common terms and conditions three months after receiving its opinion
- After the publication of the template for common terms and conditions TSOs, **subject to the approval of NRA**, shall apply the terms and conditions set out in the template when concluding contracts for bundled capacity products
 - Introduces obligations to develop a catalogue of T&Cs, seek NRA opinion, consult with Network Users, obtain ACERs opinion and publish a final version
 - Timeline 2 ½ years (max)
 - Relates to capacity sold post this process.

EU CAM Code – update

- **Article 21:** The network users who are parties to unbundled transport contracts at the time of the entry into force of this Regulation at respective interconnection points, ~~should~~ shall aim to reach an agreement on the bundling of the capacity via contractual arrangements ("bundling arrangement"), in compliance with the provisions set out in Article 19
 - Text changed but 'aim' still remains
 - Assumption is that obligation is still not mandatory on Network Users to bundle any unbundled contacts.

EU CAM Code – update

- **Article 22:** Immediately after the start of the annual yearly capacity auction at least in each odd-numbered year, TSOs shall co-operate in the processes of assessing market demand for incremental capacity and of conducting technical studies for incremental capacity projects for their joint interconnection points. The first demand assessment shall be conducted in 2017
 - Improvement on previous version of a bi-annual process
- The non-binding demand indications referred to in paragraphs 6 and 7 shall contain at least the following information:
 - the two or more adjacent entry-exit systems between which demand for incremental capacity – on one or both sides of an interconnection point – is expressed and the requested direction;
 - Provides for a single side of an IP to utilise process

EU CAM Code – update

- **Article 25/26:** TSOs offer the incremental capacity together with the respective available capacity in the annual yearly capacity auction as standard bundled products in ascending clock auctions as a default
- TSOs may apply an alternative allocation mechanism where the demand assessment report, or the consultation indicate that the incremental capacity project fulfils **both of the following conditions**:
 - (a) it involves more than two entry-exit systems and bids are requested along several interconnection points during the allocation procedure;
 - (b) bids with a duration of more than one year are requested
- May restrict options for utilising current PARCA arrangements at IPs
- May only need incremental capacity on one side of an IP
- PRISMA & competing auctions for GB IPs (including incremental)?

EU CAM Code – update

- **Article 25/26:** In an alternative allocation mechanism network users may submit binding conditional bids for contracting capacity subject to one or more of the following conditions specified by the TSOs in the project proposal
 - (a) commitments linking or excluding commitments at other interconnection points;
 - (b) commitments across a number of different yearly standard capacity products at an interconnection point;
 - (c) commitments conditional on the allocation of a specific or minimum amount of capacity

- But previous text limits the ability to offer the alternative mechanism

EU CAM Code – update

- **Article 25/26:** The alternative allocation mechanism is subject to approvals by the concerned NRAs
- If either booking duration or bids for higher amounts of capacity are prioritised, NRAs shall set aside an amount equal to 20% of the technical capacity at each interconnection point.

EU CAM Code – update

- **Article 27:** In the case of incremental capacity processes initiated but not completed before the application date of this Regulation, those processes shall continue in accordance with the subsequent phase of the respective incremental capacity process in accordance with Articles 22 to 26
 - No GB impact as no current IP incremental projects
- **Article 28:** TSOs may offer standard capacity products for interruptible capacity of a duration longer than one day if the respective standard capacity product for firm capacity was sold at an auction premium, sold out, or was not available
- Transmission system operators shall only offer a daily capacity product for interruptible capacity in both directions at interconnection points where firm capacity has been offered but was sold out day-ahead
 - Removes the ability to offer DA interruptible
 - May impact on GB UIOLI arrangements (offering unutilised firm capacity DA as interruptible).

