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Supporting Slides for UNC modification 597

WG 2

2nd December 2016

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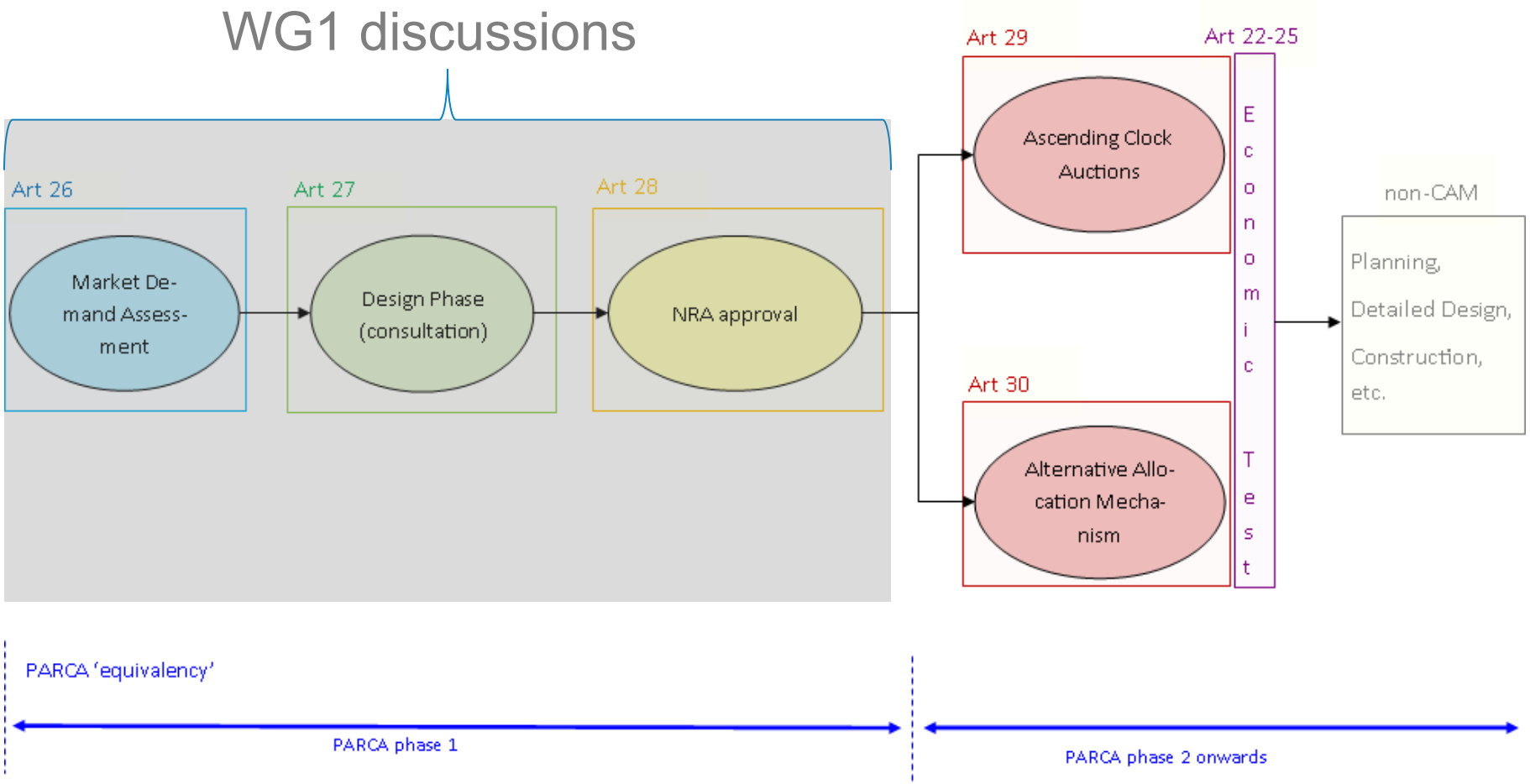
High Level steps in the CAM process



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Commercial Framework

Phase	Task/Output	Rules	Other impact
Demand Assessment	Demand Indications (inc. ad-hoc process)	UNC	
Demand Assessment	Demand Indication Fee	UNC	Licence
Demand Assessment	Demand Assessment Report	UNC	
Design Phase	Requirements for Consultation	UNC	
NRA Approval	Requirements for Project Proposal	UNC	
NRA Approval	Requirements for Joint Notice	UNC + PARCA	
Allocation	Methodology: Auctions or Alternative	Project Proposal	[Licence if auctions]
Economic Test	Methodology	Capacity Methodology	

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Agenda

- WG2
  - Actions update
  - Alternative Allocation process
  - Auction process (for comparison)
  - Economic Test
- Future WGs
  - Legal Text

ALTERNATIVE ALLOCATION

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Alternative Allocation approach

- Follow PARCA ‘phase 2’ as closely as possible.
  - use PARCA contract
  - window to sign contract (default 28 days)
  - reservation of capacity
  - security deposit
  - apply an Economic Test
  - withdrawal/termination rules
  - Allocation Date
  - etc.

