

## ECCAF – Meeting 2



Elexon

30 January, 10:00

# 1. Introductions and Apologies

Barbara Vest (Energy UK)  
ECCAF Chair

## 2. Action Log Update

Paul Wakeley (National Grid)  
ECCAF Technical Secretary

## Action Update (circulated in Agenda)

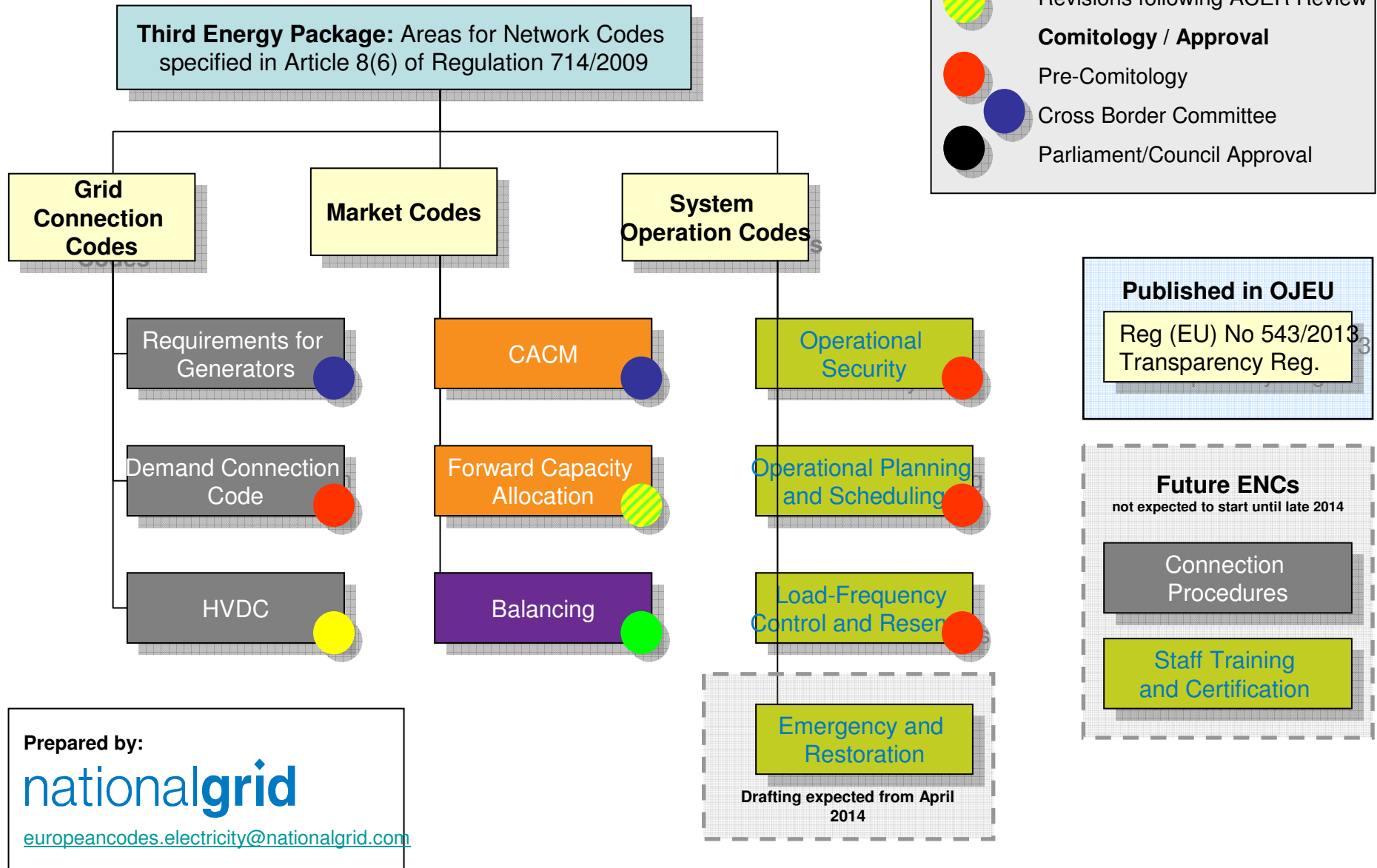
ID	Action	Lead Party	Target Date	Status	Update
<b>Closed Actions</b>					
1/1	Contact Consumer Futures to ensure we are engaging appropriately especially around obligations on small domestic consumers in RFG / DCC	PW	January 2014	<b>Closed</b>	Reply received from Cornwall Energy, on behalf of Consumer Futures <i>"At present we're keeping Consumer Futures abreast of developments through our Panel engagement (CUSC, UNC and BSC) as well as tracking papers/ material from JSEG and now EECAF, but if we have any specific issues we'll certainly be in touch."</i>
1/2	BSC Panel to consider nominating a new representative to ECCAF, as Barbara Vest as Chair holds that an ECCAF seat automatically, and the Terms of Reference envisage seven Code Panel representatives plus the Chair.	IP/BV	January 2014	<b>Closed</b>	BSC Panel appointed Peter Bolitho as their ECCAF representative at their January 2014 Meeting
1/3	Prepare a set of standard criteria against which to judge different structural methods for making changes to the GB Codes, for discussion at the next ECCAF meeting.	RW/GG	January 2013	<b>Closed</b>	Circulated to ECCAF members. For discussion under Agenda Item <b>Error! Reference source not found..</b>
1/4	Prepare calendar of meetings for 2014 for circulation to members, avoiding dates of GB Code Panels and JESG Meetings.	PW	December 2014	<b>Closed</b>	Circulated to ECCAF members.

## 3. Network Code and Comitology Update

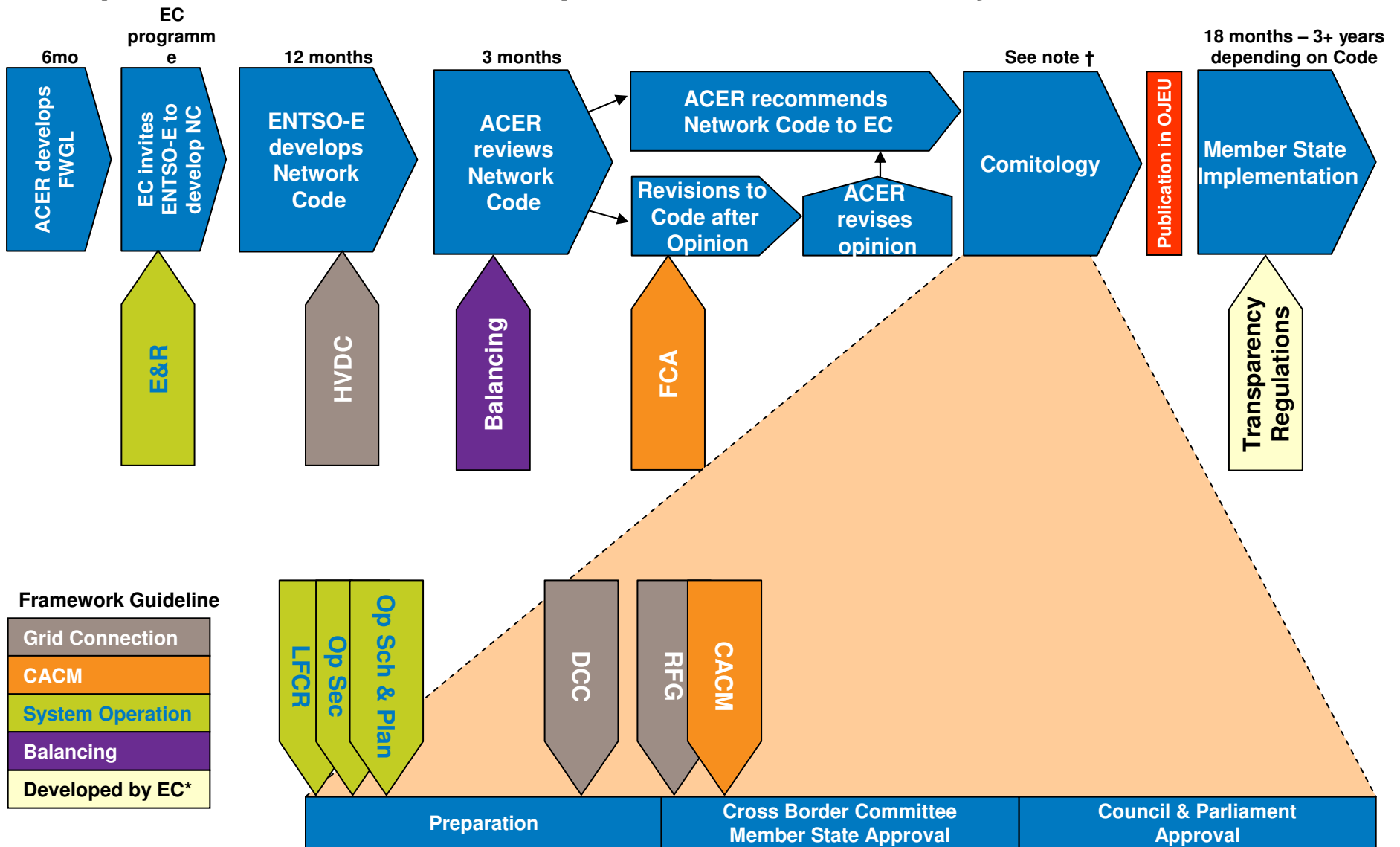
NGET / DECC / Ofgem

# European Network Code Development Status

30 January 2014



# European Network Code Development Status: 30 January 2014



\* Areas developed by EC follow a different development process and there are no Framework Guidelines.