EU CAM Code – update

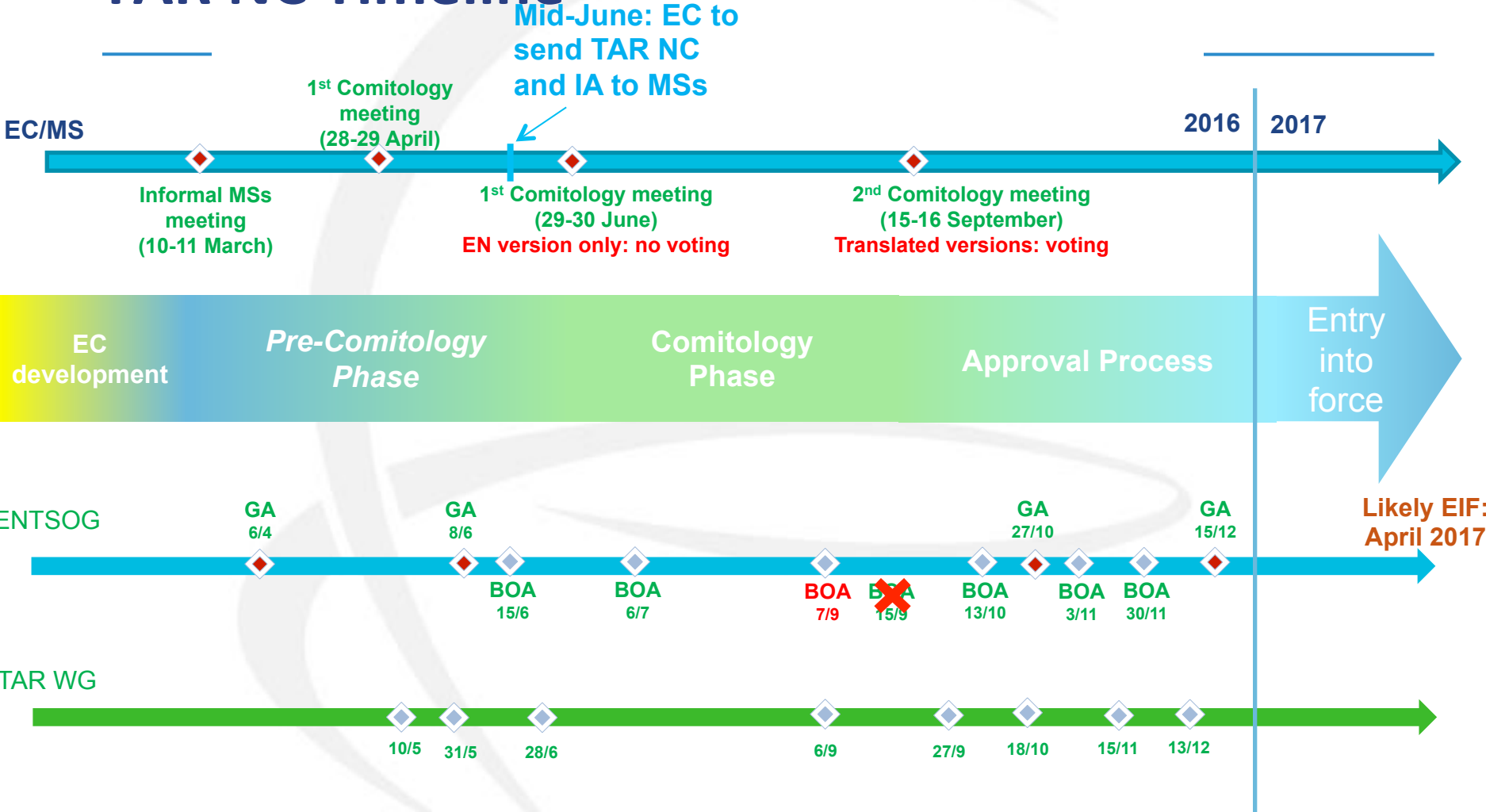
- **Article 33:** Capacity booking platforms - text deleted
 - No impacts on GB IPs / Network Users

- **Article 36:** Regulation shall apply from 1st April 17
 - Still have obligation to publish next years LT auction in Feb 17 and offer capacity Mar 17 under current CAM Regulation
 - Transitional arrangements need to be considered.

EU Tariffs Code Update

June 2016

TAR NC Timeline



EU Tariffs Code – application dates

- **TAR NC sets different dates for implementation of Articles**
 - There are **4 major dates** (or types of dates) to comply with:
 - **Entry Into Force** (probably **1 April 2017**)
 - **Specific application dates** (for some Articles)
 - **1 October 2017**
 - **31 May 2019**

EU Tariffs Code – application dates

- **Entry into Force [April 2017]:**
 - Definitions
 - Incremental capacity
 - Aligns to CAM amendment
 - Protection for existing contracts
 - Implementation monitoring
 - Specific dates given for submission of information
 - Derogations for interconnectors

EU Tariffs Code – application dates

■ 1 October 2017:

- Publication requirements
- Consultation requirements
- Pricing of bundled capacity
- Clearing & payable price
 - Rules for application of fixed or floating prices