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Conditional Binding Commitments

- There are 3 allowed conditions under CAM (alternative allocation only), which NG will support:
  1. Commitments linking or excluding commitments at other IPs;
  2. Commitments across a number of different yearly standard capacity products at an IP;
  3. Commitments conditional on the allocation of a specific or minimum amount of capacity.
- Under the PARCA process a specific quantity is specified (3) as well as a capacity profile (2).
- The Economic Test shall take account of point (1).

Alternative Allocation Overview

Follows existing process

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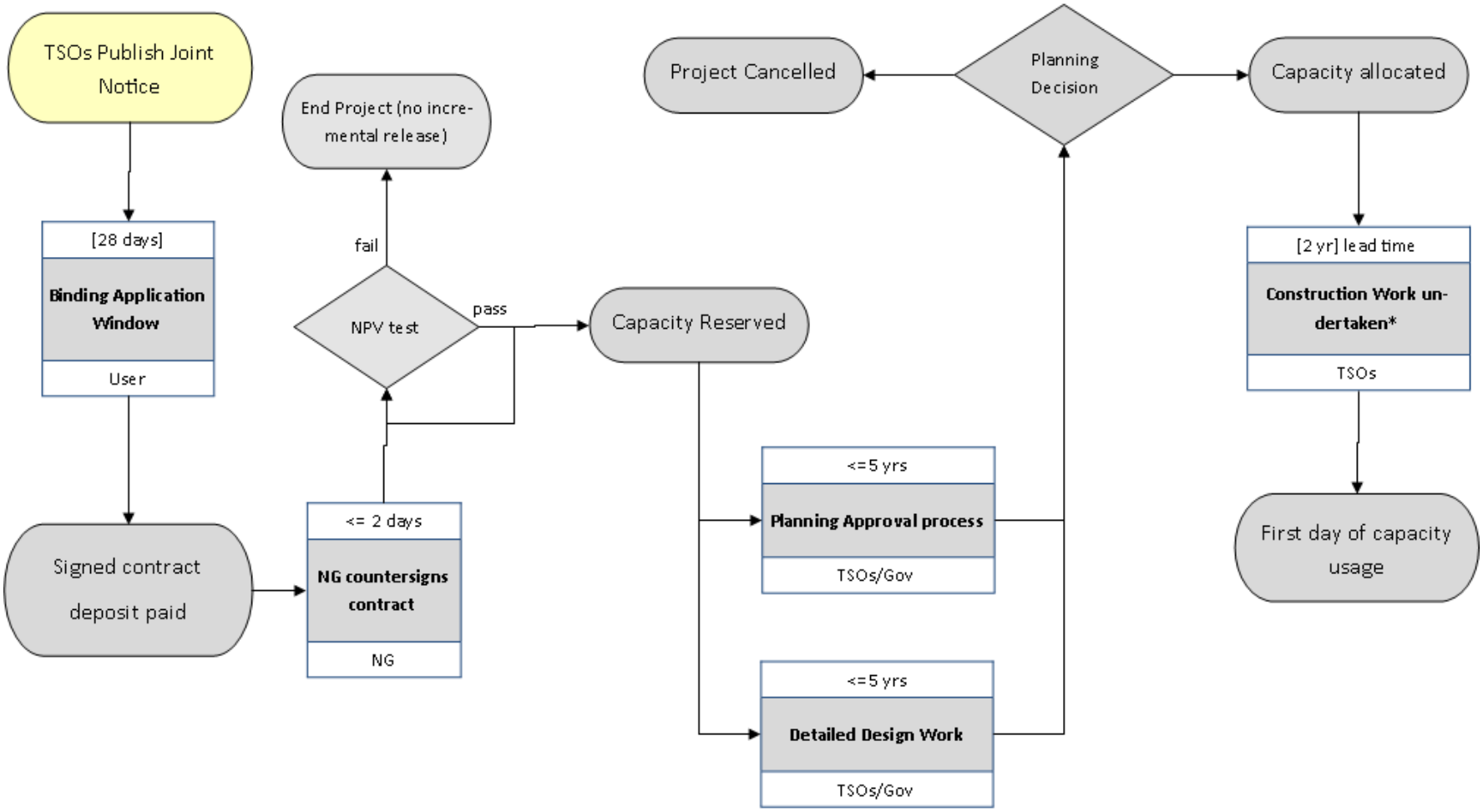

*or alternative commercial agreements finalised

ECONOMIC TEST

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Economic Test - Parameters

- PV of estimated increase in allowed revenue **(AR)**.
- PV of binding commitments **(R)** calculated as the sum of:
  - amount of inc. capacity x (est. reference price + mandatory minimum premium).
  - amount of unsold technical capacity x mandatory minimum premium.
- f-factor **(f)**.

The test is:

+ve (passed) where $R/_{AR} >= f$

-ve (failed) where $R/_{AR} < f$

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Economic Test – calculating R

Yr.	Qty	- Unsold qty - Inc. qty.	Est. Ref. Price (r)	Minimum premium (p)	Total Price (t=r+p)	Revenue (R)	Present Value of R
5	300	50	-	2	2	850	578
		250	1	2	3		
6	300	50	-	2	2	850	536
		250	1	2	3		
7	300	100	-	2	2	800	467
		200	1	2	3		
8	300	110	-	2	2	790	427
		190	1	2	3		
9	300	115	-	2	2	785	393
		185	1	2	3		
10	300	130	-	2	2	770	357
		170	1	2	3		
NPV							2757

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Completing the Economic Test

The estimated increase in allowed revenue shall be in line with the Generic Revenue Driver Methodology. For this example AR = 5000

As per previous slide, for this example R = 2757

Economic Test

$$R/_{AR} = 2652/_{5000} = 0.55$$

So long as 0.55 >= f then the economic test is passed.