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

Prepared by:

**nationalgrid**

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## 4. Options for Implementing European Requirements in to GB Code Framework

**Rob Wilson (NGET)**  
**Garth Graham (SSE)**  
**Rupika Madhura (Ofgem)**



# European Network Codes: GB Application Structural Options



ECCAF – Jan 2014

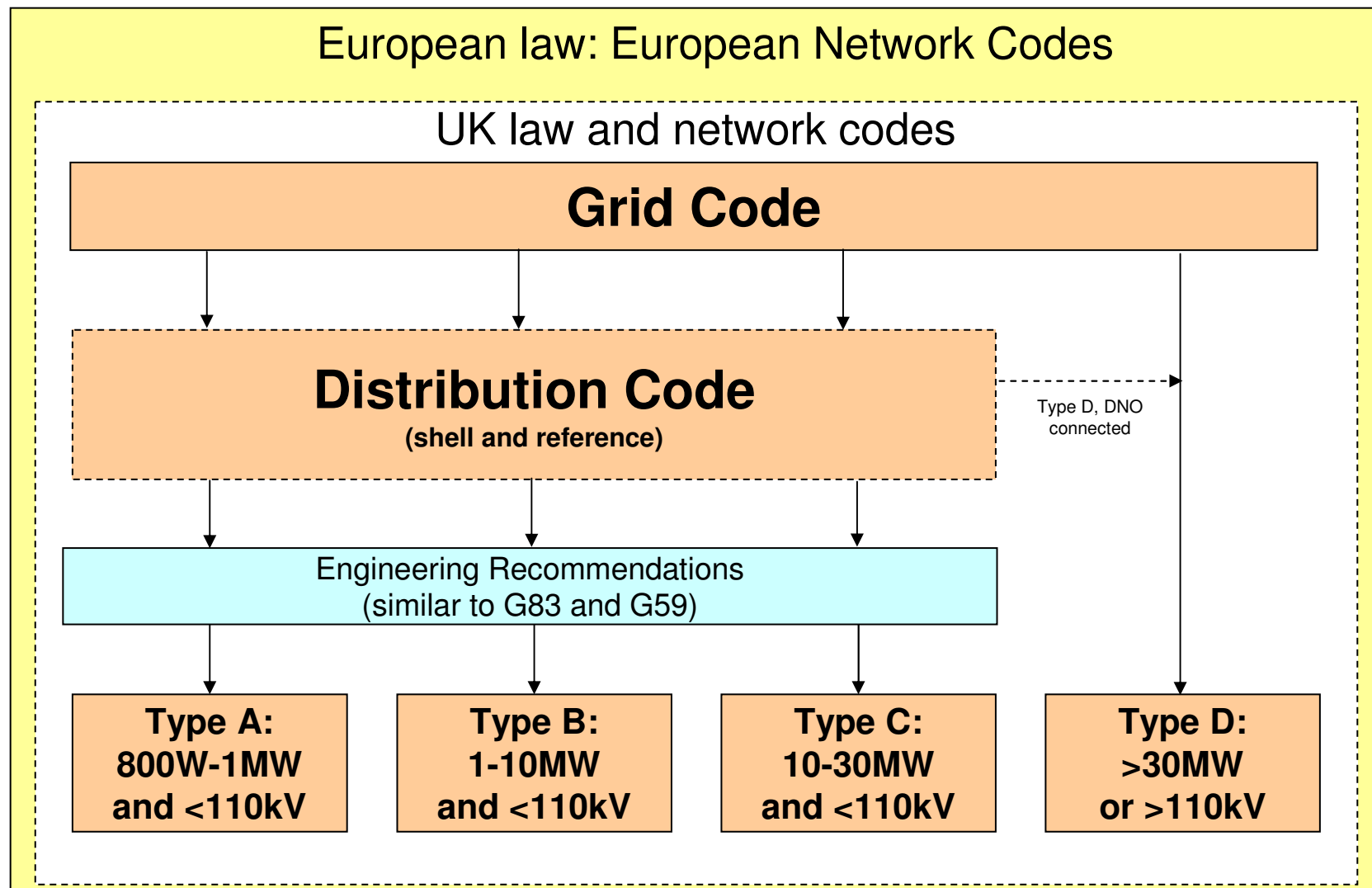
## RfG Key Progress Milestones

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- RfG was the first of the European codes to be developed (started in 2009) and has provided a pilot for the process
- ENTSO-E drafting finished in June 2012; some additional changes made up to March 2013
- On 27 March 2013, ACER issued a recommendation to the European Commission to adopt the Network Code on “Requirements for Generators” (NC RfG)
- Consultants (DNV KEMA) appointed by Commission to carry out technical impact assessment – broadly supportive report released Sept 2013
- Guidance note on national application published by ENTSO-E Oct 2013
- ‘Informal draft’ of code published by the European Commission on 14 January 2014
- Will be informally discussed at Electricity Cross Border Committee meeting on 28 January
- Presumably formal voting will follow at one or more subsequent meetings

# Application through existing processes

*Place all requirements in Grid Code. D Code operates as shell and onwards reference to ERs*



## Variations on using existing processes solution:

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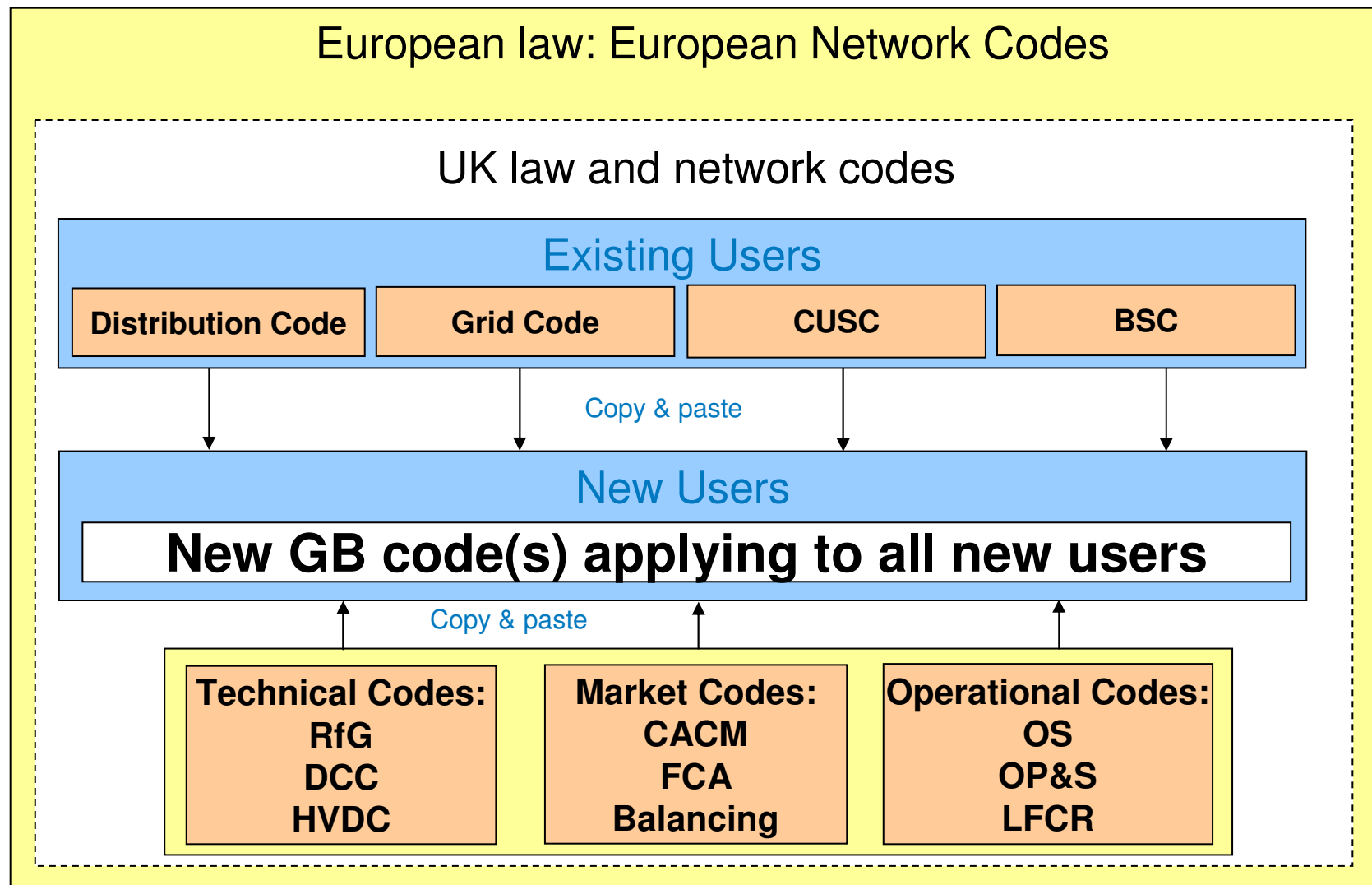
There are a few ways that this could be achieved, but in essence each requires similar actual work. The vehicles used and degree of replication are different though.

### Options:

- Place all requirements in the Grid Code; for ease of use reference Engineering Recommendations in Distribution Code for type A-C generators  
(option as shown and detailed on previous slide)
- Place type A-C requirements in Distribution Code, type D in Grid Code
- Place all of A-D requirements in a 'suite' of Engineering Recommendations / Guidance Notes; G and D codes act as reference shells to these

# Copy & Paste 'Omnicode' Solution

*Place all requirements for new users across all GB codes into a minimum number of new codes*



# Advantages of Using Existing Codes/Processes

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Generally acknowledged:

- Can be easily recognised by all parties as similar to existing processes and with established routes for governance
- Can more easily achieve a timely solution
- Closer structures and processes for existing and new Users. No need for parallel governance
- Will work across the full range of Users
- Reflects Code Governance Reviews (CGR1&2) and history of code modifications

Less clear:

- Can be extended to application across all GB and European codes
- Can be easily tested for the correct or complete mapping of RfG requirements

# Advantages of Using Copy & Paste 'Omnicode' Solution to Create New European Code(s)

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Generally acknowledged:

- Neater minimum number of codes solution
- Greater clarity of mapping leading to easier testing of correct enactment

Less clear:

- Substantially different to existing processes
- Two stream structure between new and existing Users will continue indefinitely – and this applies also to Review Panels and governance
- May need licence or legislative changes

## Actions

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- ECCAF to consider structural alternatives and seek consensus on way forward.
- Set-up of joint GCRP/DCRP Workgroup to progress RfG application – 1<sup>st</sup> meeting 28<sup>th</sup> Jan.

### Other points to consider:

- Precedent setting through RfG for other codes; a one size fits all approach will not work but there is a broader principle of how closely we stick to existing processes
- Timescales available. Wish to avoid eating in to compliance period.
- Ease of extension to other ENCs and GB codes
- Ability to make future changes either to GB or European codes
- Compliance process – meaning both:
  - Demonstrable alignment with/enactment in GB codes
  - Actual compliance of all parties



# 1st meeting of joint GCRP/DCRP nationalgrid WG on National Application of RfG 28/1/14

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- The workgroup debated the structural alternatives for GB in application/implementation of the RfG code. This is a complex area with many criteria against which alternatives need to be assessed, however the workgroup came to two conclusions:
  - The group are minded to think that the 'Omnicode' solution would be difficult, costly and with potentially unintended consequences.
  - The group are in agreement that the arrangements for existing generators should be preserved.