EU Tariffs Code – application dates

- **31 May 2019:**
 - Reference price methodology
 - Discounts for storage (& LNG)
 - Multipliers and seasonal factors
 - Pricing of interruptible capacity
 - Reconciliation
 - Single regulatory account

TAR NC Chapter VIII: Publication requirements

- NG currently identifying publications requirements arising from Chapter 8 of TAR NC as part of **Phase 4**
- Consideration to be given to information published
 - information published before annual yearly auction
 - information published before tariff period
 - Form of publication
 - Publication notice period
- NG already compliant for some requirements but there will be new requirements

EU Tariffs Code – ENTSOG activities

- Transparency requirements
 - The provisional timeline now being developed for new transparency requirements on ENTSOG Transparency Platform.
 - The estimates for each of the phases based on time needed for execution of similar activities related to implementation of ENTSOG TP functionalities
 - Indicative time required = 46 – 50 weeks
 - Deadline 1 October 2017
- ENTSOG produced an updated Recommendation Paper prior to formal comitology meeting

GB Gas Charging Review

- GB Gas Charging Review ongoing via NTSCMF of the Joint Office
- Whole GB review of charging methodology framework addressing
 - How to better reflect current and future use of network
 - EU compliance
 - Shipper concerns
 - Prospective charging methodologies
- Indicative completion spring 2017
- Terms of reference and other materials can be found at:
 - <http://www.gasgovernance.co.uk/ntscmf>

Interoperability Update

EU Data Exchange

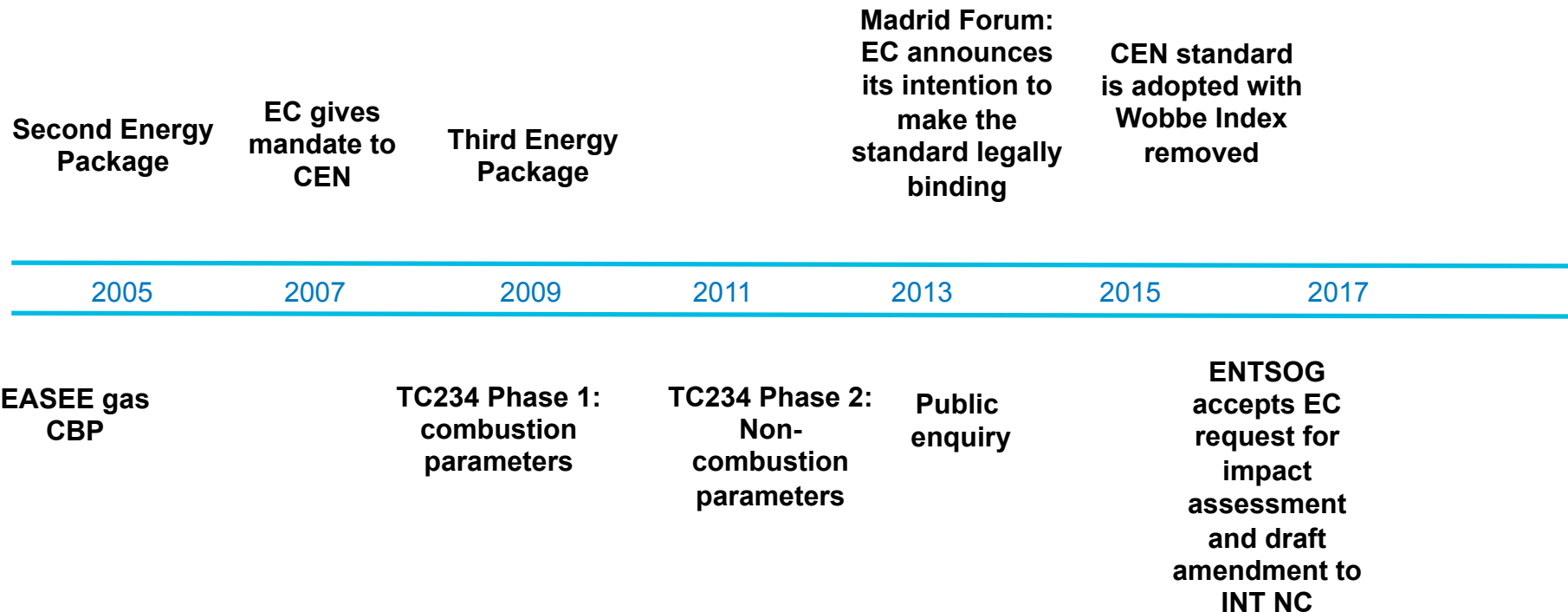
- Under the Interoperability Code, TSOs are obliged to implement common data exchange solutions
- ENTSOG is seeking to establish the most appropriate solution for each data exchange requirement
- ENTSOG plans to engage with stakeholders about this:
 - Workshop on Tuesday 6th September 2016 in Athens (remote participation is also planned to be available)
 - Subsequent consultation: 7th to 30th September 2016