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Economic Test – further info

- The test shall only be passed if both sides of an IP have a positive outcome *(Art 22)*
- CAM states that the NRA shall set the level of the f-factor. *(Art 23)*
- After the individual Economic Tests then the individual parameters shall be combined into a single combined economic test. *(Art 24)*

$AR = AR_1 + AR_2$ $R = R_1 + R_2$ f = combined f-factor

- The final approved parameters shall be published at the Joint Notice stage *(Art 25)*
- An iterative approach will be taken to the Economic Test where commitments are conditionally linked to other IPs.

INTERACTION RULES

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Existing PARCA Initiation rule

- Existing rule: a PARCA may not be initiated during an ongoing QSEC or EAFLEC process:
  - entry – between QSEC invitation and allocation dates
  - exit – between EAFLEC notification date and 30th Sep.
- No equivalent rule for CAM process i.e. there are no restrictions on submitting ad-hoc IP demand indications. No benefit is gained by a restriction - its impossible to avoid overlap with existing annual processes as the IP process is >12 months long.

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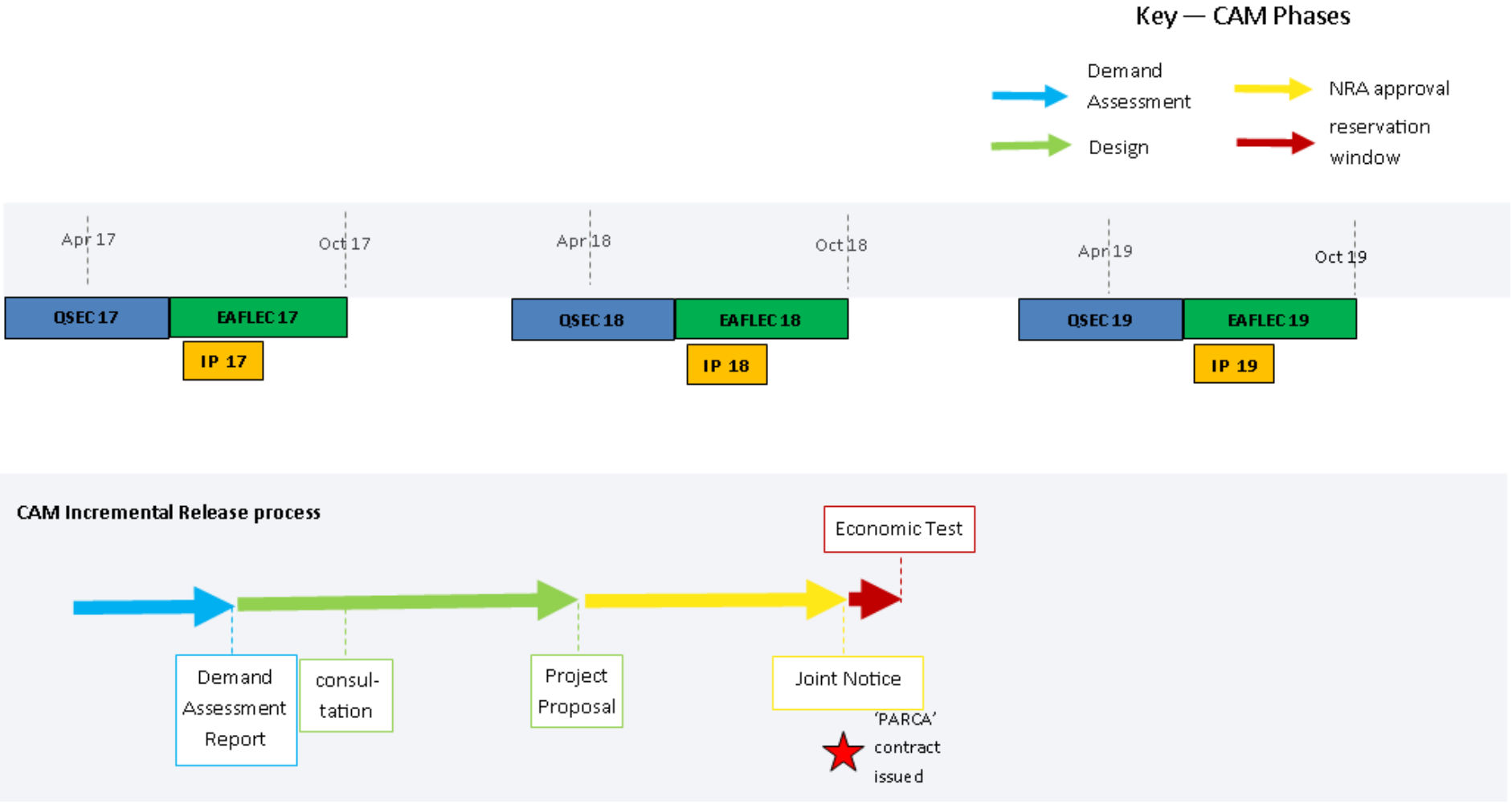
Interaction Rules – non binding part of CAM

- Non binding phases being demand assessment, design phase & NRA approval.
- Binding phase beginning when the Joint Notice is published and the binding reservation window is opened.