# Option Assessment



# Pros and Cons – criteria to consider

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- Ease of use:
  - Users
  - TSO/DNOs
  - Number of documents
  - Guidance notes required
- Structure:
  - Retains existing codes structure
  - Retains contractual structure
  - Could application of other ENCs follow the same principles?
  - DNO/SO/TO interactions require examination
  - What happens to residual GB code requirements?
- Administration & Governance:
  - Administration
  - Future changes (European code driven)
  - Future changes (GB driven)
  - Good governance / open governance or compliance with Ofgem best practice
- Timescales:
  - Could application to other GB codes follow the same principles in the time available?
  - Timescales (can the end result be achieved within the window available?)
- Implementation & Compliance:
  - Implementation clarity
  - Compliance

# Pros and Cons

Issue	Approach			
	Existing process based			Omnicode solution:
	Place all requirements in the Grid Code; for ease of use replicate in Engineering Recommendations / Distribution Code for type A-C generators	Place A-C requirements in Distribution Code, D in Grid Code	Place all of A-D requirements in a 'suite' of Engineering Recommendations / Guidance Notes; G and D codes act as reference shells to these	Copy & paste all relevant GB/ENC clauses for new users into (probably) 3 new codes for ENCs in technical, operational and market areas
<b>Ease of use</b>				
Ease of use - users	Solution relies on ERs or guidance notes to make it useable for smaller generators but is then straightforward	Clarity of which doc applies to which party will be OK	Probably easiest for users	Likely to need guidance notes for all parties to make manageable
Ease of use - TSO/DNOs	DNOs need to refer to GC	Little change to current	Harder - as multiple docs to maintain and coordinate	Two stream document solution (new vs existing) results and is cumbersome
Number of documents	Replication of requirements will give alignment issues	Small number of users (type D, DNO connected) would need to refer to both DC/GC	Multiple documents but does keep all users in either DC or GC	Very neat minimum number of codes solution potentially across all codes for new users
Guidance notes required	Yes, but no different to existing	Yes, but aligns to existing	Yes, and extension of existing arrangements. Suite of documents required	Probably
<b>Structure</b>				
Retains existing codes structure	Yes, but GC becomes more cumbersome through extension to more users	Yes	No. Fundamental changes and multiple documents	No, radical departure. Would need backing from DECC/Ofgem and possibly licence changes
Retains contractual structure	Increases complexity for D-connected gens	Yes	Makes it simpler in principle	Potentially makes things easier going forwards for new users at least
Could application of other ENCs follow the same principles?	Yes, although multiple changes will be reqd	Yes, close to an as is solution using existing processes	Yes, and can build in more annexes to DC/GC 'shells' fairly simply although number of separate documents is a concern	Yes, and this is one of the main considerations
DNO/SO/TO interactions require examination	Yes - to cover D-connected users	Yes - but requirements should cascade fairly neatly	Interactions probably straightforward and covered in DC/GC 'shells'	Yes - to consider how all of this will work within existing licences
What happens to residual GB code requirements?	Unaffected - stay as they are where no conflict with ENCs	Unaffected - stay as they are where no conflict with ENCs	Unaffected - stay as they are where no conflict with ENCs	Concept is to continue copy&paste principles from GB codes into European code vehicle for new users
<b>Administration &amp; Governance</b>				
Administration	Simple in principle. Becomes led by existing GC processes	Close to existing administration in principle, but complicated due to cumulative requirements across A-D bands	Uncertain how this would be administered and who would own suite of ERs	New governance structure required across GB codes in parallel to existing (although pragmatically mainly the same industry representatives)
Future changes (European code driven)	Existing processes. But likely to add to any mapping problems	Close to existing processes. But likely to add to any mapping problems	A little harder - replication	ACER change process identified. Probably easier to apply.
Future changes (GB driven)	Existing processes. But likely to add to any mapping problems	Close to existing processes. But likely to add to any mapping problems	A little harder - replication	Existing processes. Two stream codes does add some complication
Good governance / open governance or compliance with Ofgem best practice	As GC	As GC	Uncertain, probably as GC	Could be as CUSC
<b>Timescales</b>				
Could application to other GB codes follow the same principles in the time available?	Yes. Not everything happens in the Grid Code obviously, but the same principles of keeping to minimum solutions with existing processes can apply	Yes, close to an as is solution using existing processes	Following this route for other codes as well becomes untenable due to number of documents	Yes. Can easily extend concept across all GB codes/ENCs. Same arguments in cumbersome results but same advantages too
Timescales (can the end result be achieved within the window available?)	ER agreement process may add some time	A little harder given ER agreement process	A little harder given ER agreement process	Probably harder given changes to governance and structure, although at least text is largely to paste
<b>Implementation &amp; Compliance</b>				
Implementation clarity	Mapping to ENCs is not straightforward	Mapping to ENCs is not straightforward	Feels harder as multiple documents, although each is specific to a user	Clarity due to overall 'copy&paste' solution and could also show references
Compliance	As existing GC - and can add clarity in supporting documents. Testing compliance of smaller users will be difficult for DNOs and may need an aggregation/type test approach	As existing GC. Testing compliance of smaller users will be difficult for DNOs and may need an aggregation/type test approach	Feels harder as multiple documents, although each is specific to a user	Can add clarity in supporting documents. Testing compliance of smaller users will be difficult for DNOs and may need an aggregation/type test approach

Colour code:

Red – difficult or increases complexity

Amber – some issues

Green - straightforward

# Scoring of Options

Issue	Scoring / priority	Approach			
		Existing process based			Omnicode solution: Copy & paste all relevant GB/ENC clauses for new users into (probably) 3 new codes for ENCs in technical, operational
		Place all requirements in the Grid Code; for ease of use replicate in Engineering Recommendations /	Place A-C requirements in Distribution Code, D in Grid Code	Place all of A-D requirements in a 'suite' of Engineering Recommendations / Guidance Notes; G and D codes act as	
<b>Ease of use</b>					
Ease of use - users	High	3	2	4	3
Ease of use - TSO/DNOs	Medium	3	4	1	2
Number of documents	Medium	4	3	2	5
Guidance notes required	Low	4	2	1	3
<b>Structure</b>					
Retains existing codes structure	Medium	4	5	2	2
Retains contractual structure	High	3	3	5	3
Could application of other ENCs follow the same principles?	Medium	3	3	4	4
DNO/SO/TO interactions require examination	Low	3	4	4	3
What happens to residual GB code requirements?	Low	4	4	4	2
<b>Administration &amp; Governance</b>					
Administration	Medium	4	3	2	1
Future changes (European code driven)	Low	3	3	2	4
Future changes (GB driven)	Low	3	3	2	4
Good governance / open governance or compliance with Ofgem best practice	Low	3	3	2	4
<b>Timescales</b>					
Could application to other GB codes follow the same principles in the time available?	Medium	4	3	1	4
Timescales (can the end result be achieved within the window available?)	High	3	3	3	1
<b>Implementation &amp; Compliance</b>					
Implementation clarity	High	2	3	3	5
Compliance	High	3	3	2	4
<b>Scoring totals</b>		<b>106</b>	<b>103</b>	<b>90</b>	<b>104</b>

Scoring multipliers:

