16 April 2025

FASS: DASSA Top-Up Mechanism

Proposal for Residual Availability Determination (RAD) Mechanism

Industry consultation information session

Agenda

01 Introduction

02 Overview of RA-TSO Joint Options Assessment

03 Proposal for Residual Availability Determination

04 Questions received prior to Information Session

05 Q & A [Questions received during the Information Session]

Introduction

TSOs' DASSA Design Recommendation (July 2024):

- Daily Day-Ahead System Services Auction (DASSA), initially for reserve services.
- Secondary trading of DASSA Orders up to gate closure.
- Commitment obligations and incentives regime.
- Ex-post top-up Final Assignment Mechanism (FAM).

SEMC Decision (September 2024):

- Most of the TSOs' recommendations were approved.
- Notable exception was the FAM – SEMC commented:
  - FAM reduces incentive to participate in the DASSA and secondary trading – reducing liquidity in these markets
  - Bids (submitted in DASSA day-ahead) cannot be updated closer to real-time.
  - Secondary trading mitigates the need for a top-up mechanism.
- Decision acknowledged TSOs' concerns:
  - RAs happy to work with the TSOs to develop any alternative approaches to incentivising real-time availability above DASSA procured volumes.

Introduction

- TSOs have been consistent that a DASSA top-up mechanism is necessary.
- Two 'work packages' were agreed with the RAs with the following scope:
  - Work Package #1: Identify if TSO system security needs will be met by a design without a top-up mechanism.
  - Work Package #2: Perform an Options Assessment (**jointly between TSOs and RAs**) to determine a preferred option for a top-up mechanism.

- Joint Options Assessment (WP#2) was initiated in September 2024 and concluded in December 2024 having assessed the following options:
  - 1: No additional procurement mechanism.
  - 2: Grid code enhancements.
  - 3: Over procure in DASSA.
  - 4: Procure baseload services via LPF auction.
  - 4ii: LPF with availability commitment.
  - 5: Procure baseload services via LPF contracts < 6 months.
  - 6: Procure baseload services via LPF contracts > 13 months.
  - 7: Reconciliation of real-time system needs.
  - 8: Changes to BM rules.

Outcome of the Joint Options Assessment was to combine Options 4ii & 7 to create a 9th Option:

Procure residual availability ex-ante & clear ex-post based on real-time system needs.

Subject of this consultation, which opened on 24 March 2025.

Overview of Joint RA-TSO Options Assessment Process

Assessment of Options

- To ensure that the options were sufficiently described to ensure consistent assessment, each considered all the following:
  - Key benefits
  - Key challenges
  - Compliance Assessment
  - “Day in the Life” overview
  - Worked example

Option 1: No additional procurement mechanism

Description	Key Benefits	Challenges
• DASSA is the only means of procuring reserve services. • DASSA is the only means of payment for service providers, therefore they are incentivised to participate in the DASSA and secondary trading. • No additional top-up mechanism.	• Single procurement mechanism encouraging stronger commitment to DASSA. • Simplified implementation reducing IT and TSO administrative impact. • Unlikely to have impact on FASS PIR timelines.	• Relies on secondary and balancing markets to resolve system reserve shortfalls. • Possible impact on Imbalance Pricing due to insufficient reserve procurement. • Inflexible in the event of unforeseen system constraints. • Reduced opportunities for technologies with less predictable availability until closer to real-time (wind, DSU etc.). • Increased risk of reserve shortfalls with no mechanism to correct deficits.

Option 2: Grid Code enhancements

Description	Key Benefits	Challenges
• Grid Code updated to require all service providers to declare and make available their full technical system services capability. • All available system services capability will be accessible by the TSOs in real-time. • Service providers will not be rewarded for being available for additional volumes.	• No IT requirement for implementation, de-risking impacts to FASS PIR timelines. • System security ensured by placing explicit obligations on all system service providers.	• Additional volumes required will not be remunerated, reducing incentives and investment signals for providers. • Difficult to enforce/monitor and could result in additional operational cost to undertake such activities. • Significant cost and effort required to progress Grid Code modifications through the mod panel.

Option 3: Over procure in DASSA

Description	Key Benefits	Challenges
• Over procure system service volume. • DASSA is the only means of procuring system services. • DASSA is the only means of payment for service providers. • No additional top-up mechanism.	• Single procurement mechanism Encouraging stronger commitment to DASSA. • Simplified implementation reducing IT and TSO administrative impact.	• Relies on secondary and balancing markets to resolve system reserve shortfalls. • Possible impact on Imbalance Pricing due to insufficient reserve procurement. • Potential increase in costs to consumers. • Difficulties in managing renewable integration without the ability to adjust reserves post auction. • Increased risk of reserve shortfalls with no mechanism to correct deficits.

Option 4: Procure Baseload Services via LPF Auction

Description	Key Benefits	Challenges
• Monthly/quarterly/bi-annual auctions for TSO-defined system services volumes. • Auctions in advance of DASSA, procuring "baseload" volumes i.e. a certain volume of system service with an **obligation to make awarded volumes available**. • DASSA remains primary auction. • Regular procurement auction cycles.	• Creates a predictable market environment. • Enhances system security well in advance of delivery. • Enables some additional confidence for the TSOs regarding volumes secured.	• May remove volumes from DASSA. • Increased reliance on the secondary and balancing markets affecting cost to consumer. • Requires code and IT developments, increasing FASS complexity and impact milestone delivery in PIR. • Renewables may be challenged to effectively participate in system services market, which may limit overall market participation and the goal of decarbonisation.

Option 4ii: LPF with Availability Commitment

Description	Key Benefits	Challenges
• Monthly/quarterly/bi-annual auctions for TSO-defined system services volumes. • Contracted service providers only obliged to maintain available volumes not cleared in other markets. • DASSA remains primary auction. • Regular procurement auction cycles. • Payments made irrespective of eventual availability.	• No distortion to energy market as LPF obligation only applies to volumes not cleared in other markets. • Incentivises the entry and performance of plant in locations of higher system need through sub-region capacity requirements. • Enables all technologies to participate. • Service providers can participate in other markets.	• May disincentivise participation in DASSA. • No guarantee real-time needs will be met. • Not deliverable by FASS Go-Live. • A contract duration of six months may not provide sufficient investment incentives.

Option 5: Procure Baseload Services via LPF Contracts <6 Months

Description	Key Benefits	Challenges
• Contractual arrangement for volumes procured prior to the DASSA. • Volumes procured competitively via Request for Proposal (RFP) every <=6 months. • Obligation to make awarded volumes available. • DASSA remains the primary mechanism for procurement of reserve.	• Provides a structured mechanism for procuring system services ahead of short-term energy and balancing markets. • Facilitates revenue certainty for providers. • Ensures volume certainty for TSOs, reducing reliance on last minute procurement.	• Limited flexibility due to set contracts. • Renewables may be unable to participate in the market. • May not represent most cost efficient procurement of reserves. • No guarantee of meeting real time requirements. • Procurement development and execution overhead not implementable for DASSA go-live.

Option 6: Procure Baseload Services via LPF Contracts >13 Months

Description	Key Benefits	Challenges
• Contractual arrangement for volumes procured prior to the DASSA. • Volumes procured competitively via Request for Proposal (RFP) every >13 months. • Must be re-procured/renewed every 13 months. • Obligation to make awarded volumes available. • DASSA remains the primary mechanism for procurement of reserve.	• Provides a structured mechanism for procuring system services ahead of short-term energy and balancing markets. • Creates predictable market for providers. • Increased revenue certainty. • Ensures volume certainty for TSOs, reducing reliance on last minute procurement.	• Potential liquidity issues where LPF may draw participants out of DASSA. • No guarantee of meeting real time needs. • Renewables may be unable to effectively participate in the market. • Additional costs may be passed on to consumers. • Procurement development and execution overhead not implementable for DASSA go-live.