- Unsold quantities of existing technical capacity may be used to satisfy demand expressed during the CAM process, but only once a binding demand has been received.
- Unsold quantities shall not be set aside for the CAM process during the non-binding phases.
- Unsold quantities shall continue to be offered in full into other long term auction/application processes prior to the binding phase of CAM.

2017 Interactions timeline



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Interaction Rules – binding phase of CAM

- NG can not run the IP Economic Test for binding commitments while capacity has been set aside for another allocation process (QSEC; EAFLEC; Annual Yearly).
  - This is because NG will not know in what proportion the demand can be met from existing unsold & new incremental, if unsold is currently in another process.
- NG would have to wait for allocation of the other process to complete, before being able to complete an Economic Test.
- The binding phase of CAM should therefore avoid overlap with other processes:
  - entry – between QSEC invitation and allocation dates
  - exit – between EAFLEC notification date and 30th Sep.
  - initiation of domestic PARCA may be delayed to avoid interaction with binding phase of CAM.

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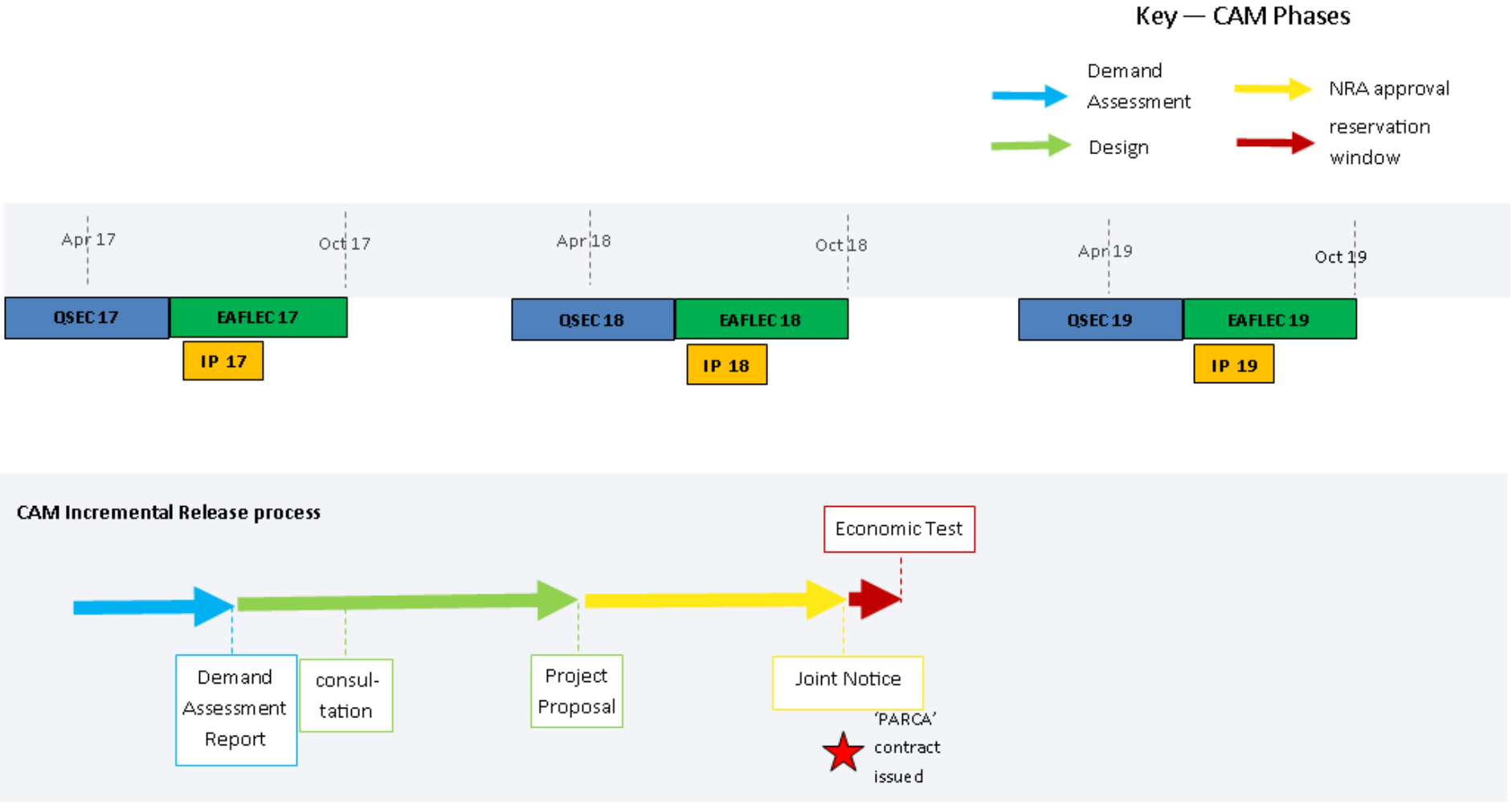
Interaction Scenarios with annual processes

1. Joint Notice is published & no other allocation process (QSEC/ EAFLEC/ Annual Yearly) is running. We can complete the Economic Test before any of the other processes are due to start. Ok, no 'hard' interaction between CAM & non-CAM processes.