High – 3

Medium – 2

Low -1

# Background



# European Networks Codes – Commission target to enter into force by end of 2014

## Connection Codes

Requirements for Generators

Demand Connection Code

HVDC

## Market Codes

CACM

Forward Capacity Allocation

Balancing

## Operational Codes

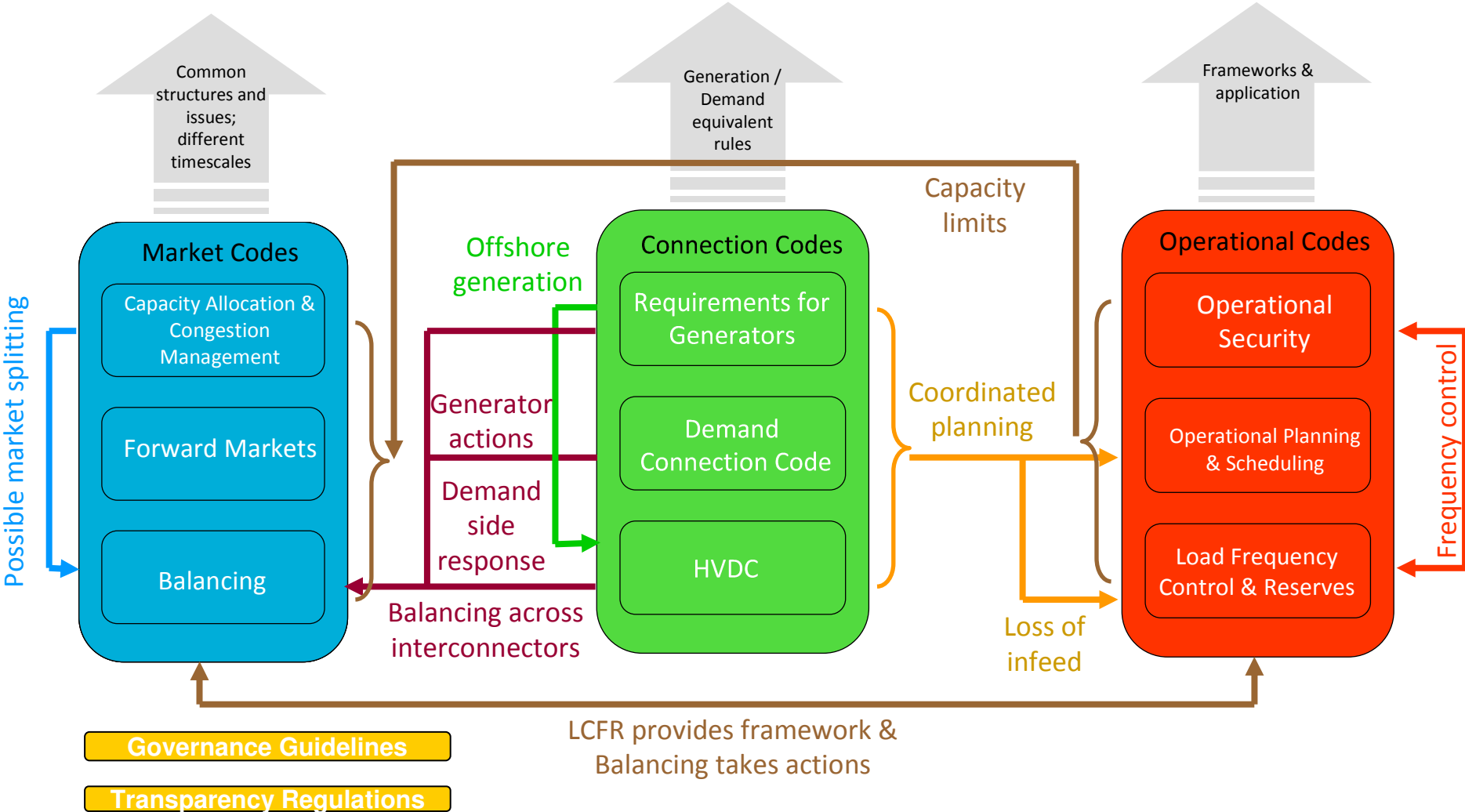
Operational Security

Operational Planning and Scheduling

Load-Frequency Control and Reserves

# ENC High Level Interactions

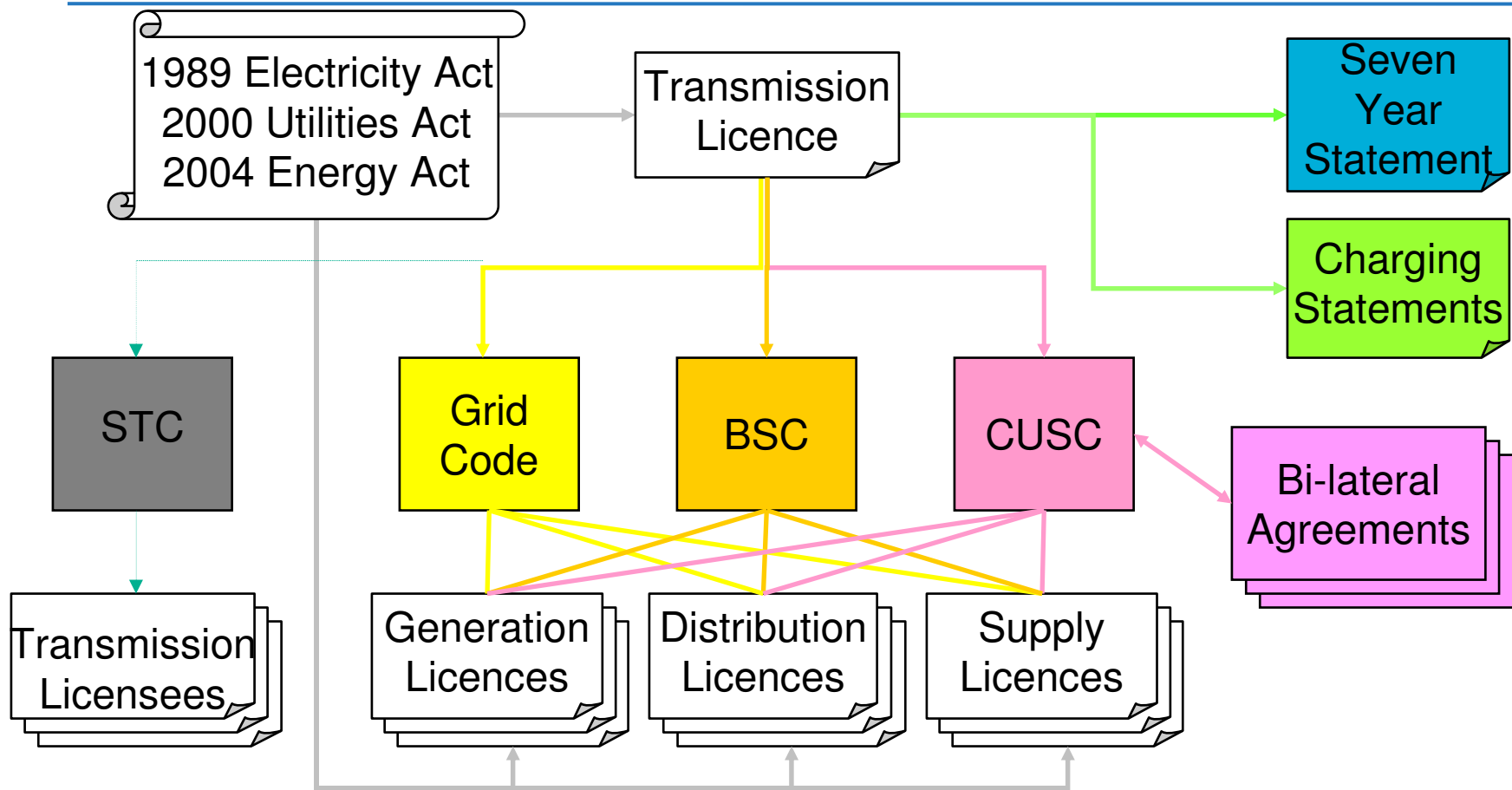
9 codes, 1 package





# The Industry Framework / Obligations

## Transmission

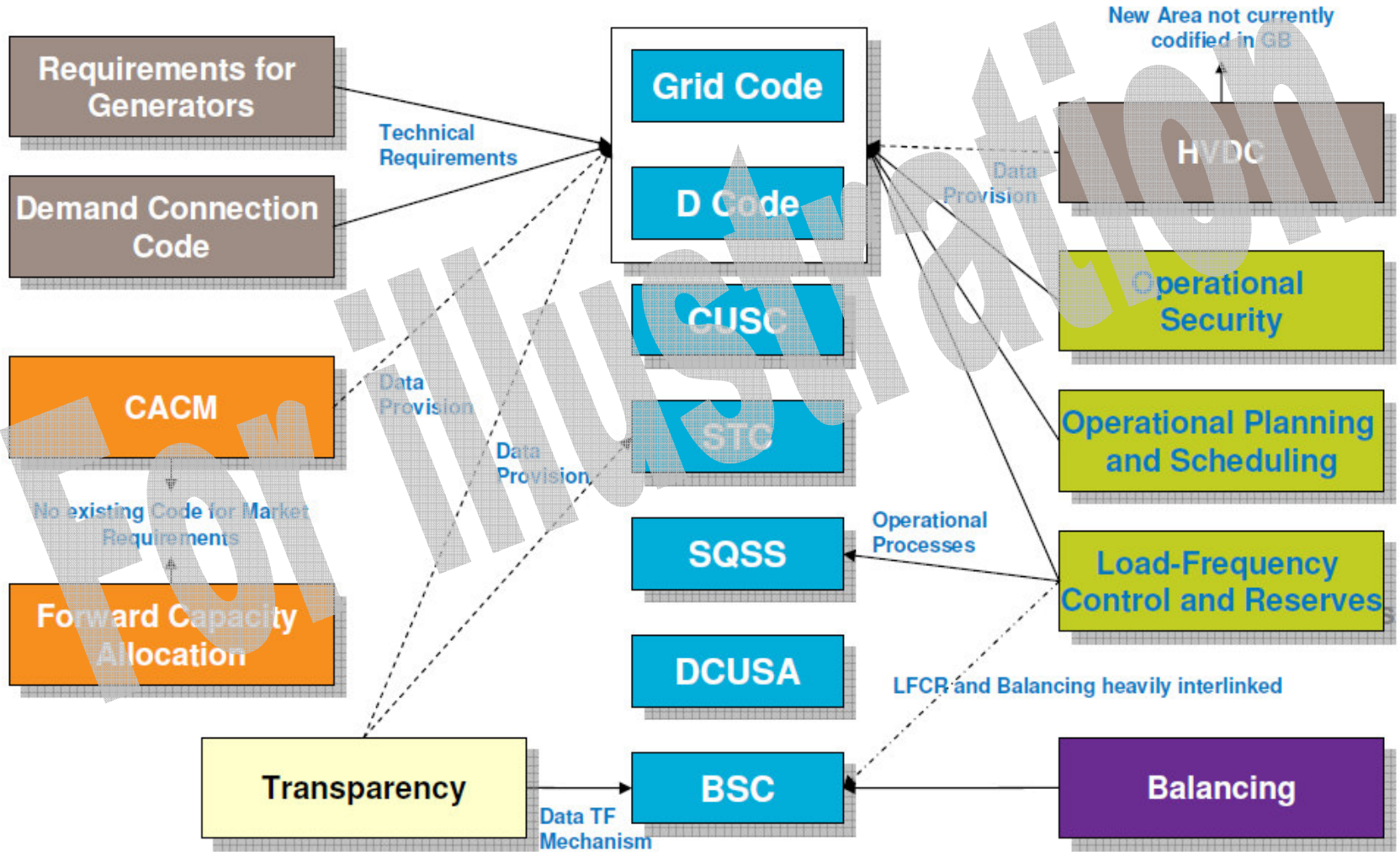


# High-level 'natural' mapping of ENC to GB Codes

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→ Primary Effect  
 - - - - - Secondary Effect



# Background to RfG - Changes in Generator Banding

- Replaces current Small/Medium/Large classifications with type A-D bandings
- Removes Scottish specificities
- Applies requirements to smaller, embedded generation (now from 800W rather than 50MW in England & Wales)

## Current Grid Code banding:

Generator Size	Direct Connection to:		
	SHET	SPT	NGET
Small	<10MW	<30MW	<50MW
Medium			50-100MW
Large	10MW+	30MW+	100MW+

## RfG banding:

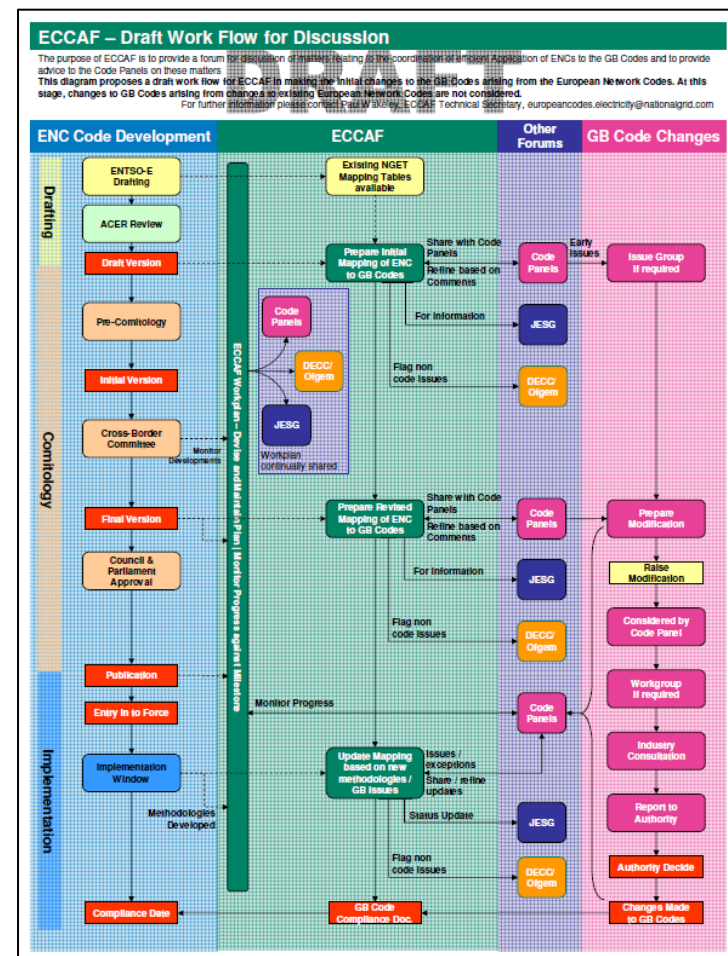
RfG Type	Generator Capacity	Connection Voltage
A	800W-1MW	<110kV
B	1-10MW	<110kV
C	10-30MW	<110kV
D	≥30MW	>110kV

## 5. Process for engagement and application

Facilitated by Paul Wakeley (NGET)

# Please refer to handout ECCAF 2-5 work process vDraft1.pdf

- Purpose of this session:
  - Discuss and refine the process diagram
  - Whilst ensuring an approach which facilitates consistency of application of multiple ENCs to multiple GB Codes
- Ideal Output:
  - Agreed work process diagram