Option 7: Reconciliation of Real-Time Needs

Description	Key Benefits	Challenges
• Identify real-time system needs not procured in the DASSA (residual needs). • Identify assets that meet real-time needs and assign volumes. • Determine the remuneration rate applicable for residual needs. • Remunerate assets providing residual needs.	• Enables all technologies to participate. • Mechanism already within FASS IT solution requirements. • Service providers paid for DASSA Orders and additional volumes required in real-time. • Remuneration for volumes beyond Final DASSA Order volumes is procured competitively (based on submitted prices). • Provides clear investment signals to investors, as services provided will be remunerated.	• May disincentivise participation in DASSA. • Moderate IT system complexity to operate. • Increased operational overhead. • Substantial ex-post analysis to determine volume requirements, availability determination & Adjusted Supply Curve.

Option 8: Changes to Balancing Market Rules

Description	Key Benefits	Challenges
• No additional top-up mechanism. • Use simple instead of complex BM offers for system services. • Reserve re-positioning in the BM remunerated pay-as-clear instead of pay-as-bid. • DASSA remains the primary means of procuring system services.	• Simple IT implementation. • Encourages stronger participation and commitment from service providers in the DASSA. • Reduces TSOs' operational overhead and administrative burden associated with running an extra top-up mechanism. • Allows for inframarginal rents.	• Uncertainty whether this would provide sufficient additional reserves. • Potential imbalance costs may arise due to insufficient reserve procurement. This could result in a reduction in transparency as costs might be shifted to the imbalance price. • Inframarginal rents may increase short term costs to consumers. • May exclude non-BM units.

Development of Preferred Option

Joint Options Assessment focussed on the benefits and challenges of:

- Procuring a volume of system services in advance with no commitment obligation (Option 4ii).
- Reconciling the real-time needs of the system ex-post (Option 7).

Option 4ii
• Mitigates system needs via payments for technical availability.
• Enables all technologies to participate.
• Service providers can participate in other markets.
• May disincentivise participation in DASSA.
• Not deliverable by FASS Go-Live.

Option 7
• Procurement of actual real-time volume requirement only.
• Enables all technologies to participate.
• Mechanism already within FASS IT solution requirements.
• May disincentivise participation in DASSA.
• Non-compliance with SEMC decision.

Outcome: Extension of Option 4ii

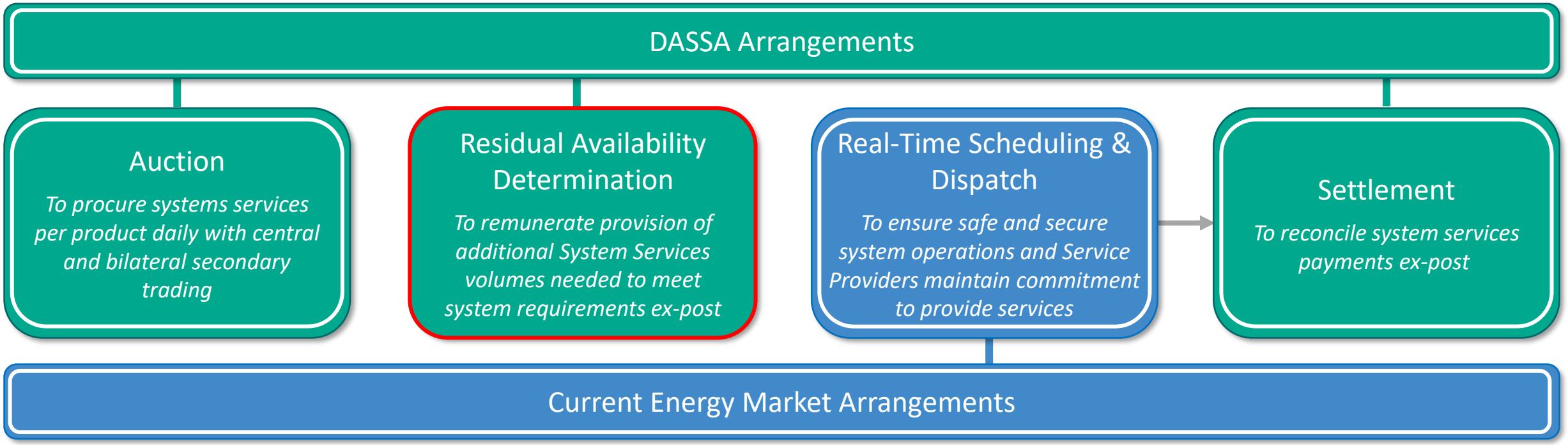
- Procure residual availability ex-ante.
- Clear ex-post based on real-time system needs.

Proposal for Residual Availability Determination (RAD)

DASSA Arrangements – HLD criteria

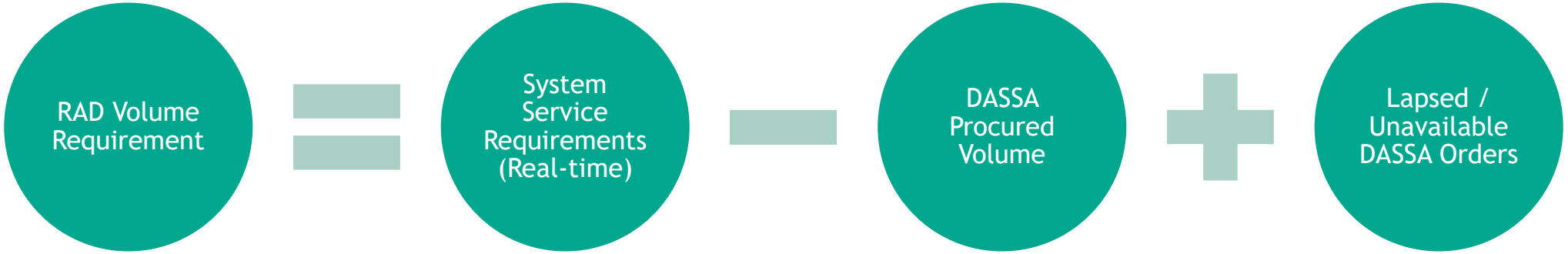
High Level Decision (SEM-22-012): Objectives and Assessment Criteria:

- Consumer Value
- European Compliance
- System Need
- Alignment
- Accuracy
- Adaptability
- Simplicity
- Energy Transition
- Investor Clarity
- Transparency



Proposal for RAD - Overview

- System services to be procured as per the DASSA; no change to registration and qualification.
- The RAD procures the same system services ordinarily procured within the DASSA including upward and downward reserve.
- The RAD proposal assumes a central auction platform will be implemented for the DASSA & the RAD.
- The RAD does not change any design elements with respect to the FASS charge.
- The RAD will procure residual availability ex-ante.
- The RAD will clear ex-post based on real-time system needs.