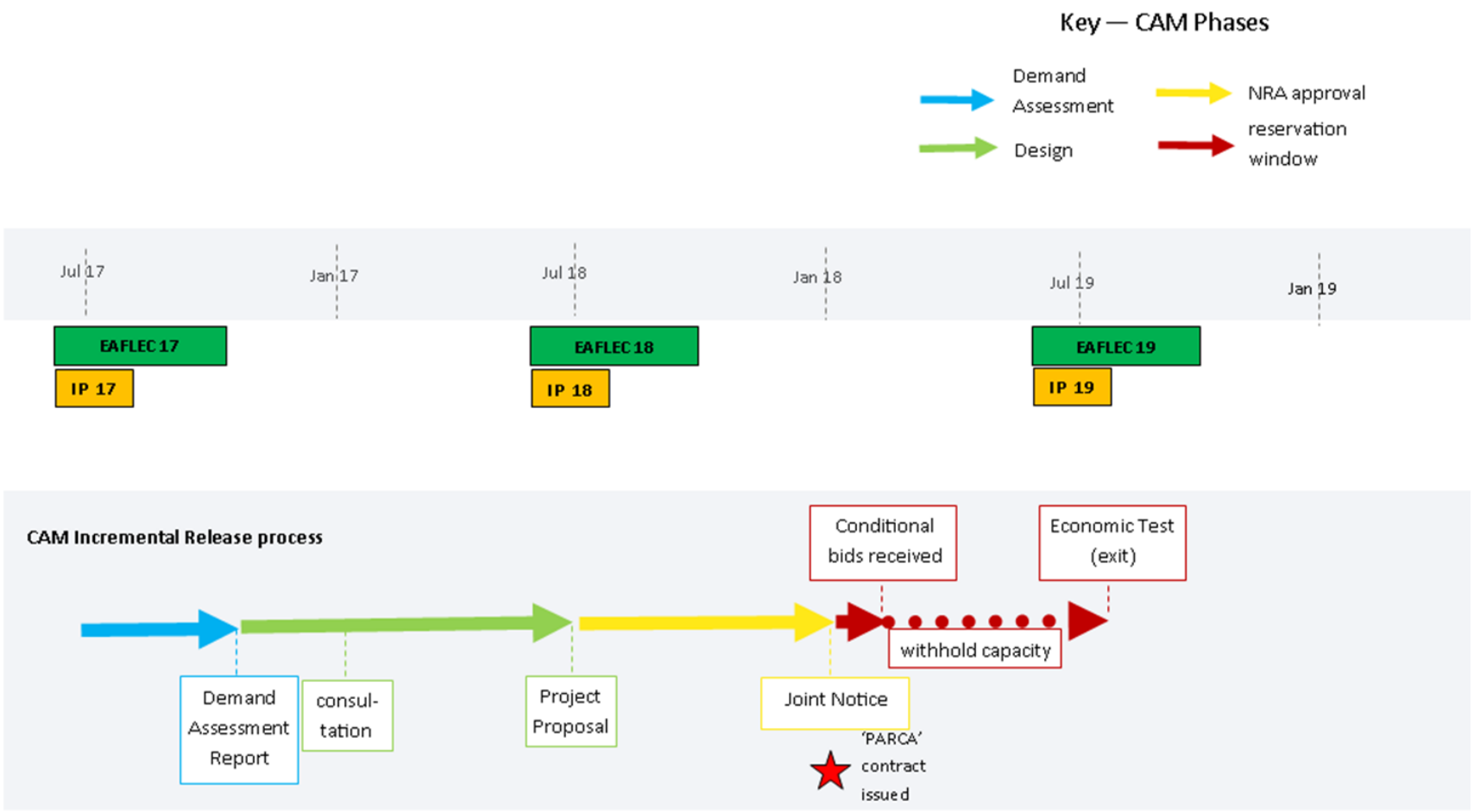
2. Joint Notice is published & no other allocation process (QSEC/ EAFLEC/ Annual Yearly) is running. We can't complete the Economic Test before running into the start of another allocation process. Capacity to be set aside for the binding process that started first i.e. CAM

3. Reservation window shuts & another allocation process is currently running (will try to avoid but can't guarantee). Capacity has been set aside for the binding process that started first i.e. other non-CAM process. The Economic Test must be deferred until allocations for the other process are completed.