## 6. ECCAF Workplan for 2014/15

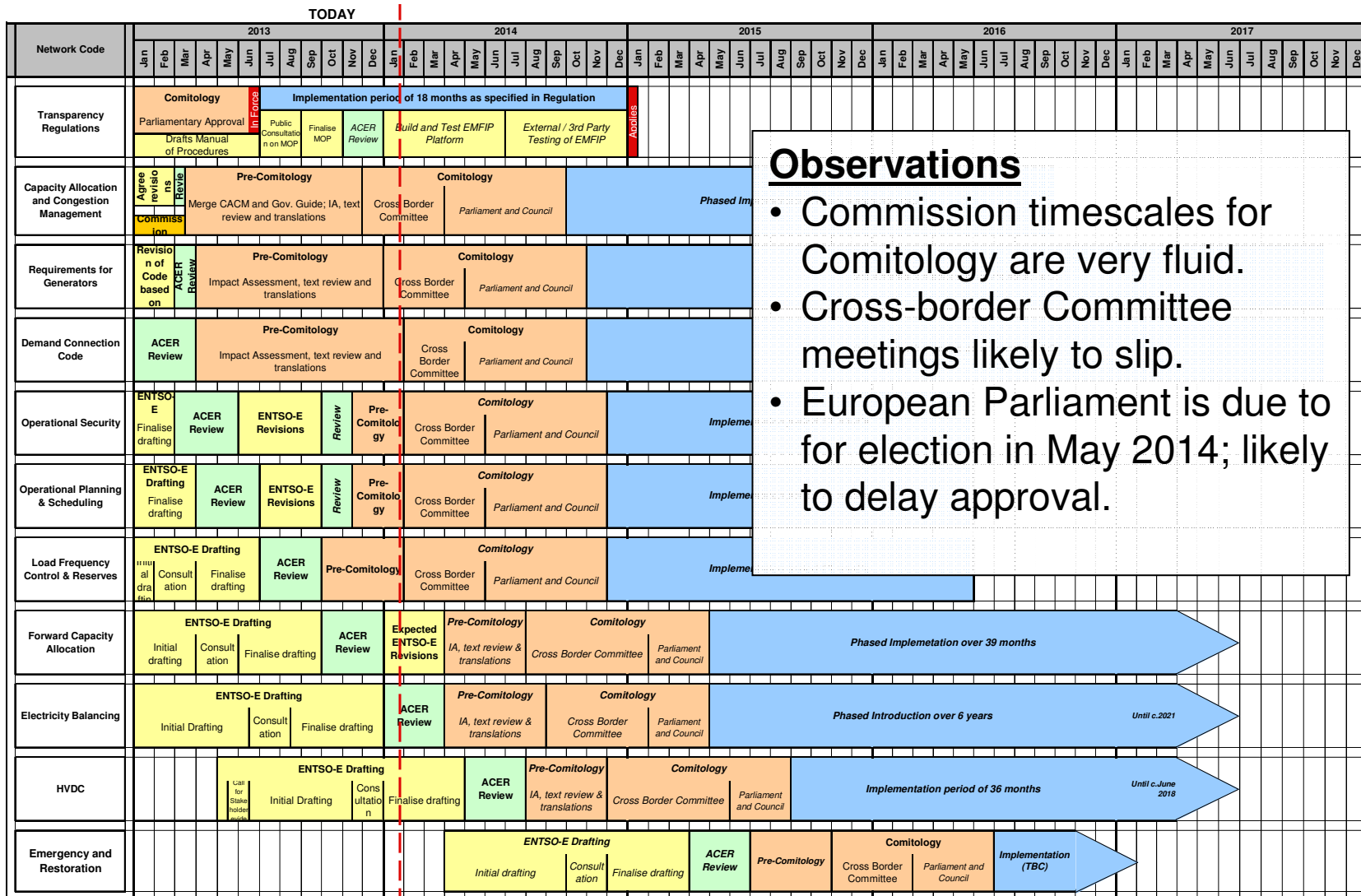
Facilitated by Paul Wakeley (NGET)

# Please refer to handout ECCAF 2-6 Workplan -vDraft1.pdf

Network Code	2014												2015																
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec					
Capacity Allocation and Congestion Management	X-Border Committee			Parliament and Council									Implementation																
		Initial Mapping		Revised Mapping								Confirm Dates																	
Requirements for Generators	Cross Border Committee			Parliament and Council									Implementation																
	Structural Discussion	Initial Mapping		Revised Mapping								Confirm Dates																	
Demand Connection Code	Pre-Comito	Cross Border Committee			Parliament and Council									Implementation															
			Initial Mapping		Revised Mapping							Confirm Dates																	
Operational Security	Pre-Comito	Cross Border Committee			Parliament and Council									Implementation															
			Initial Mapping		Revised Mapping							Confirm Dates																	
Operational Planning & Scheduling	Pre-Comito	Cross Border Committee			Parliament and Council									Implementation															
			Initial Mapping		Revised Mapping							Confirm Dates																	
Load Frequency Control & Reserves	Pre-Comito	Cross Border Committee			Parliament and Council									Implementation															
			Initial Mapping		Revised Mapping							Confirm Dates																	
Forward Capacity Allocation	ENTSO-E Revisions		ACER Review	Pre-Comitology					Cross Border Committee					Parliament and Council					Implementation										
				Initial Mapping											Revised Mapping							Confirm Dates							
Electricity Balancing	ACER Review			Pre-Comitology					Cross Border Committee					Parliament and Council					Implementation										
				Initial Mapping											Revised Mapping							Confirm Dates							
HVDC	ENTSO-E Drafting				ACER Review			Pre-Comitology					Cross Border Committee					Parliament and Council					Implementation						
								Initial Mapping														Revised Mapping							

**DRAFT**  
**For discussion**

# ENC development timeline



**Observations**

- Commission timescales for Comitology are very fluid.
- Cross-border Committee meetings likely to slip.
- European Parliament is due to for election in May 2014; likely to delay approval.



## Purpose of Session

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- Agree approach to scheduling of ECCAF Tasks for 2014/15 based on Commission Workplan and based on ECCAF work process
- This will define the agenda for ECCAF for the following meetings.

## 7. Electricity Balancing Network Code: An initial mapping to the GB Framework

Steve Wilkin (Elexon)



# Electricity Balancing Network Code (EBNC): initial thoughts on mapping to GB

Steve Wilkin

30 January 2014



## Covering:

- Scope of this analysis
- Initial conclusions on mapping to the existing GB code and legal framework
- Steps needed to implement the EBNC initially and over time
- Possible next steps?



## Scope of this analysis

Objective: to get an initial view of how the current draft EBNC might map to the existing GB legal framework to facilitate ECCAF discussions

Caveats:

- The EBNC is in draft with ACER and pre-comitology state
- I have only looked at the EBNC in isolation from other Network Codes, so I haven't looked at the other Market Codes for example
- I have not looked at where we might already meet the EBNC requirements only where the requirements might sit
- I am familiar with the BSC, but not so much with other GB Codes and legal framework
- This is a personal, initial view and not necessarily an ELEXON view



## Broad conclusions

However, I have been able to reach some broad conclusions on mapping:

- the mapping is much wider than to just the current BSC
- EBNC implementation is likely to differ from RfG models



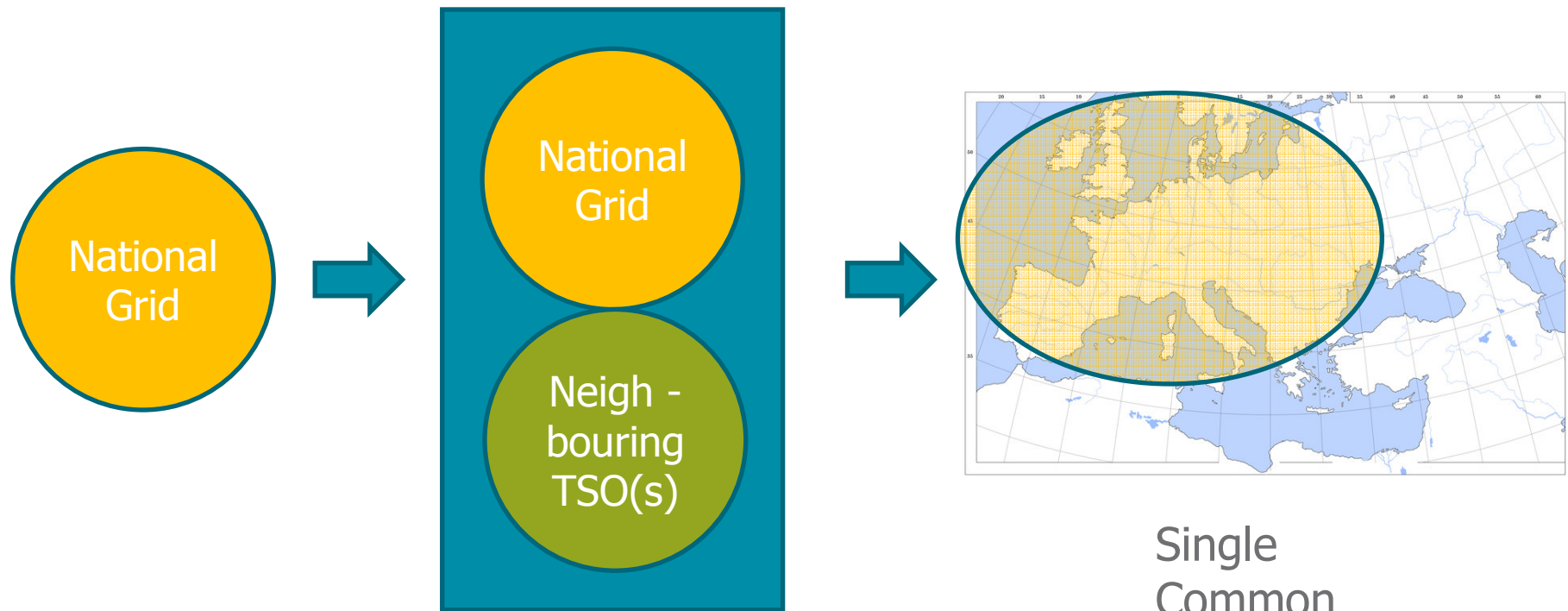
## Why might the EBNC be different from other Network Codes?