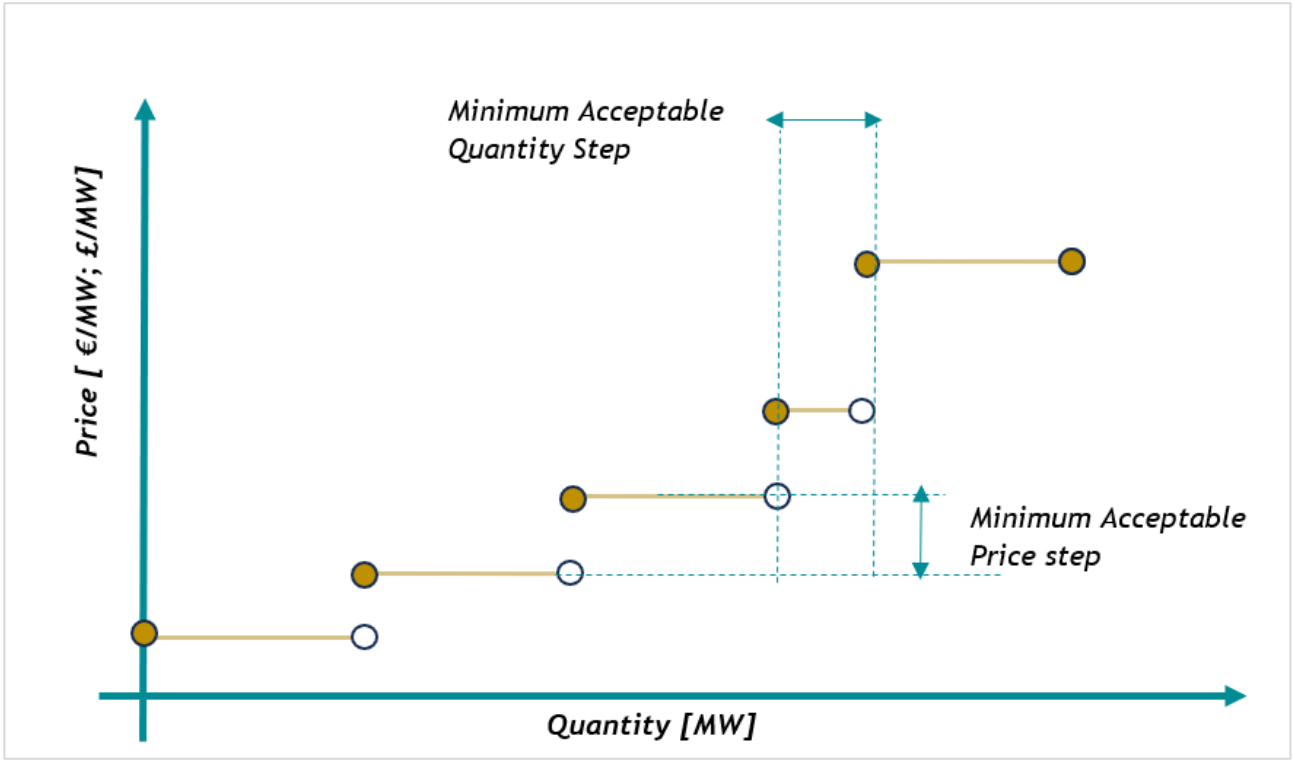


Proposal for RAD – Ex-Ante Design

- Ex-ante bids for the RAD replicate the Auction Timeframe that aligns with the DASSA (23:00 D-1 to 23:00 D).
- Ex-ante RAD offers may be submitted before DASSA offers and the RAD gate closure of 14:30 D-1.(DASSA gate closure remains unchanged at 15:30 D-1.)
- Bids may be updated up to gate closure; after gate closure rebids / updating of bids will not be permitted.
- Rationale: market power concerns of service providers having asymmetric knowledge following outcome of the DASSA and the Long-Term Schedule (LTS); this proposal is consistent with the SEMC decision on the DASSA bidding process.
- Bidding process is similar to the DASSA design
  - Providers may submit up to 10, non-decreasing Price/Quantity pairs per service per Trading Period.
  - There will be no interdependency amongst bids.
  - All bids will be categorised as divisible.

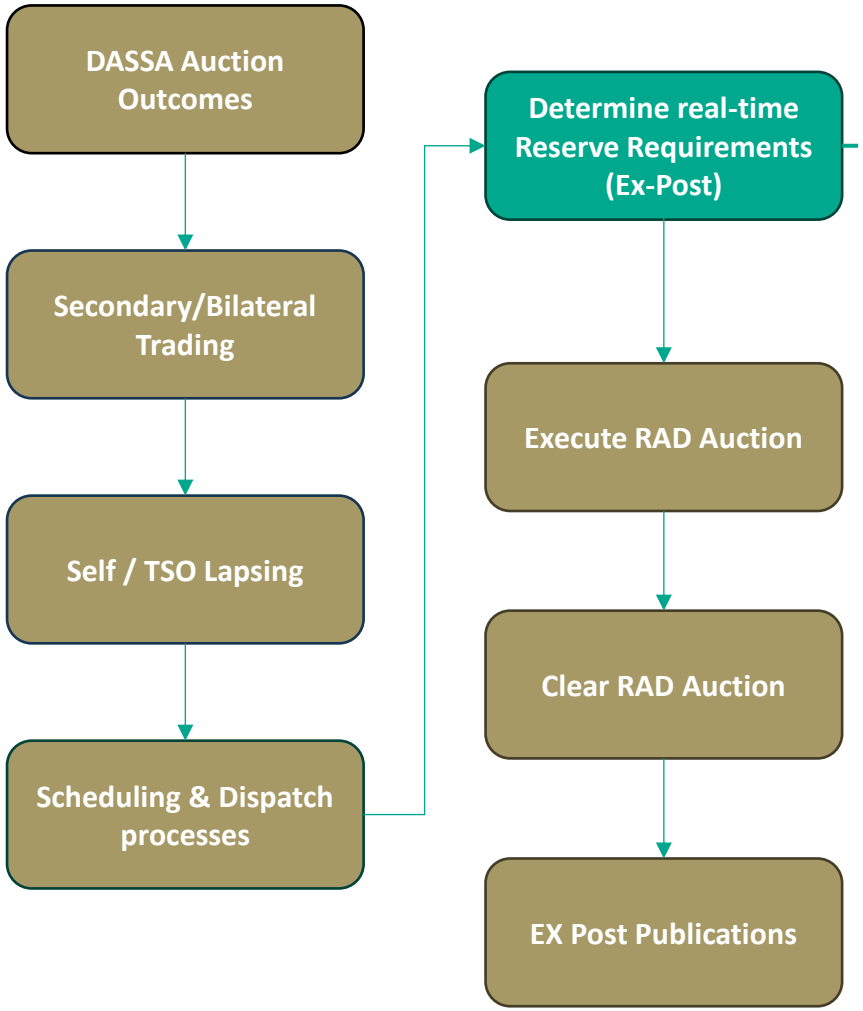
Proposal for RAD – Ex-Ante Design

- Bidding process is similar to the DASSA design.
- A typical stepwise linear offer curve is illustrated here.
- This offer curve contains nondecreasing steps that are made up of price/quantity pairs offered by the service provider (gold circles).
- Minimum acceptable values for quantity and price for each step may be implemented, as per the figure.



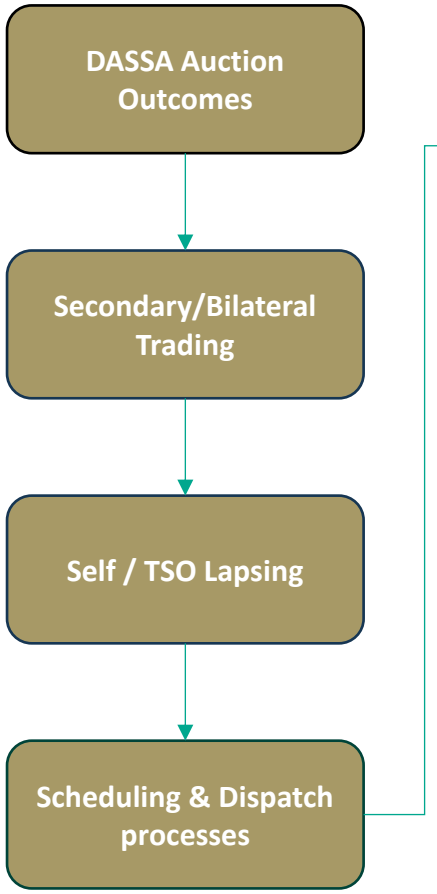
Stepwise Linear Supply Function

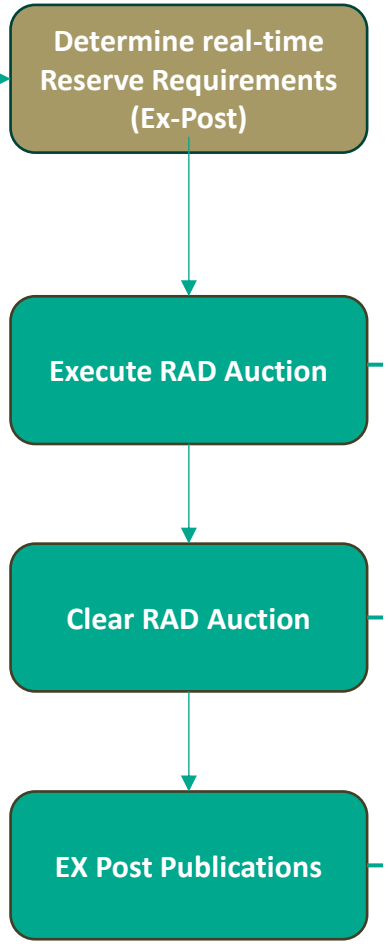
Proposal for RAD – Ex-Post Design



- TSOs will conduct an ex-post assessment of system needs in real-time, which will determine any additional volume above that procured in the DASSA required to meet system needs.
- The assessment will be conducted for each combination of Service, Zone [jurisdiction] and Quality Category, e.g., Dynamic POR in NI.
- The inputs to this assessment will be per :
  - Real-time system requirements (which will be based on data from our EMS).
  - The total volume procured in the DASSA.
  - The total volume of lapsed DASSA Orders.
  - The real-time availability of confirmed DASSA Order holders.
- The outcome of the assessment could be positive or negative, e.g., if the real-time system needs are less than the procured DASSA volume net of lapsed and unavailable Orders, then the RAD will not execute.