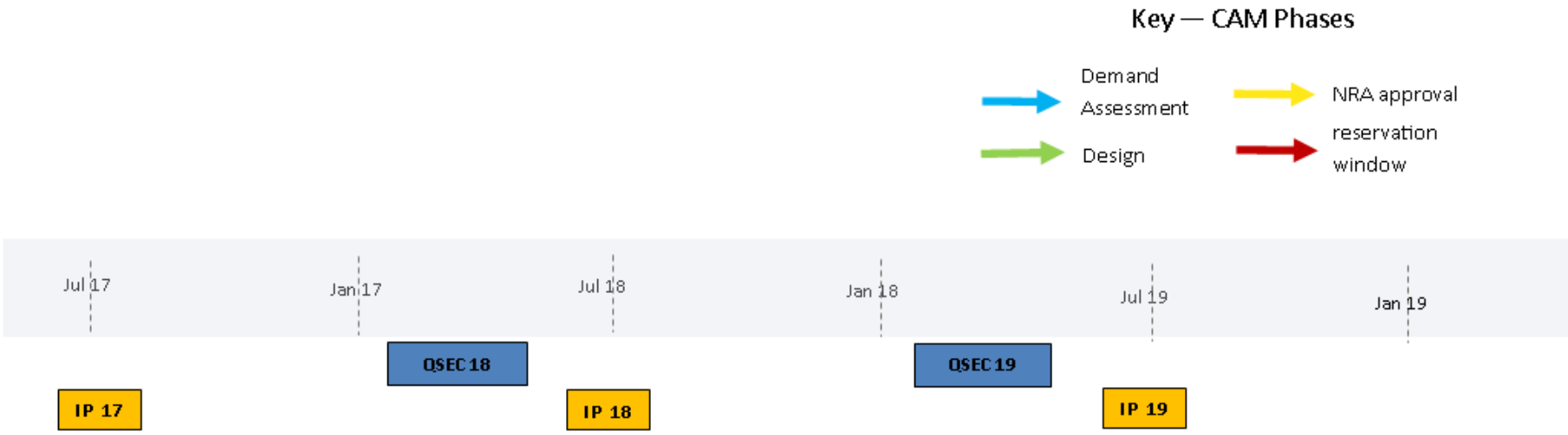
Scenario 1

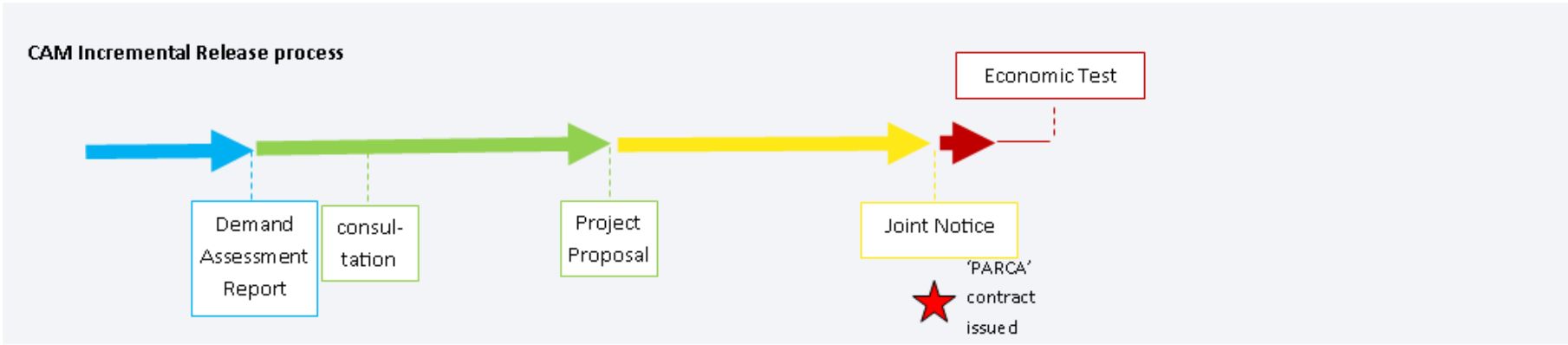

Key — CAM Phases
Demand Assessment
NRA approval
Design
reservation window
Apr 17
Oct 17
Apr 18
Oct 18
Apr 19
Oct 19
QSEC 17
EAFLEC 17
IP 17
QSEC 18
EAFLEC 18
IP 18
QSEC 19
EAFLEC 19
IP 19
CAM Incremental Release process
Economic Test
Demand Assessment Report
consul-tation
Project Proposal
Joint Notice
'PARCA' contract issued

Scenario 2


Key — CAM Phases
Demand Assessment
Design
NRA approval
reservation window
Jul 17
Jan 17
Jul 18
Jan 18
Jul 19
Jan 19
EAFLEC 17
IP 17
EAFLEC 18
IP 18
EAFLEC 19
IP 19
CAM Incremental Release process
Demand Assessment Report
consul-tation
Project Proposal
Joint Notice
'PARCA' contract issued
Conditional bids received
withhold capacity
Economic Test (exit)

Scenario 3


Key — CAM Phases
Demand Assessment
NRA approval
Design
reservation window
Jul 17
Jan 17
Jul 18
Jan 18
Jul 19
Jan 19
QSEC 18
QSEC 19
IP 17
IP 18
IP 19


CAM Incremental Release process
Economic Test
Demand Assessment Report
consul-tation
Project Proposal
Joint Notice
'PARCA' contract issued

WITHHOLDING 10% OF INCREMENTAL CAPACITY

Comparison between options for additional 10%

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	Add obligation	'over ask'
Shipper wants	100	100
Shipper asks for	100	111.1
Shipper allocation	100	100
NG obligation	111.1	111.1
Revenue driver	111.1	111.1
Build for	100*	111.1
Incentive impact	Risk of 'extra' 11 to be managed	None
Economic test (revenue / project value)	Rev(100) / PV(111.1)	Rev(100) / PV(111.1)