EU Gas Quality Update

Interoperability Code Amendment nationalgrid to Implement the CEN Gas Quality Standard

- ENTSOG accepted a request from the EC to conduct an impact analysis and draft an amendment to the Interoperability Code by June 2017
- ENTSOG held a stakeholder workshop in Cologne on 28th April 2016
 - National Grid NTS' 'unofficial' notes of this meeting are available at:
<http://www.gasgovernance.co.uk/sites/default/files/ENTSOG%20Gas%20Quality%20Workshop%20Cologne%2028.4.16%20-%20informal%20notes.pdf>
 - There was little support at this meeting to make the standard legally binding
 - ENTSOG plans to hold more workshops in September (probably 13th) and November 2016 (16th or 17th) (NG NTS will confirm once dates are fixed)
- ENTSOG has published a consultation questionnaire on the Interoperability section of its website:
<http://www.entsog.eu/publications/interoperability>
 - **The deadline for responses is 15th July 2016**
 - **National Grid NTS encourages GB stakeholders to respond**

History of the CEN Gas Quality Standard



Second Energy Package

EC gives mandate to CEN

Third Energy Package

Madrid Forum: EC announces its intention to make the standard legally binding

CEN standard is adopted with Wobbe Index removed

2005

2007

2009

2011

2013

2015

2017

EASEE gas CBP

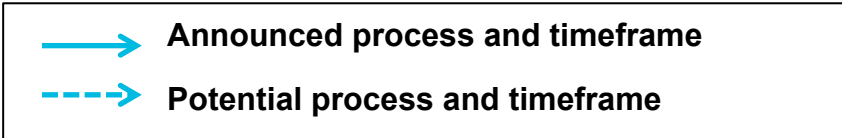
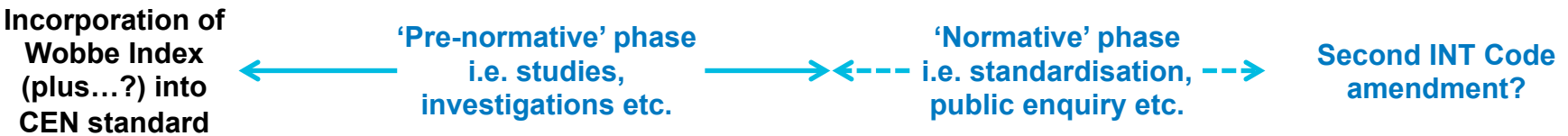
TC234 Phase 1: combustion parameters

TC234 Phase 2: Non-combustion parameters

Public enquiry

ENTSOG accepts EC request for impact assessment and draft amendment to INT NC

CEN Standard Implementation: Processes and Potential Future Timescales



ENTSOG Questionnaire: Policy Issues and NGGT Views

Issue	NGGT Views
1. How should the standard be applied?	Voluntary basis preferred. If legally binding then prefer whole chain to IPs or transmission only. It should not be applied restrictively.
2. What should the implementation plan be?	Not applicable since voluntary adoption preferred.
3. How should the standard interact with current Interoperability rules?	No change to current INT rules preferred.
4. How should A-Deviations be treated?	If the standard is made binding then A-Deviations would automatically be included unless specifically excluded by the INT amendment text. If they are included, what are the obligations at the IPs?
5. How should the flexible limits (CO ₂ and O ₂) be applied?	Further definition is needed before these flexible limits could be applied by NG NTS.