Proposal for RAD – Ex-Post Design





- TSOs will execute the RAD if a volume deficit is identified for any combination of Service, Zone [jurisdiction] and Quality Category, e.g., Dynamic POR in NI.
- The RAD Merit Order for each system service requirement will be derived from submitted RAD price-quantity pairs and the availability of service providers in real-time.
- The availability of service providers will be based on their actual MW output [as per our EMS], not explicitly their FPNs (unlike the DASSA), net of any confirmed DASSA Orders.

- A Pay-as-clear price, will be determined per system service product / zone / quality category, as per the DASSA.
- The clearing price will be capped at the value of the DASSA clearing price for that time period.

- Confirmed RAD Orders will be awarded to service providers who cleared in the RAD auction.
- Auction results will be published.

Q & A

Questions Received Prior to Webinar

Question	Answer
Request to extend the consultation due to the upcoming Easter and May bank holiday periods.	Extending this consultation would further risk milestone delivery outlined in PIR V2.0. The information presented within the FPM workshop held on the 21 January 2025 covered most of the subject matter contained within the consultation paper and today's presentation. The closing date of the consultation will therefore remain as 02 May 2025.
If a renewable asset has sold nothing in the DASSA and is held at a MW level due to constraints or curtailment, will the system service volume available (Availability – Metered Gen) be included in the RAD or is it deemed as not capable of providing system services and removed from the stack?	The determination of a service provider's availability in real-time for an upward reserve product will utilise the best available EMS data (used by the Control Centres) to capture a unit's headroom and its ability to export power.
How Far in advance can RAD offers be made, e.g. when is it proposed to open RAD for offers? DAM currently 19 days ahead.	In the consultation, the TSOs have proposed a RAD gate closure of 14:30 D-1 (and the rationale for same). We have not considered a firm RAD gate opening and are open to industry feedback on this in response to Question #2.
Are Real-time volume requirements for the RAD only based on Jurisdictional location, or are locational constraints factored in?	The RAD requirements will be based on what was procured in the DASSA for each combination of Product, Zone [jurisdiction] and Quality Category. In determining a unit's real-time capability, the RAD will utilise the same information that is used in the Control Rooms, which will inherently take account of outages in the EMS network model. As a result, the real-time data will incorporate some actual constraints that are not known at the DASSA stage.

Questions Received Prior to Webinar

Question	Answer
Residual Capacity noted as "net of other Market commitments". RAD supply curve notes that it will use service providers' availability to provide system services in real-time. Is the participant volume in the RAD based off Real-time output or FPN? • *If a unit clears maxgen ex-ante, will it qualify for upward volume in the RAD if part-loaded at time of delivery* • If a thermal unit does not clear ex-ante, will it qualify for volume in the RAD if part-loaded at time of delivery	Real-time availability will be based on the **actual output** of the units [using EMS data], which will implicitly reflect the ex-ante and balancing markets, and net of any confirmed DASSA Orders.
How do we ensure we are paid for all services and not just one, i.e if we secure SOR, it is likely we are providing POR	RAD requirements will be calculated individually per service for each combination of Product, Zone [jurisdiction] and Quality Category.
Do RAD bidders always get first call above non RAD bidders?	This will be dependent on the establishment of a RAD Default Price, which is yet to be determined. The TSOs will be conducting a Parameters and Scalars consultation shortly, which includes proposals on DASSA pricing. We will be considering the RAD default price following the conclusion of that (and this) consultation.
What prices will now be considered in the scheduling, is it only BM prices?	There will be no changes made to the current price references of the scheduling process.

Questions Received Prior to Webinar

Question	Answer
A Change in dispatch can mean potentially losing a whole DASSA bundle? i.e if your Replacement Reserve is no longer technically feasible, but you are still available for FFR-TOR2 ? Does the cancelling of the bundle potentially remove you from the merit order for the other products (even though it would in this instance be as a result of an SO action.	The RAD will procure on an individual product basis, accounting also for Zone [jurisdiction] and Quality Category constraints. Separately, the TSOs are currently preparing to publish the Parameters & Scalars consultation paper in the coming weeks. Within this paper, the TSOs will clarify their position on the bundling mechanism for the DASSA.
The RAD is a mixture of 4ii and 7 yet what aspect of 4ii is being used, is it simply the slightly advanced price submission or is there a requirement to sign up to an LPF to ensure you can participate and make your volume available in real time?	There are several differences: • RAD bids will be separate to the DASSA. • Clearing of the RAD will only be based on what each unit was available for in real-time (and hence there is no commitment entered into at the ex-ante stage).
More generally we are making the assumption that going forward the SOs will not move units away from their energy positions until all available DASSA and RAD Actions have been taken. Is this the case, for example there's no locational mechanism that identifies the need for specific reserve in the Dublin area, however reserve may be need in this area. The SOs have the ability to trade in the secondary market, but our understanding is that they can only offer reserves on an Ireland wide basis, not Dublin only. So how does the SO envision procuring the right type of reserve in certain circumstances.	As per section 7.3 of the consultation paper, the RAD proposal does not imply or require any changes to the current scheduling and dispatch process. This is also the case with the DASSA, with the exception of the requirement for a forecast availability signal. As per our Product Design and Locational Methodology and Volume Forecasting Methodology recommendations papers, the TSOs have identified two locations that require reserve constraints – Ireland and Northern Ireland. The DASSA, including secondary trading, will account for these constraints. These jurisdictional constraints will also be reflected in the RAD.

Questions Received Prior to Webinar

Question	Answer
Will the TSOs/RAs consider further input from industry on the other options proposed, or are these all now rejected?	On completion of the Joint Options Assessment, the RAD mechanism was identified as the best option to meet system security needs, utilising technology agnostic procurement, while also addressing the SEMC concerns expressed in SEM-24-066. Whilst the RAD is the preferred option, the TSOs welcome comments/feedback regarding the other options assessed.
Please clarify the reasoning why the RAD offers need to be submitted before the DASSA; and why submitting them at the same time does not work?	The proposed design is intended to separate the DASSA and the RAD bidding processes: • Separate opportunity costs as the RAD has no commitment obligation. • Intention in general is that service providers will not have information on the DASSA position of their competitors that may inform their RAD bids. The TSOs welcome industry feedback on this as to whether submitting RAD and DASSA bids concurrently, rather than sequentially as proposed, meets the TSOs' requirements as set out in the consultation.
Can the TSOs provide more information on what rationale is present for needing a price cap?	The TSOs would be concerned that the RAD should not discourage participation in the DASSA, nor incentivise DASSA Order holders to strategically lapse Orders in expectation of higher clearing prices in the RAD. Hence, the TSOs' proposal that the RAD clearing price should not exceed the DASSA clearing price The TSOs will publish our Parameters & Scalars consultation paper in the coming weeks. Within this paper, the TSOs will propose values for price caps in the DASSA.
Can the TSOs provide more information on why the price cap is being set at the DASSA clearing price?	Response per above.

Questions Received Prior to Webinar

Question	Answer
Can the TSOs provide a more detailed description of each option and what are the blockers to each option?	In sections 6.3 and 6.4 of the consultation paper, the TSOs have endeavoured to provide sufficient detail of each option to illustrate to industry how the outcome of the Joint Options Assessment was arrived at, including whether the options met the TSOs' requirements and the complexities of any implementation.
Is participation in the RAD voluntary?	Bidding into the RAD is voluntary. The RAD is an incentive for service providers to be make themselves available to meet system needs. This is separate to the TSOs' recommendation that service providers be obligated to declare their availability to provide a service to the TSOs if they are technically capable of doing so, irrespective of whether they hold a DASSA Order for the service volume (to be captured in the System Services code).
What is the TSOs view of how renewables and storage will participate in the DASSA / Top up?	The TSOs expect that those service providers that have a high level of certainty as to their availability ahead of real-time will participate in the daily auction, as well as secondary trading and the RAD. Service providers that only know their availability close to real-time may choose to participate in secondary trading and the RAD.