- no difference identified
- difference identified

*discuss with Ofgem

STANDARD AUCTION MECHANISM

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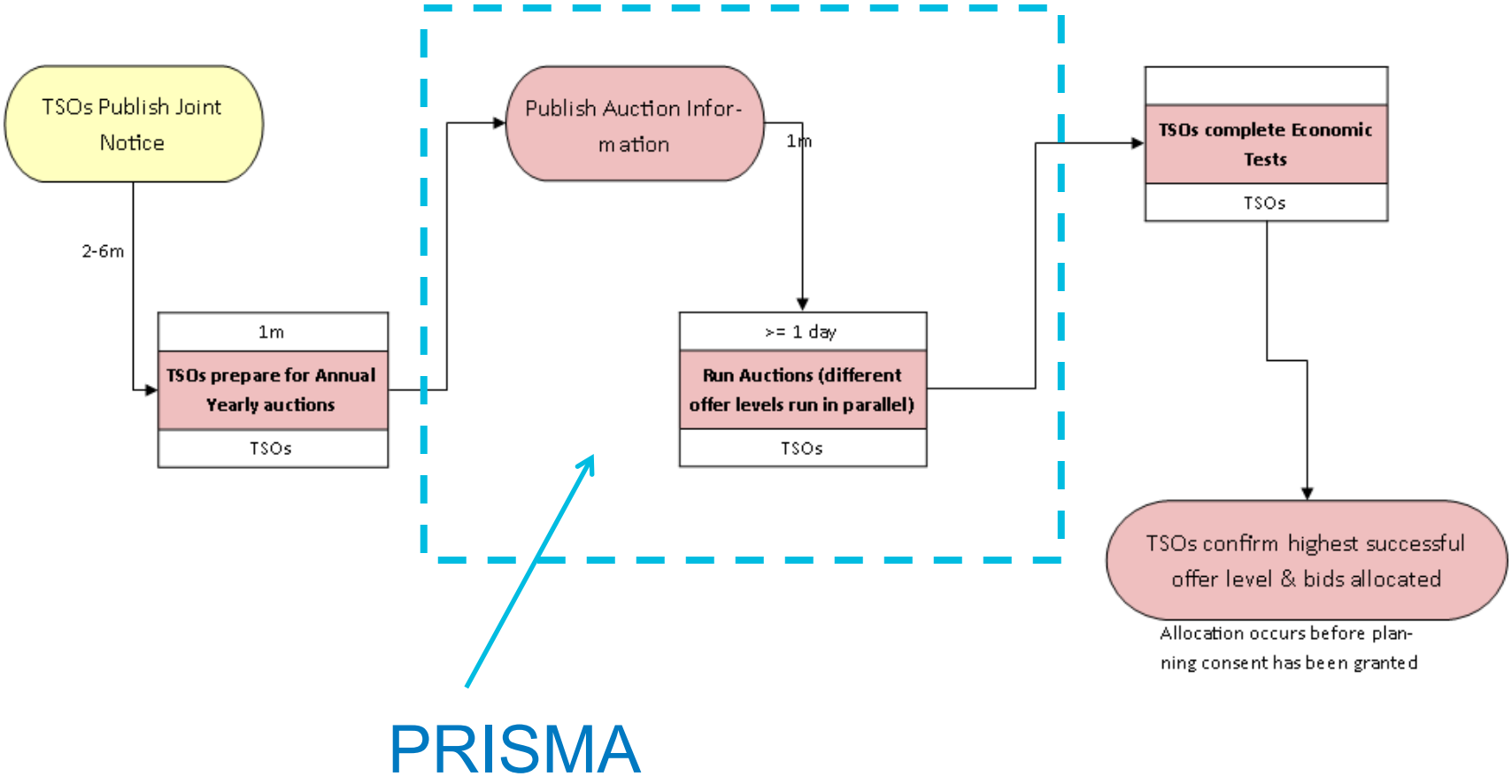
Auction Overview



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CAM Requirements for Standard Mechanism

- Incremental Capacity will be offered alongside existing capacity in the Annual Yearly Auction (Ascending Clock)
- Amount offered (*offer level*) = A-B-C+D+E-F
  - A is technical capacity
  - B is technical capacity set aside (for short term)
  - C is (previously) sold capacity
  - D is additional capacity (CMP)
  - E is incremental capacity in respective offer level
  - F is incremental capacity set aside (for short term)
- There shall be a number of incremental capacity amounts offered, and hence a number of *offer levels*.

Auction(cont.)

- The number of offer levels will be identified in the Project Proposal.
- A baseline offer level will be offered i.e. incremental = 0
- Each offer level will be marketed independently, and in parallel, with other offer levels.
- The auctions will be run on PRISMA.
- It is necessary for the adjacent TSO to have the same number of offer levels.
- The available capacity at each offer level will be subject to bundling in line with the existing process.

Auction(cont.)