CEN Standard Implementation: Carbon Dioxide and Oxygen Limits

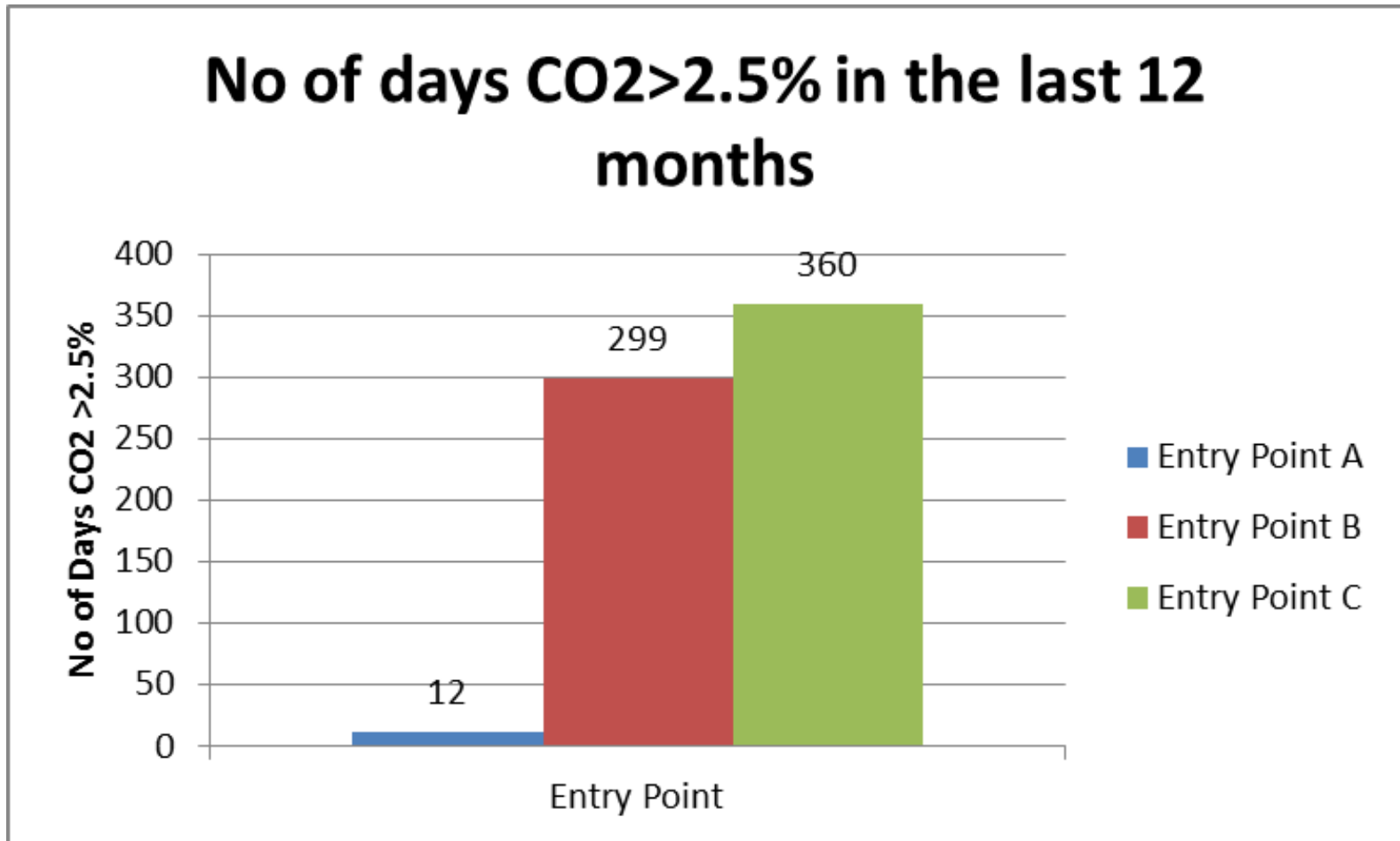
- CEN standard provides ranges for CO₂ and O₂ limits, dependent upon whether gas will reach 'sensitive' sites
 - CO₂: 2.5% up to 4%
 - O₂: 0.001% up to 1%
- NG NTS has analysed the impact on GB entry flows of applying the 'base' limits at all of its transmission entry points (which include IPs)