Questions Received Prior to Webinar

Question	Answer
Additional clarity is needed on options 4, 4ii, 5. Could the TSOs please provide more detail on what the 4 options 4, 4ii, 5 and 6 mean? For example: A. What is baseload volume? B. How does the LPF (auction or contract) volume get taken into account in the DASSA volume requirement? C. What are the obligations when holding one of the LPF auction/contracts? D. Can a day-in the life be provided.	Answers to the individual queries as follows: A. Baseload volume simply refers to a predetermined volume of a service to be procured ex-ante outside of the daily auction. The determination of the value of this baseload volume would be informed by system needs analysis and other inputs, such as investment certainty and interaction with the DASSA. B. The TSOs would expect that any service volume procured in advance of the DASSA, whether via a quarterly auction or 1 year fixed contract, as examples, would be accounted for in the daily DASSA volume requirement i.e. the TSOs would procure less on a daily basis. A key factor would be whether any volume procured in advance of the DASSA would have a commitment obligation attached to it or just be residual availability. C. Options 4, 5 and 6 would include a commitment obligation to make awarded service volume available for the duration of the contracted period, possibly subject to a small tolerance, and deliver the service when called upon to do so. Measures would be in place to incentivise awarded parties to fulfil the commitment obligation. D. Please see a day-in-the-life for Option 4, as an example, in the Appendix.
Clarity is requested on how close to gate time you can update your prices?	Service providers may update their RAD bid prices up to gate closure of the RAD, which is proposed to be 14:30 D-1 (for an Auction Timeframe of 23:00 D-1 to 23:00 D). Updating of RAD bids after RAD gate closure will not be permitted.
What is the purpose of a DASSA price cap in RAD?	Applying a RAD price cap equal to the DASSA clearing price (for the equivalent Trading Period) is aimed at incentivising participation in the DASSA and disincentivising the strategic lapsing of DASSA Orders to avail of a potentially higher price in the RAD.

Questions Received Prior to Webinar

Question	Answer
How are late notice TSO actions reflective of scarcity pricing?	TSO actions close to real time may result in DASSA Order holders being moved to positions incompatible with their Order. It is this scenario that the proposed RAD aims to solve – incentivising service providers to be available, net of other commitments, to address any reduction in the realisable volume procured in the DASSA. DASSA scarcity pricing applies only in instances of volume insufficiency, where the required volumes are not cleared in the daily auction (at 15:30 D-1), triggering the TSOs to enter secondary trading to procure the missing volume at the DASSA scarcity price (subject to a demand curve on the economic merit of submitted Buy Orders).
What are market power concerns that are being mitigated?	In proposing that the RAD gate closure does not take place after the DASSA, and also that RAD bids may not be updated after RAD gate closure, the TSOs are endeavouring to mitigate against service providers with asymmetric knowledge of the market – those from larger portfolios with knowledge of the outcome of the DASSA and the Long-Term Schedule (LTS) may be able to infer the position of other service providers – utilising that information in their bidding into the RAD.
Has the RAD option been discussed with the RAs as it seems very similar to the FAM and it is not clear from the paper why this is now acceptable to the RAs?	The proposal for the RAD is the outcome of the Joint Options Assessment process that was carried out between September and December 2024. The parties to this process were EirGrid, SONI, CRU, UR and the RAs' advisors, Nera. The RAs agreed for the RAD to be put forward for consultation by the TSOs. The proposal for the RAD is subject to a SEMC decision, which will be informed by the feedback to this consultation.

Questions Received During the Webinar

Question	Answer
For DASSA and the RAD, will there be changes to current BCOP? This could have a sizeable impact on service providers.	The TSOs have recommended that the RAs consider the development of a tailored BCOP for the DASSA arrangements that would facilitate the appropriate monitoring of the system services market. Our proposal for the RAD does not entail any changes to the existing BCOP for the Balancing Market.
How can participants remove themselves from the RAD where their position may have changed in real-time.	Depending on the service provider, the TSOs consider that there would be little or no risk in participating in the RAD i.e. submitting a bid ex-ante and maintaining any residual availability net of other commitments and potentially being paid if in merit. There is no explicit commitment obligation attached to the RAD. Separately, the TSOs have recommended that service providers be obligated to declare their availability to provide a service to the TSOs if they are technically capable of doing so, irrespective of whether they hold a DASSA Order for the service volume (to be captured in the System Services code). Being available to provide a service requires that the service be delivered when required – in response to a frequency event or dispatch instruction, as applicable.

Questions Received During the Webinar

Question	Answer
How can industry comment on the clearing of the RAD where information surrounding the clearing cap has not been released?	The TSOs acknowledge industry concerns in this regard, given that the value of the DASSA price cap has yet to be consulted upon. The TSOs welcome feedback on the principle of applying a clearing cap in the RAD (in response to Q3 in the consultation paper) and will utilise these comments to inform the next steps on this proposal.
Is the RAD being proposed as the only option and should participants disregard the others?	While the RAD is the TSOs' preferred option, we welcome comments/feedback regarding the other options that were evaluated under the Joint Options Assessment process.
Can the TSOs share the DASSA top-up mechanism needs analysis report please [WP#1]? Can you pls share the analysis on the system needs for RAD which will hopefully give an indication that intermittent renewables will be able to participate [ref investor clarity].	The DASSA top-up mechanism needs analysis report is the outcome of an independent third-party evaluation that was commissioned by the TSOs to support discussions with the RAs regarding the need for such a mechanism. The TSOs will discuss with these parties as to whether the report may be shared with industry.
For intermittent renewables, is there any evidence there will be sufficient volume requirements to allow participation of wind? There is low investment signals without these figures.	The TSOs are unable to provide an estimate as to what the volumes being procured ex-post in the RAD will be. We expect that the RAD requirement will vary depending on system conditions but may become more predictable as the arrangements mature.

Questions Received During the Webinar

Question	Answer
Is the time limit still an issue given the likely delay to the DASSA?	Consultations related to the design of the DASSA arrangements, including the RAD and the upcoming Parameters & Scalars, are on the critical path for the FASS programme. It is critical that the consultations and ensuring SEMC decisions are executed in a timely manner.
Could it be explained why in some options there is a perceived risk that there are no mechanisms to correct deficits (e.g. in Option 1)? Isn't the BM already used today to bring on units to provide System Services in some cases?	The Balancing Market will always be used to dispatch units to manage issues encountered in real time. The RAD will address issues directly related to the procurement of balancing capacity in the DASSA. Also, given that the RAD is an incentive to be available, the ability of the TSOs to manage any issues in real time is enhanced.
The RAs' scoring [which had previously been shared at the SSFA Project Panel in December 2024] showed that the BM changes was their preferred option. Have they changed their mind? Why are the RAs now proposing the RAD?	The proposal for the RAD is the outcome of the Joint Options Assessment process that was carried out between September and December 2024. Each of the options was independently evaluated and scored by the RAs (and Nera) and the TSOs. Discussion of the independent assessments and their underlying assumptions followed, culminating in a focus on the merits of two specific options: 4ii and 7. The RAD was then developed to encompass those respective merits. The RAs then agreed that the RAD be put forward for consultation by the TSOs.

Questions Received During the Webinar

Question	Answer
With regard to Option 3, will the TSOs not be over-procuring in the DASSA anyway in accounting for the LSI / LSO?	The TSOs' Volume Forecast Methodology Recommendations paper sets out the inputs to the determination of reserve service volumes to be procured daily, which include LSI / LSO, consequential losses, and unexpected availability. The TSOs, as prudent system operators, do not deem these to constitute 'over procurement'. Where the proposed RAD will intersect with daily volume requirements is with regard to the allowance for unexpected availability: as the RAD is a mechanism to deal with the issue of DASSA Order holders not being available in real time, the TSOs expect that this allowance could be set to zero over time.
Why were participants not included throughout the options assessment? Why are the TSOs not engaging with providers	In the context of the decision not to approve the FAM, SEM-24-066 stated: "…the SEM Committee is happy to work with the TSOs to develop any alternative approaches the TSOs may identify." It is this mechanism that the TSOs utilised to develop a solution to bridge the gap between the outcomes of the daily auction, real time system requirements and the actual service volume availability of DASSA Order Holders in real time. In establishing the structured Joint Options Assessment process, the TSOs explicitly acknowledged the need to address the SEMC's concerns with the FAM while endeavouring to develop an alternative as quickly as possible for industry consultation. The additional overhead to develop a DASSA top-up mechanism following SEM-24-066 increased the risk to the programme timelines: the TSOs considered that the Joint Options Assessment process to be the most effective means of speedily developing a viable proposal for consultation.