- The auctions associated with each offer level will be completed, but the results will be provisional. Only the results of one offer level can become binding.
- Shippers will need to bid against each offer level to make sure they get the capacity they need.
- The (provisional) results of each offer level will be subject to an economic test.
- TSOs will complete the economic test.
- The highest offer level that passes the economic test will become the binding results. The other results become void.

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Auction(cont.)

- In order to maximise the incremental capacity released there may be one further bidding round if the following criteria are satisfied.
  - 1 or more offer levels successfully passed the NPV test
  - there were at least 2 offer levels
  - at least one offer level was unsuccessful
  - the offer level below the (lowest) unsuccessful offer level passed the economic test and had an auction premium.
- If all conditions are met then a new auction could be re-run for the lowest unsuccessful offer level. (e.g. re-run S2 in example table)

Offer	NPV
S3	x
S2	x
S1	✓
S0	✓

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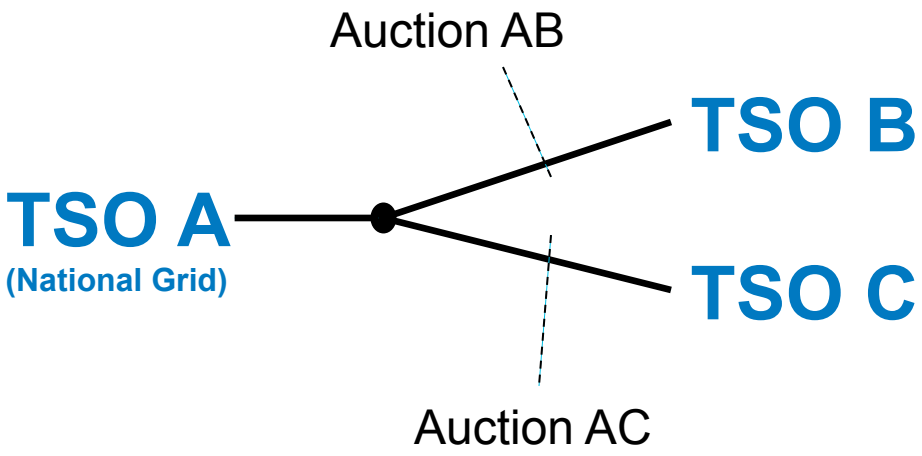
Competing auction 1:2 scenarios

- Three TSOs – A, B & C
- Bundled auctions AB and AC



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Existing & Incremental Capacity

- Competing Capacities
  - ensure efficient use of network for existing capacity.
  - manages congestion
  - dynamic allocation driven by market need.
- Incremental Capacity
  - ensure efficient network development for future capacity
  - reduces congestion
  - investment driven by market need
- 2 different concepts each with their own complexity. CAM does not explicitly envisage using competing auctions for allocating incremental capacity, however because incremental capacity is tied to existing then it is unavoidable if using auctions.

competing auction & incremental - note: rules TBC at European level

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1. no incremental offered (1 pair of linked auctions)

AB

Avl.	Rd 1	Rd 2	Rd 3	Rd n
S_0	D_1	D_2	D_3	D_n

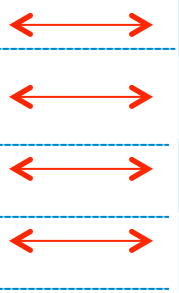
AC

Avl.	Rd 1	Rd 2	Rd 3	Rd n
s_0	d_1	d_2	d_3	d_n

2. incremental offered (x pairs of linked auctions)

AB

	Avl.	Rd 1	Rd 2	Rd 3	Rd n
i_0	S_0	D_{01}	D_{02}	D_{03}	D_{0n}
i_1	S_1	D_{11}	D_{12}	D_{13}	D_{1n}
i_2	S_2	D_{21}	D_{22}	D_{23}	D_{2n}
i_x	S_x	D_{x1}	D_{x2}	D_{x3}	D_{xn}



AC

Avl.	Rd 1	Rd 2	Rd 3	Rd n
s_0	d_{01}	d_{02}	d_{03}	d_{0n}
s_1	d_{11}	d_{12}	d_{13}	d_{1n}
s_2	d_{21}	d_{22}	d_{23}	d_{2n}
s_x	d_{x1}	d_{x2}	d_{x3}	d_{xn}

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Competing Auctions Issues

- Competition tree limited to 1 pair of auctions at each supply level to limit complexity (PRISMA proposal)
  - There will not be multiple matching where S1 from AB is matched up with e.g. S0, S1, S2 and S3 from AC.
- TSOs will agree a reasonable number of Offer Levels.
- All 3 TSOs would need to agree to submit ‘x’ numbers of offer levels to PRISMA.
- Shippers who want capacity will need to be aware they have to submit requested capacity in ‘x’ auctions.

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Allocation Phase Summary

- Auctions merge 2 complex processes (competing auctions and incremental auctions) together.
  - rules still to be developed.
- Auctions brings back ‘planning consent’ issue, that PARCA was brought into address.
- Conditional commitments are not possible in auctions.
- Fixed 2 year cycle when using auctions.
- High system costs to implement auctions.
- For these reasons then the continued use of PARCA, via the alternative mechanism, is our preferred route at IPs.
  - established process for GB users
  - offers flexibility which PARCA was introduced for
  - in discussions with adjacent TSOs to introduce an alternative mechanism