Carbon Dioxide Analysis

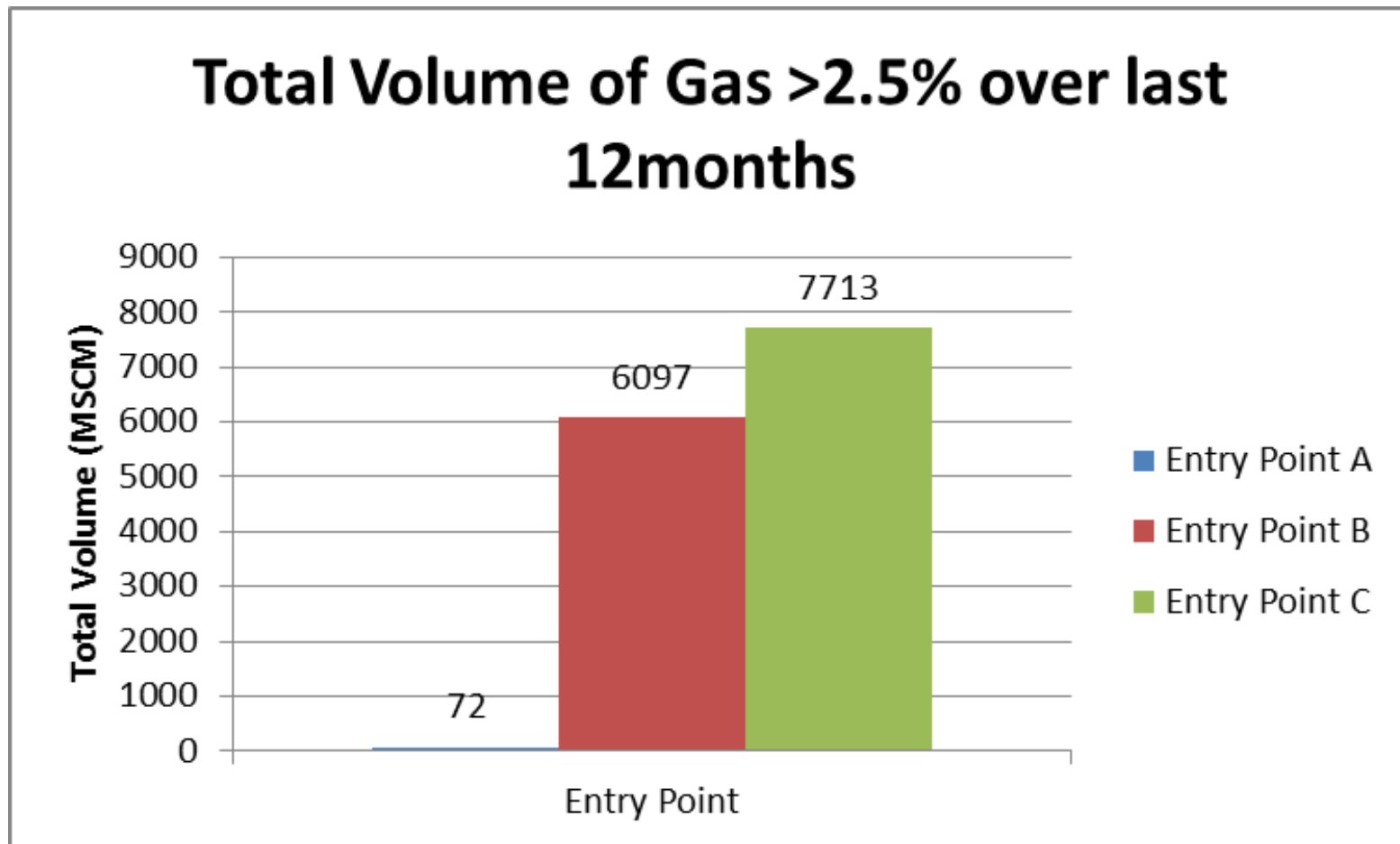
- Graphs 1 and 2 show for calendar year 2015:
 - Number of days on which the average CO₂ content was above 2.5% for three sources of supply to the NTS
 - Total volume of gas delivered at those same three supply sources for each of those days
- The data shows that approximately 13.8 bcm of gas with a CO₂ content above 2.5% was delivered to the NTS over this period
- Total NTS supplies (exc. storage) in 2015 = 79 bcm
- Hence 17.5% of NTS supply was above 2.5% CO₂