### EBNC:

- has no prior agreed target model
- is a 6 year roadmap so all the detail won't be known when it comes into force – this will be further developed over these years
- does not distinguish between new and existing users (the RfG criterion for the “omnicode” model)
- is wider in scope than existing GB Codes
- requires common arrangements across Coordinated Balancing Areas (COBAs) to be developed i.e. regional documentation

# Development of a pan European balancing area and documents

Developments from 2015(?) onwards

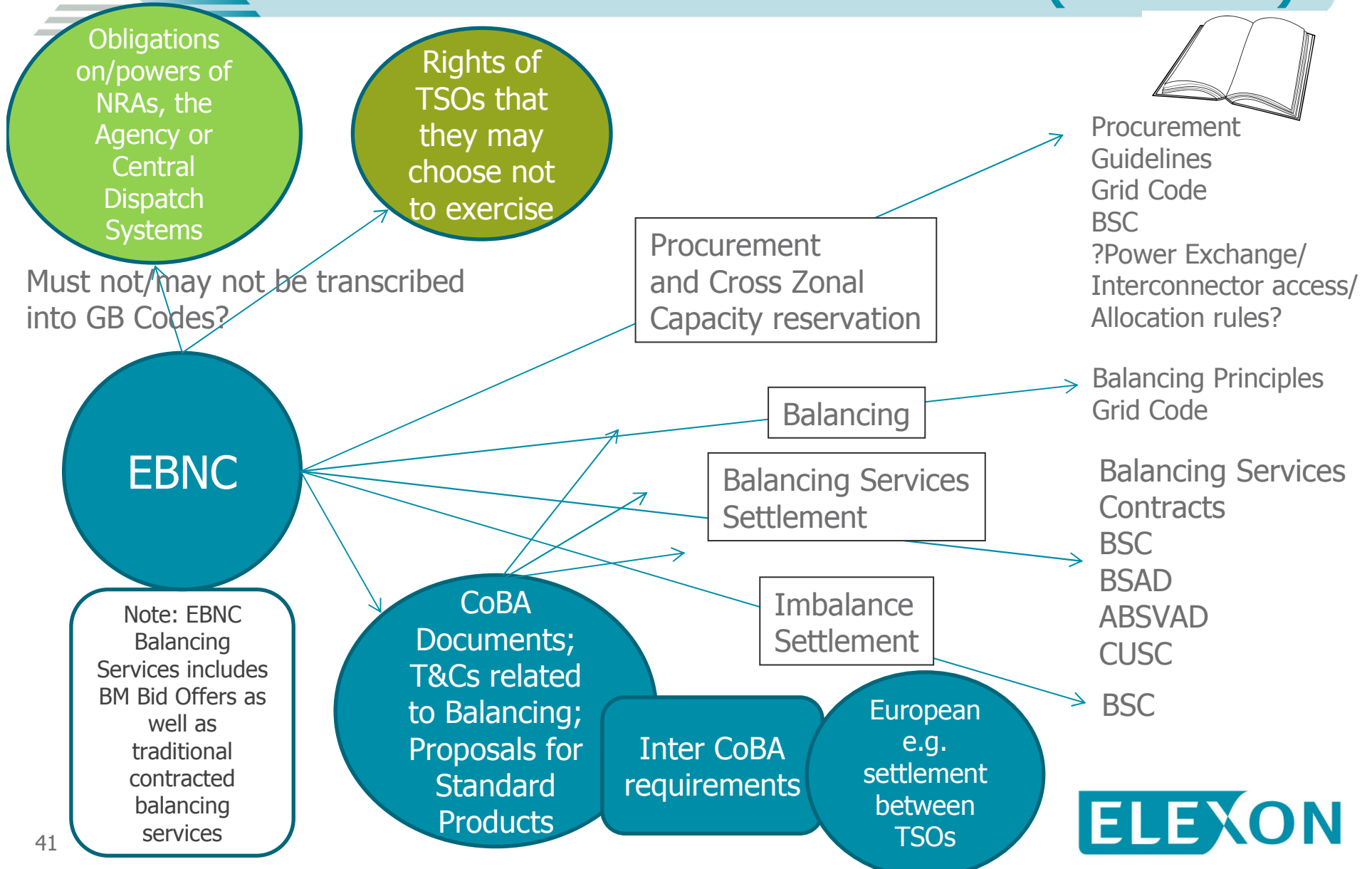


Common Balancing Areas (CoBAs) – need CoBA specific rules

Single Common Balancing Area



# Scope of impact of the EBNC on GB documents (overview)

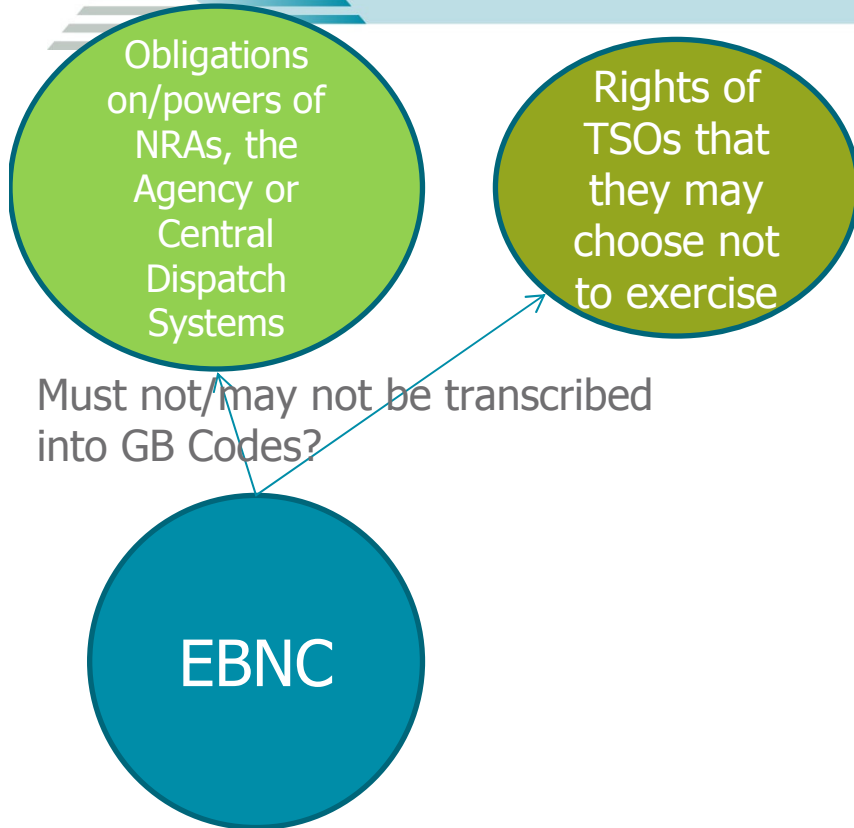




## Does everything in the EBNC need to be transposed into GB Codes?

- Does it all need to be transposed into GB Codes?
  - Some of the EBNC sets out principles to be met by future implementations under the roadmap
  - Some of the EBNC relates to ACER and NRA duties outside the existing GB Codes
  - Coordinated Balancing Areas (CoBAs) will develop their own rules:
    - Will probably need CoBA level documents under different governance
    - Should all this be transposed into GB documentation or just that necessary to interface with the CoBA?
  - Some of the EBNC binds NRAs either collectively or individually
    - Not appropriate for GB Codes presumably
  - Some of the EBNC gives rights (e.g. to TSOs) that GB may choose not to exercise
  - TSO cost recovery provisions are outside GB Code remit

## Scope of impact of the EBNC on GB documents (don't need to transcribe?)

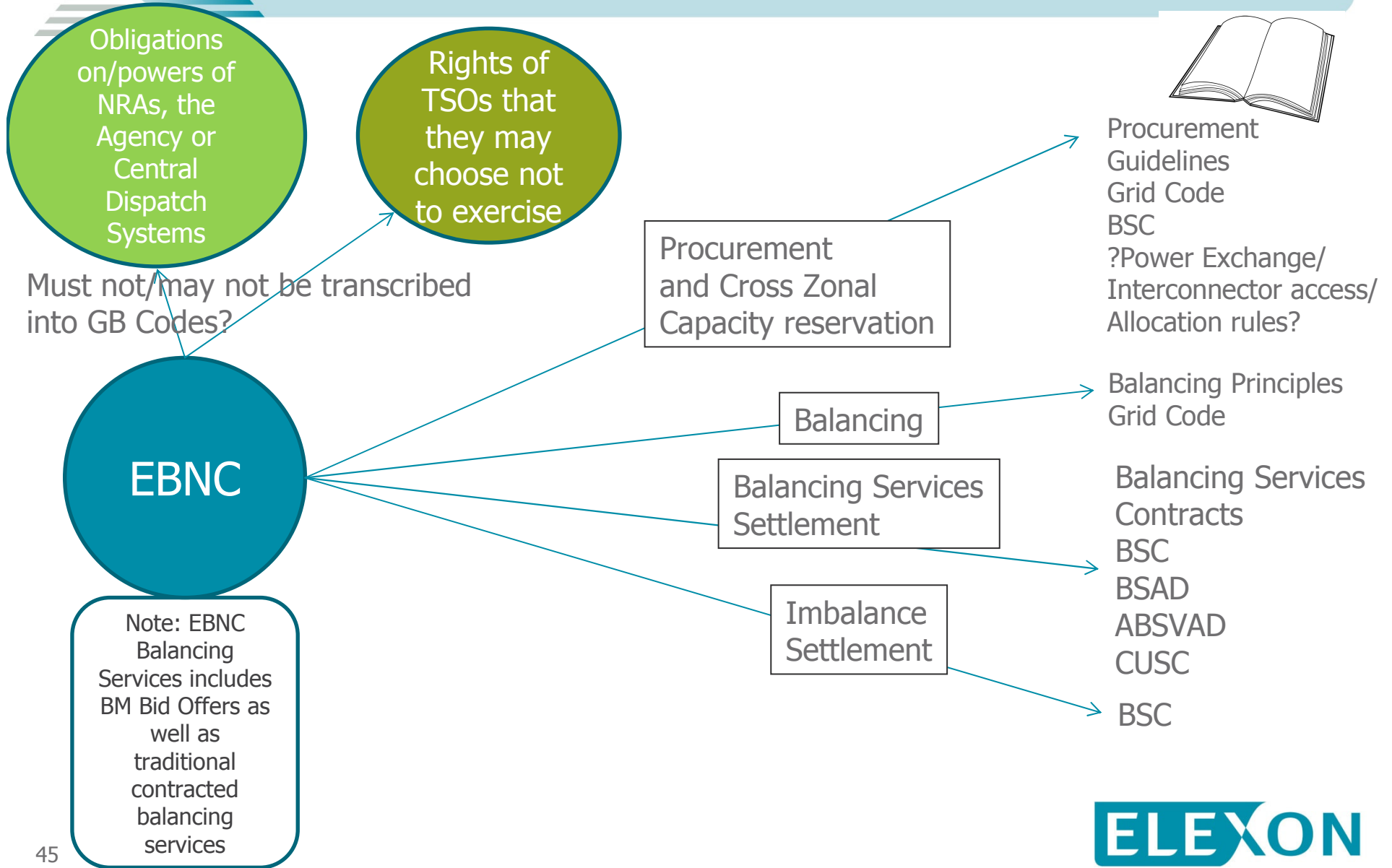




## Does the EBNC have impacts beyond the existing Codes?

- Initial indication using existing governance:
  - EBNC maps to at least: BSC, Grid Code, CUSC, Procurement Guidelines, Balancing Principles Statement, Applicable Balancing Services Volume Data Methodology Statement, Balancing Services Adjustment Data Methodology
  - The latter mappings to NGET's Transmission Licence C16 statements imply that changes to the Licence itself may need to be considered
  - Parts of other (non EBNC) Network Codes, i.e. definitions, also need to be included
- EBNC definitions may also have knock-on effects on a wide range of other publications and websites, e.g. EBNC "Balancing Services" would seem to include GB Balancing Mechanism Bids and Offers
  - Do we want a GB Code of definitions?
- Initial indication using the "omnicode":
  - If a GB EBNC is required it would presumably replace the BSC (as there is no distinction between new and existing users in the EBNC)
  - Some parts of the EBNC would still lie outside the GB EBNC unless Licence Condition statements are also brought within the GB EBNC, which would in turn require a change to the Transmission Licence