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Question	Answer
Can the FFR response times be reviewed to allow a wider range of assets to qualify for this product?	The SEMC (SEM-24-074) approved the TSOs' recommendation to redefine the FFR service into 3 categories based on response time, with full activation of the service required at no greater than one second. The TSOs consider that very fast FFR provision, as currently incentivised in the DS3 Regulated Arrangements, remains essential for system operation.
Has the RAD been signed off by the RAs or will we see a similar scenario where we spend considerable time consulting on the FAM for it not to be approved by the SEMC?	The proposal for the RAD is the outcome of the Joint Options Assessment process that was carried out between September and December 2024. The RAs agreed that the RAD be put forward for consultation by the TSOs. The proposal for the RAD is subject to a SEMC decision, which will be informed by the feedback to this consultation.
Why set the RAD cap to the DASSA clearing price? This will not incentivise generation units to bid into the RAD. Where there is scarcity scenario within the RAD, there is no additional incentivisation to bid into the RAD when it will still clear at the DASSA clearing price. In this scenario with the TSO fall back on option 8 and utilise the BM to rectify the volume insufficiency?	Applying a RAD price cap equal to the DASSA clearing price (for the equivalent Trading Period) is aimed at incentivising participation in the DASSA and disincentivising the strategic lapsing of DASSA Orders to avail of a potentially higher price in the RAD. The TSOs consider that the opportunity cost for maintaining residual availability, with no commitment obligation and having exhausted all other market opportunities, would not be equivalent to that of participating in the DASSA. We would therefore welcome further feedback from industry (in the consultation responses) as to why a price cap in the RAD equivalent to the DASSA clearing price would be a disincentive to participate in the RAD. A scarcity scenario in the RAD would equate to there being no availability in real time to meet a DASSA volume deficit, but this volume would only be known ex post. The Balancing Market will always be used to dispatch units to manage issues encountered in real time.

Questions Received During the Webinar

Question	Answer
Is the risk with RAD that you get called upon to provide a service below your bid price? If the scarcity cap applies?	To clarify, the TSOs propose that a RAD clearing price cap will apply (which will be subject to a SEMC decision). Should a service provider be available and happen to be in merit based on its RAD bid, and where that bid exceeds the DASSA clearing price, then the RAD payment will be limited to the value of the DASSA clearing price.
Slightly related to that question, if the DASSA cleared at say €5, but there's volume insufficiency. Does that mean that only bids less than €5 will be accepted in RAD. Or will it be the case that units will only be paid €5, even if they have bid higher in RAD and are required.	A scenario of 'volume insufficiency' exists when the daily service volume requirement is not cleared in the DASSA. This is separate to the issue that the RAD would address, which is where the volume procured in the DASSA is not fully realisable in real time. As per the response above, should a service provider be available and happen to be in merit based on its RAD bid, and where that bid exceeds the DASSA clearing price, then the RAD payment will be limited to the value of the DASSA clearing price. In the case of volume insufficiency in the DASSA, the DASSA clearing price will be the value of the DASSA scarcity price, therefore potentially meaning higher payments in the RAD for service providers in merit based on their submitted bids.
Ask for TSOs to reconsider logic of scarcity pricing within the RAD. The DASSA clearing without scarcity on D-1 does not mean that scarcity cannot occur on D.	A scarcity scenario in the RAD would equate to there being no availability in real time to meet a DASSA volume deficit, but this volume would only be known ex post after the TSOs have undertaken an evaluation of the real time system needs.
Will there be a separate set of service declarations to be provided by the market participants? And these will be compared against outturn availability for calc net availability for RAD?	No. The RAD will utilise existing data in our EMS to determine the availability of service providers, which will be based on their actual MW output, net of any confirmed DASSA Orders.

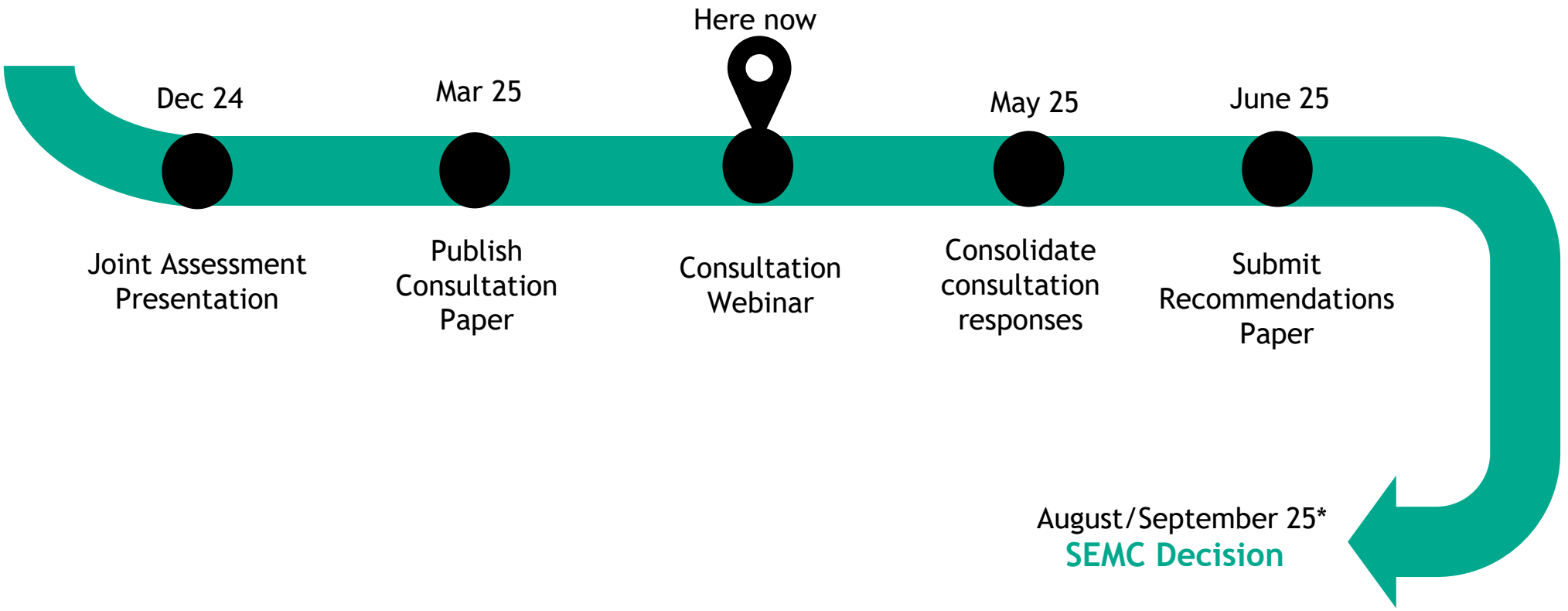
Questions Received During the Webinar

Question	Answer
What are the risks in the RAD?: As over-frequency products will be included, there is a risk that if volumes are imported during an over-frequency event (for a battery) these incur very high imbalance prices, which will not be known at bid stage.	Depending on the service provider, the TSOs consider that there would be little or no risk in participating in the RAD i.e., submitting a bid ex-ante and maintaining any residual availability net of other commitments and potentially being paid if in merit. There is no explicit commitment obligation attached to the RAD. The cost of providing (negative) balancing energy, and managing energy costs, is via participation in the Balancing Market.
Will the DASSA or the RAD have any impacts on the SDP?	As per section 7.3 of the consultation paper, the RAD proposal does not imply or require any changes to the current scheduling and dispatch process. This is also the case for the changes being implemented under the Scheduling and Dispatch Programme (SDP). Please note that the FASS Team works closely with the SDP to manage any intersection between the two programmes.
Can those differences between DASSA/RAD risks that justify price cap Kasra is describing be communicated in an appendix to slides?	We have not included an appendix to that effect, but hope that the detailed responses above provide sufficient detail regarding the RAD price cap proposal.