Graph 1: Number of days in calendar year 2015 on which the average CO₂ content was above 2.5% for three sources of supply to the NTS

nationalgrid



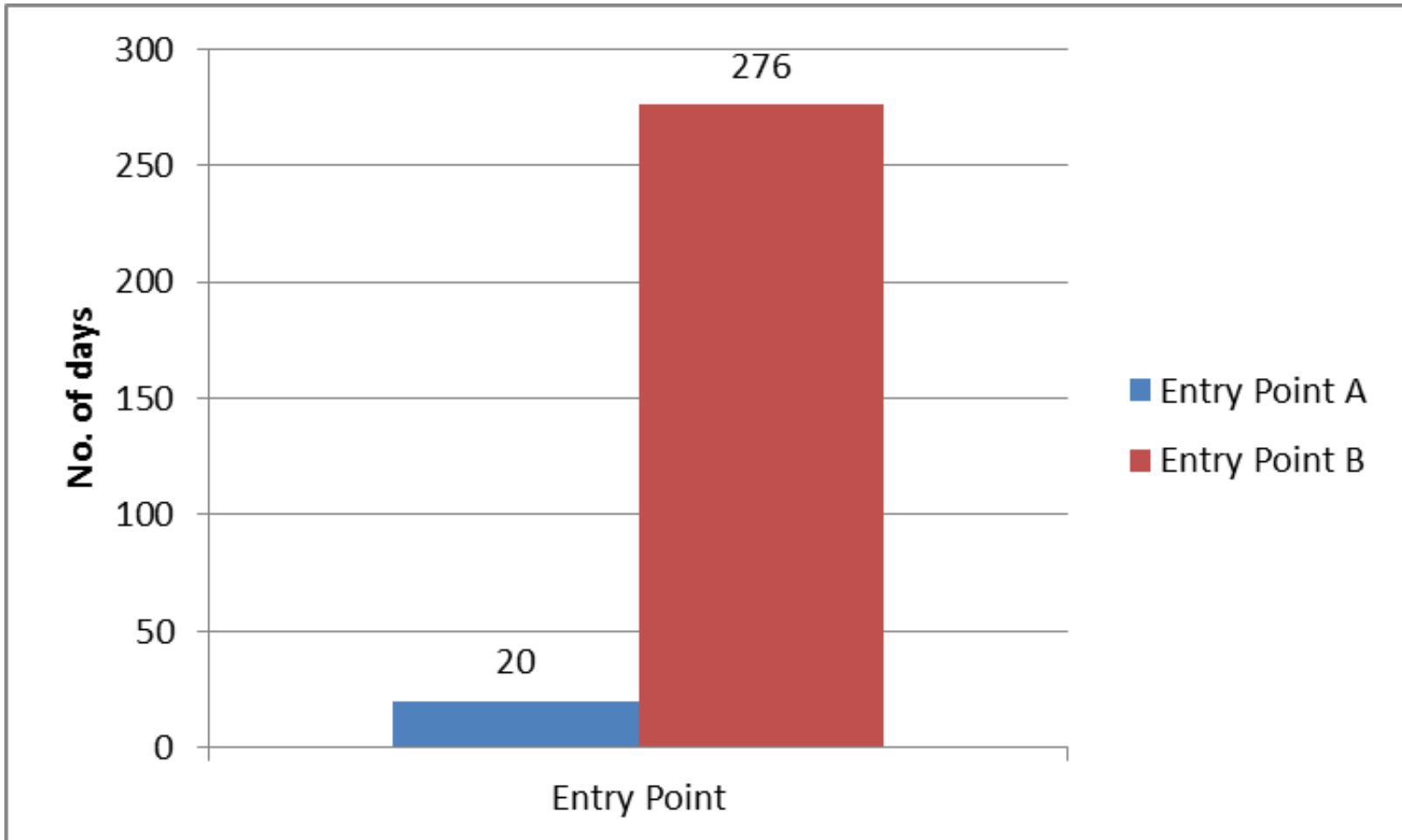
Graph 2: Total volume of gas delivered at those same three supply sources for each of those days in 2015