# Scope of impact of the EBNC on existing GB documents

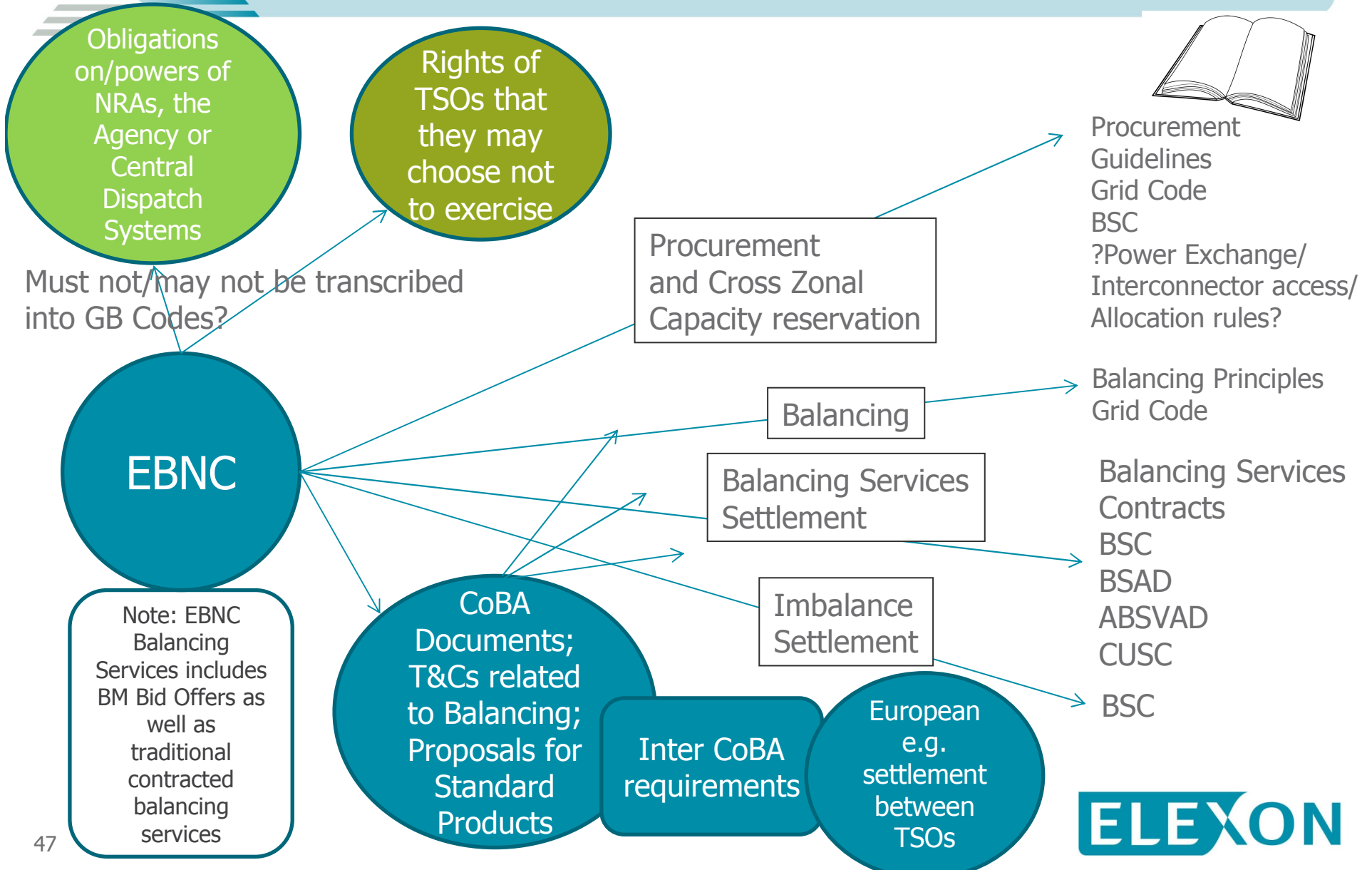




## But it's a roadmap...

- What does the roadmap mean for mapping to GB Codes?
  - If we want no immediate change to existing GB arrangements, we need to take some actions before the EBNC comes into force
  - We can't map everything immediately it does come into force as there is no detail in many areas, e.g. for:
    - CoBAs
    - Pan European developments
  - We need to plan for ongoing changes for (at least?) 6 years, i.e. until 2021

# Scope of impact of the EBNC on GB documents over time





## Conditions required to implement the EBNC initially

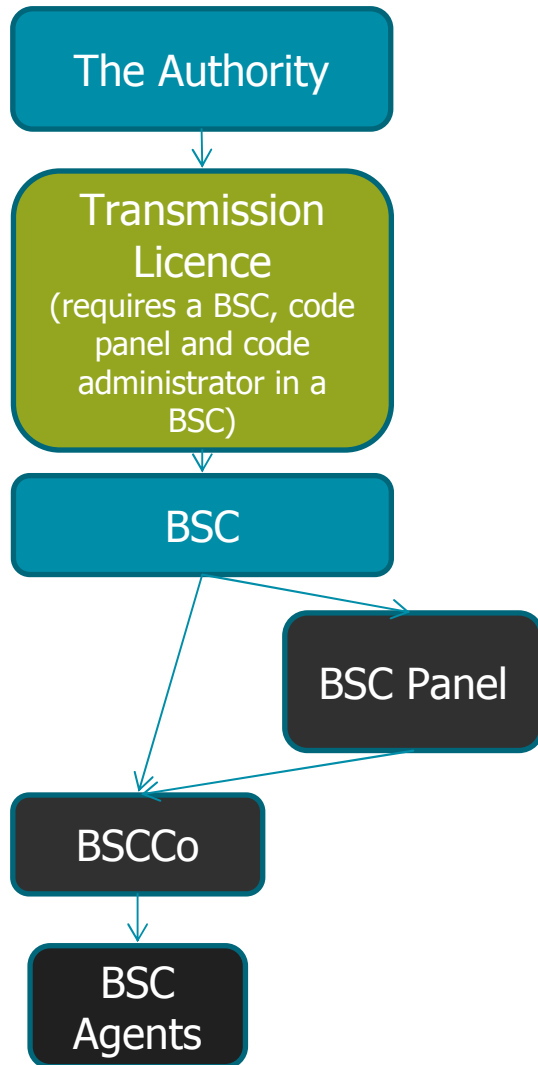
Three areas identified so far:

- Assignment of roles to specific TSO(s)
- Delegation by TSO(s)
- Choice of interpretation

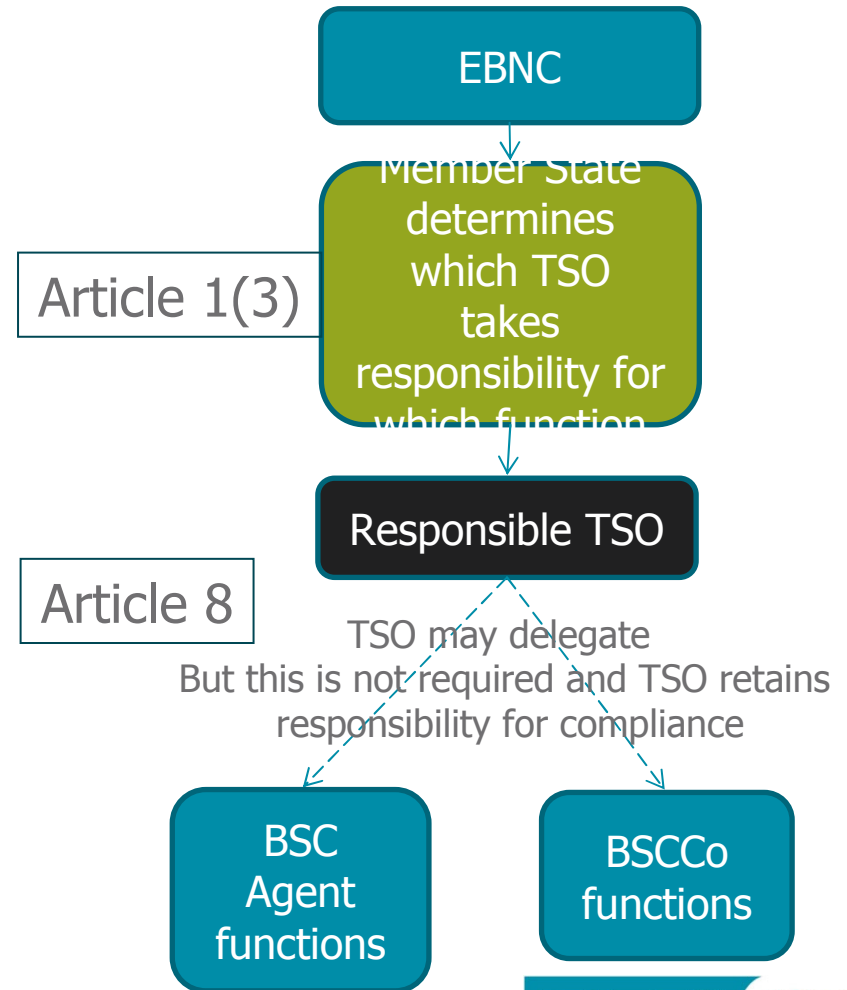


# Delegation of TSO functions to third parties

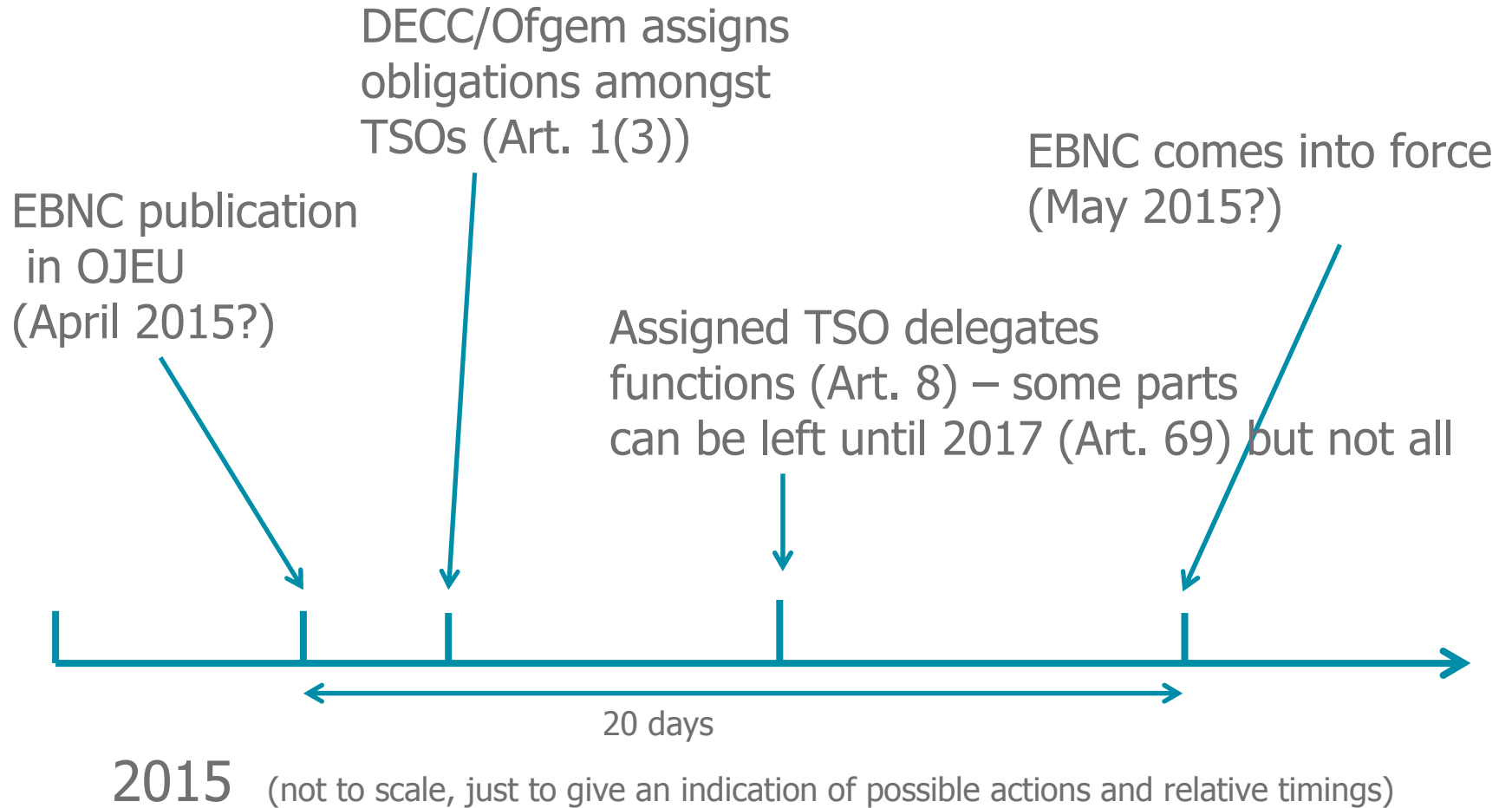
## Now (in GB)