Timeline and Next Steps

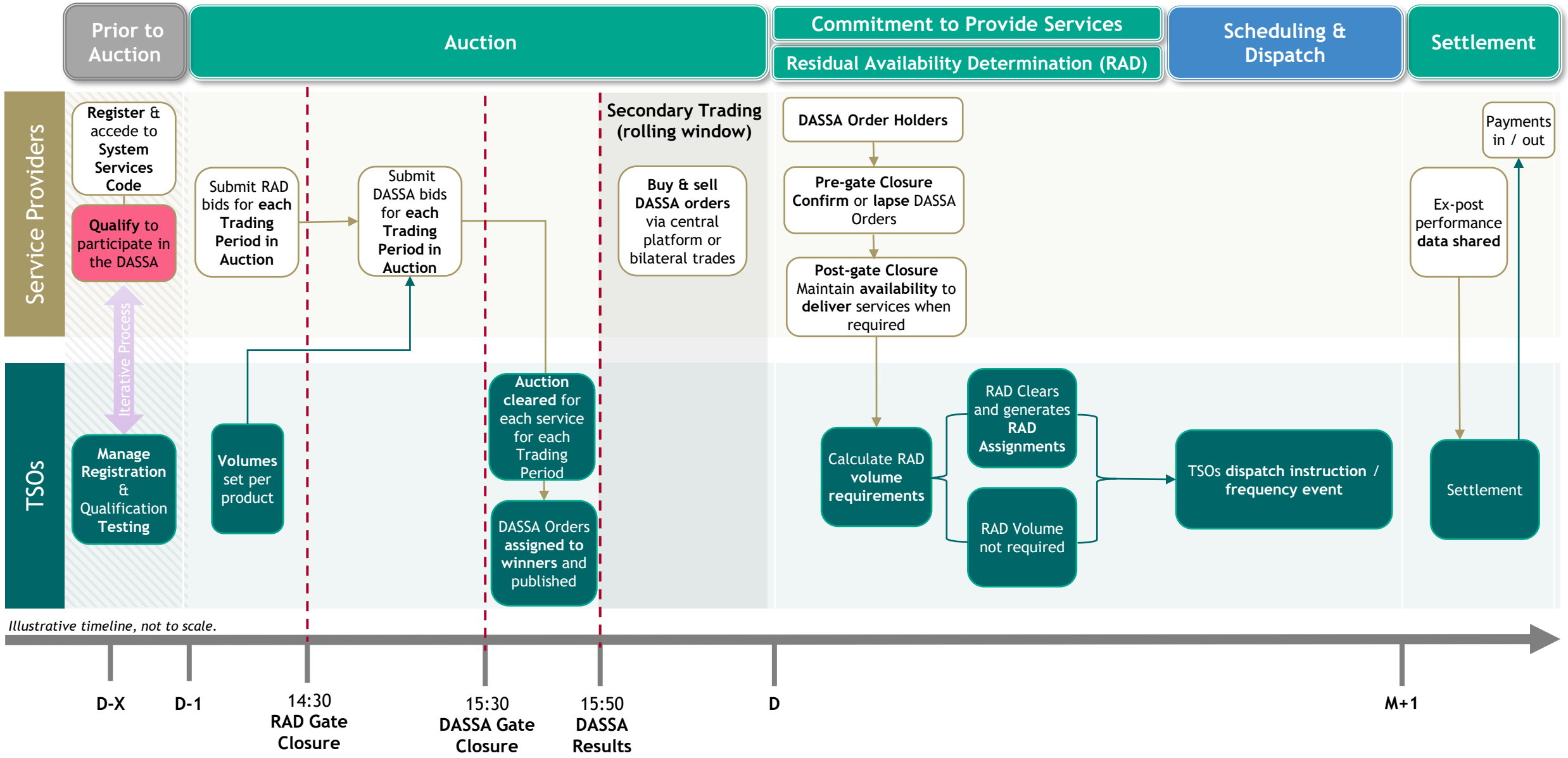
RAD Consultation Timeline and Next Steps

- The timeline indicated below for the consultation period is on the critical path for the overall FASS programme go-live and system delivery.
- **Reminder – The consultation will close on the 2nd of May 2025.**

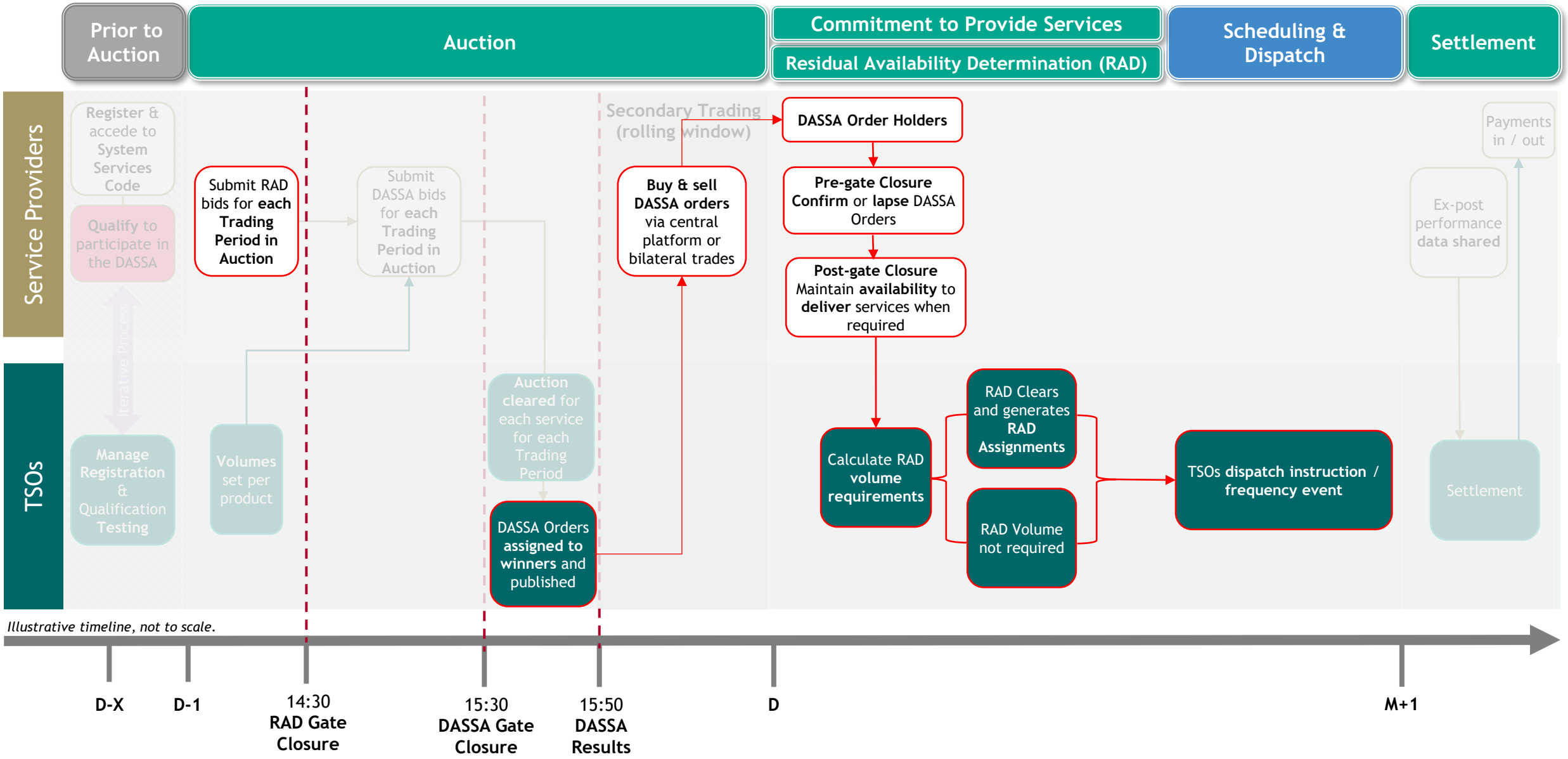


August/September 25* - Subject to Regulatory Authority decision on DASSA go-live date.