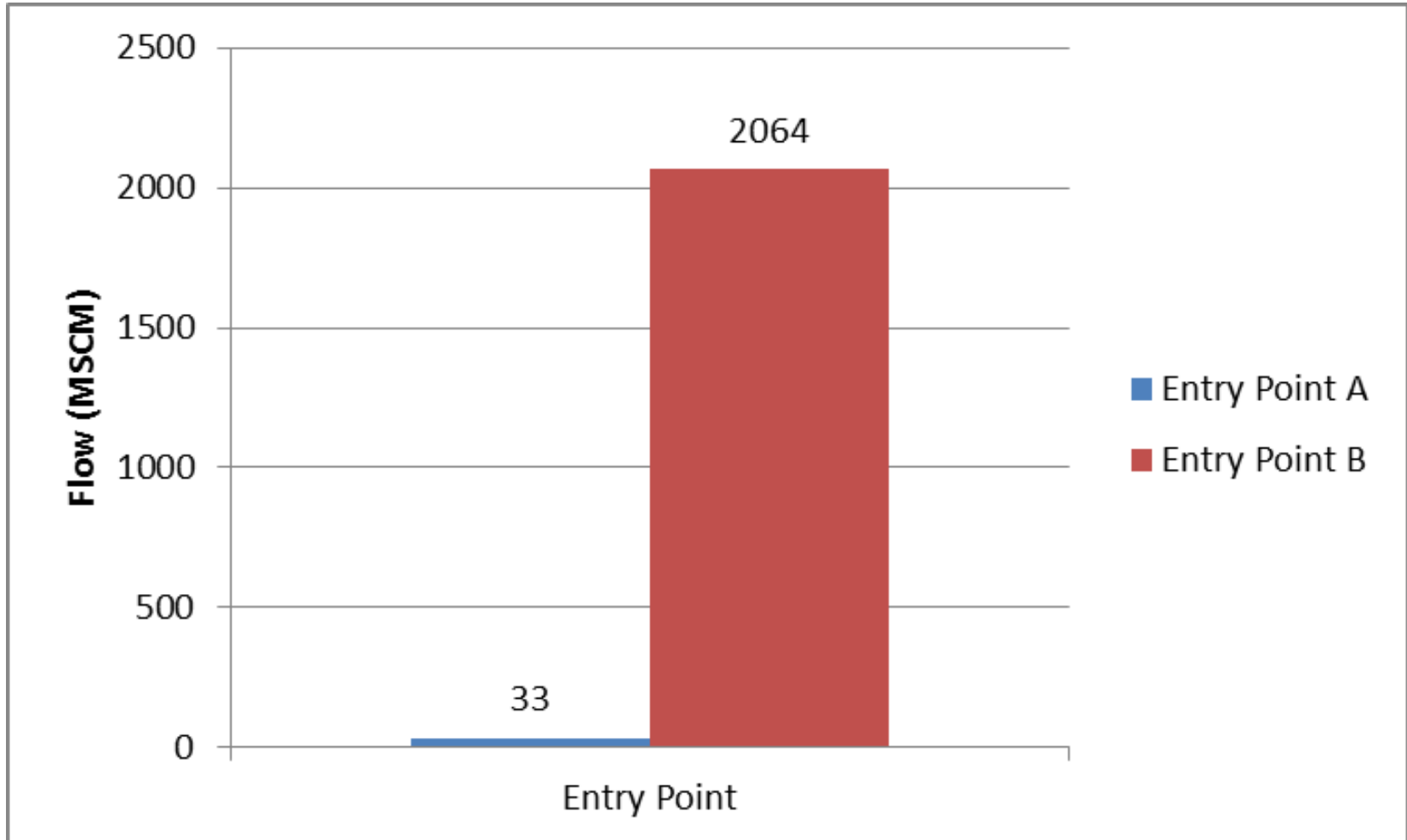
Oxygen Analysis

- Graphs 3 and 4 show for calendar year 2015:
 - Number of days on which the average O₂ content was above 0.001% for two sources of supply to the NTS
 - Total volume of gas delivered at those same two supply sources for each of those days
- The data shows that approximately 2.1 bcm of gas with an O₂ content above 0.001% was delivered to the NTS over this period
- Total NTS supplies (exc. storage) in 2015 = 79 bcm
- Hence ~2.6% of NTS supply was above 0.001% O₂

Graph 3: Number of days in calendar year 2015 on which the average O₂ content was above 0.001% for two sources of supply to the NTS



Graph 4: Total volume of gas delivered at those same two supply sources for each of those days in 2015



CO₂ and O₂ Analysis: Conclusion

- If, during calendar year 2015, GB supplies were to have been restricted to:
 - 2.5% CO₂ content; and
 - 0.001% O₂ content
- then approximately 20% of UK supply would have been refused entry to the NTS
- Assuming a gas price of 35p/therm, 15.9 bcm of gas is worth over £2 billion

Future Topics

Future Topics

Topic Area	Provisional Date
Tariffs Code	Monthly updates whilst progressing through comitology
CAM Amendment / Incremental	Monthly updates whilst progressing through comitology
EU Gas Quality	Monthly updates