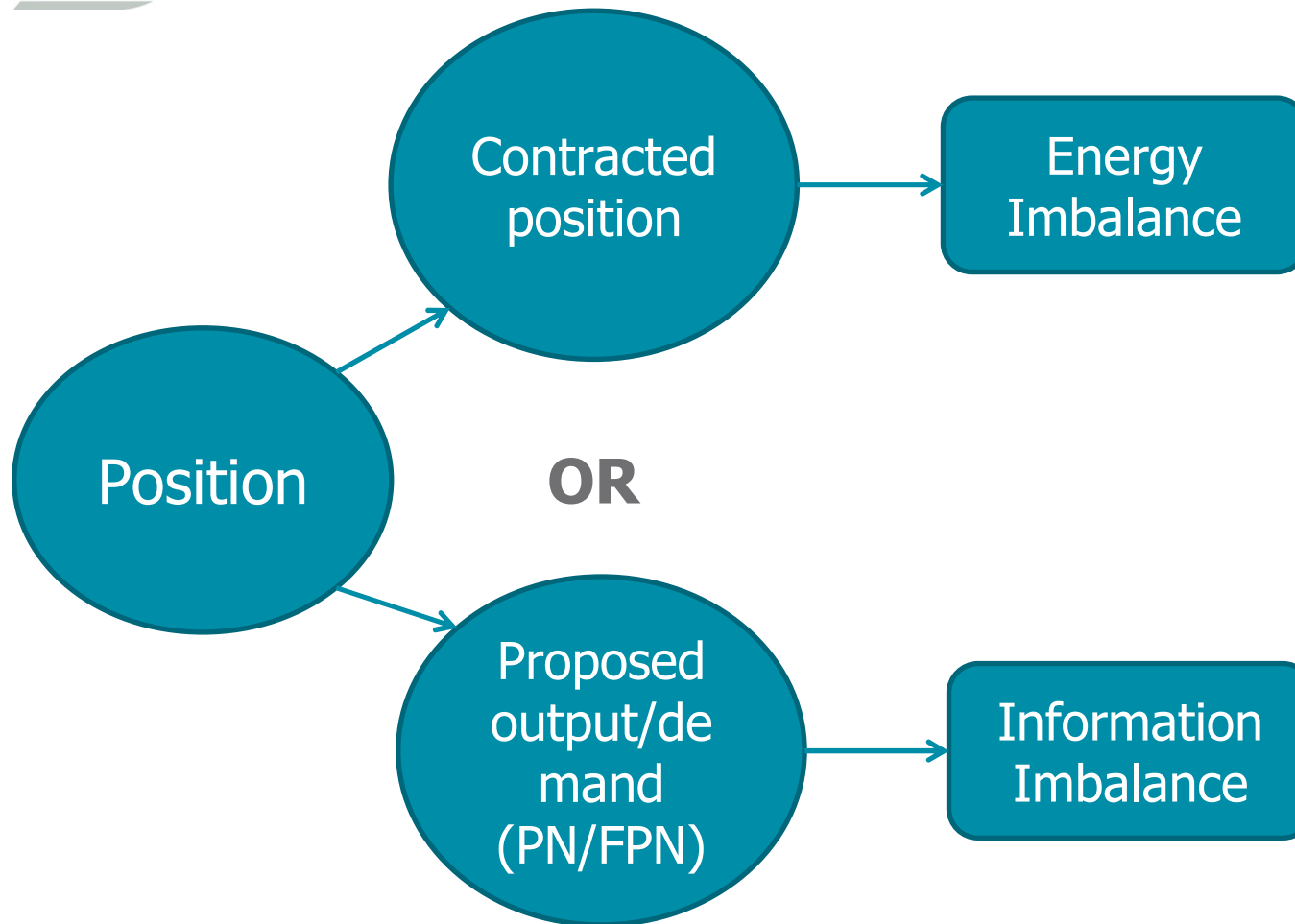
## Future EBNC?



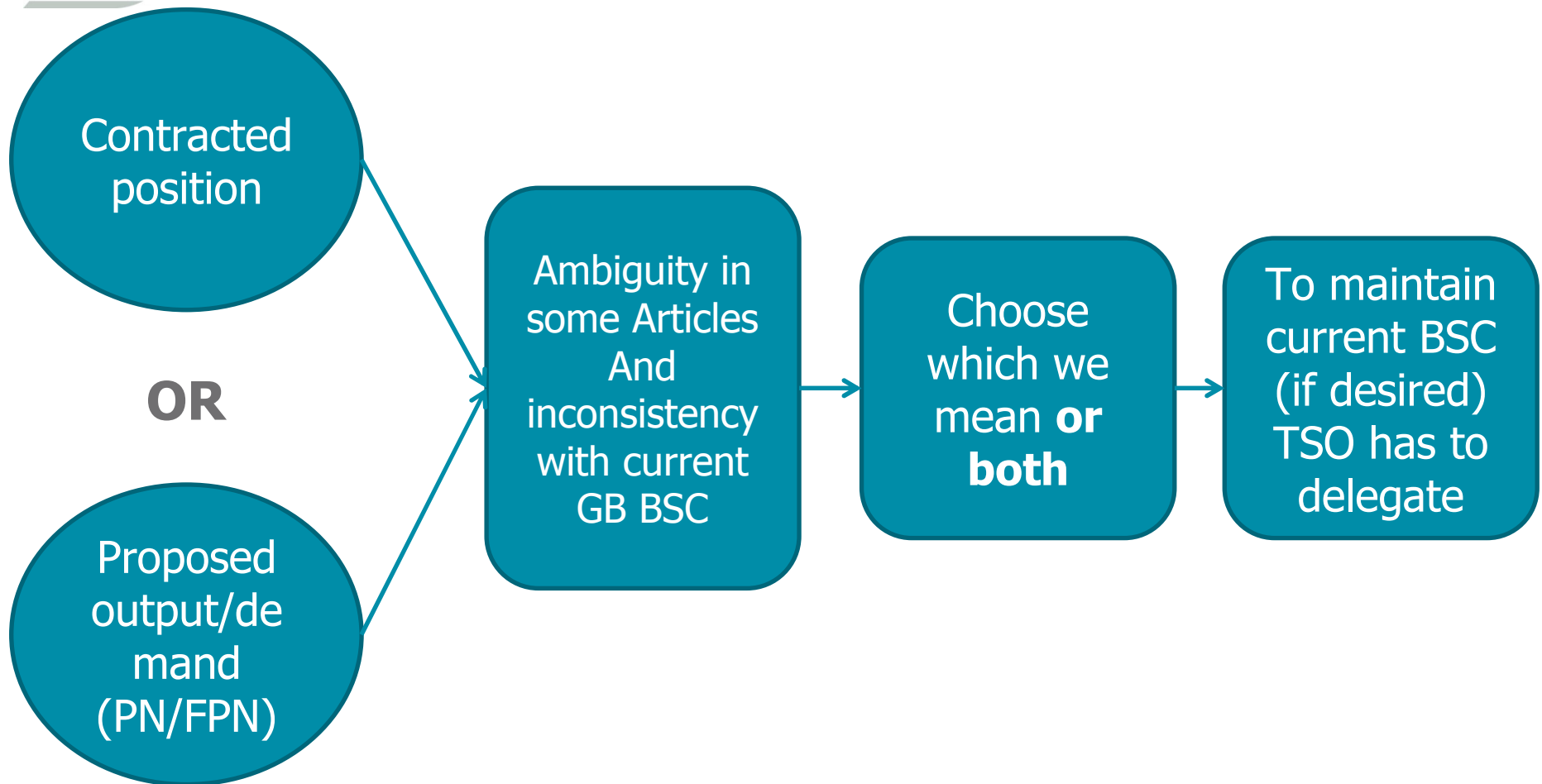
## Possible timeline to implement EBNC if no initial change in GB is the aim



## Choice of definition of "Position" (1)



## Choice of definition of "Position" (2)





## And just to note....

- There are some implicit requirements that are not spelt out in the EBNC but will have to be in GB documentation, for example I foresee:
  - conversion of European Standard Products to GB Balancing Mechanism Bid-Offer Acceptances

## Example: Conversion of Standard Product Acceptances to GB Acceptances

Example: Balancing Energy Bids and Offers

GB cannot use Standard Product acceptances directly, e.g. because priced in €s

Conversion back to GB sits in Grid Code and BSC?

GB Bid-Offer  
Acceptances  
(BOAs):

- £/MWh clearing price
- Spot values and times (against FPN?)
- Times to (nearest) minute?

←  
Not explicit  
in EBNC

EU Standard Product  
Acceptances from central  
EU optimisation:

- €/MWh clearing price
- Spot acceptance values?
- Times in seconds (including part minutes)?



## Possible Next Steps?

- ECCAF to discuss high level principles
  - Recommendations to Panels noting those parts outside existing Codes and that EBNC is still draft
- Next level of detail:
  - Article by Article mapping/confirmation with legal input?
    - I have some rough but detailed slides on where I think Articles may map that I am happy to share/be challenged on (see separate Appendix)
  - When do we need to start – can we/should we wait for “final” EBNC?





## 8. Agenda Items for February Meeting

Barbara Vest (Energy UK)

## 9. AOB

Barbara Vest (Energy UK)

**Thank You**