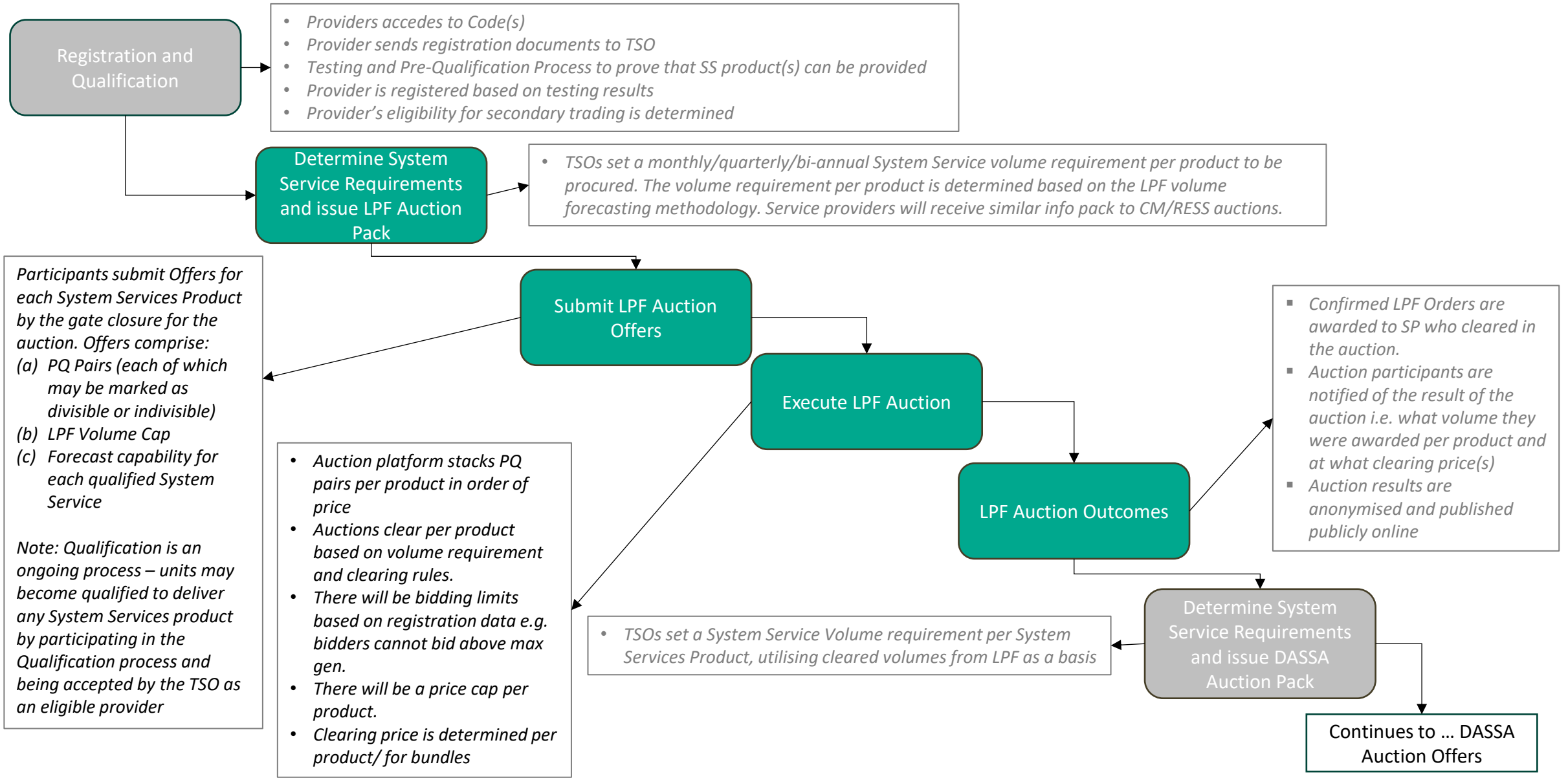
FASS - DASSA & RAD High Level Process



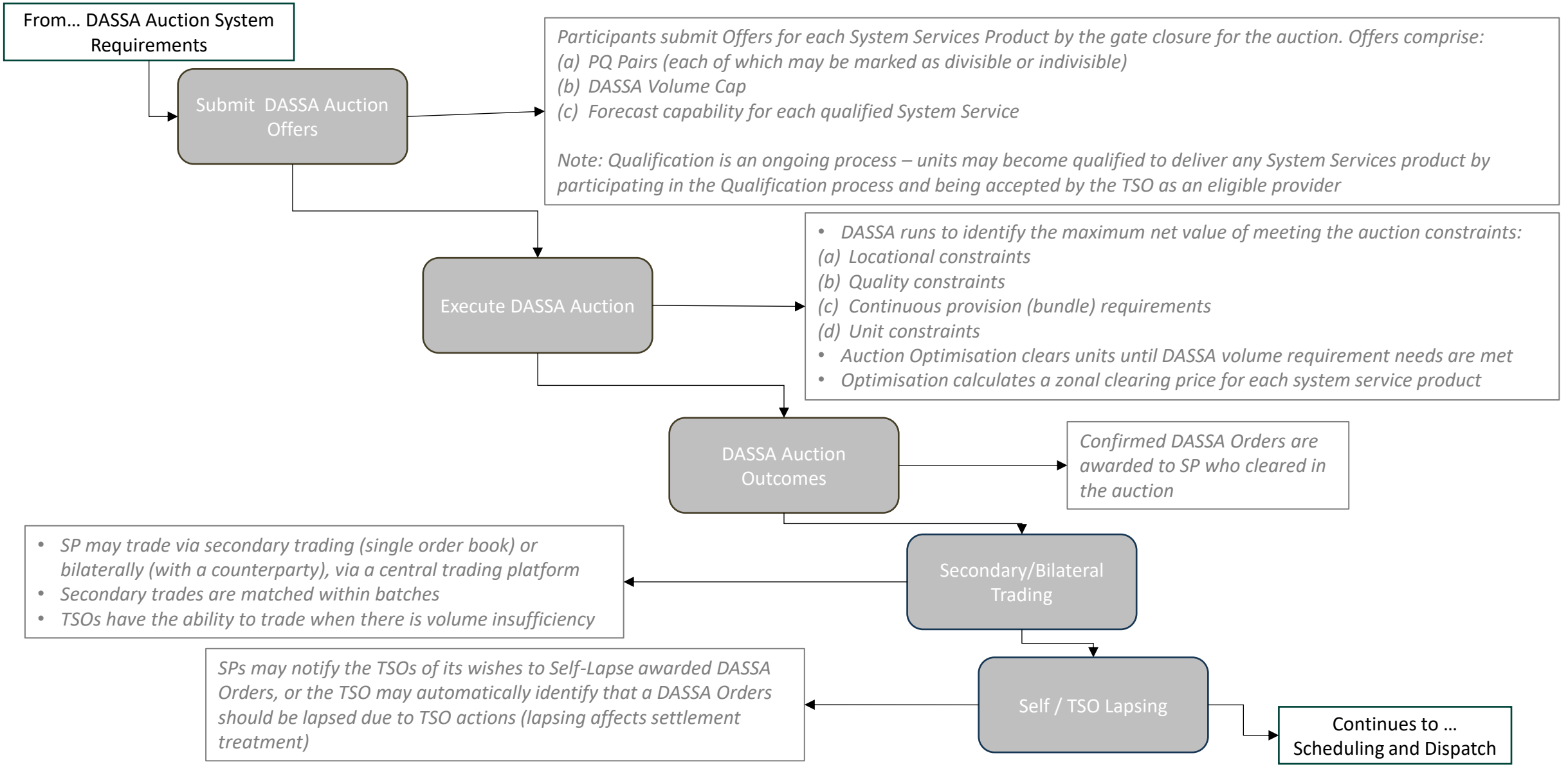
RAD: Proposed High Level Process



Option 4: “Procure baseload services via monthly/quarterly bi-annual auction (LPF)” (1 of 3)



Option 4: “Procure baseload services via monthly/quarterly bi-annual auction (LPF)” (2 of 3)



Option 4: “Procure baseload services via monthly/quarterly bi-annual auction (LPF)” (3 of 3)