The Capacity Market Operating Model

Capacity Market Processes and Data Flows

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Prepared by DECC

Contents

Using this document

1.1 Purpose of the Operating Model

This document is a description of the Operating Model ("OM") for the Capacity Market. As the Electricity Market Reform programme moves from policy design to implementation, the OM sets out how the Capacity Market works and is a reference for interested parties. **This version is aligned to the policy set out in the October 2013 EMR consultation and reflects how those proposals could work in practice and will be updated as the policy is finalised.**

The OM sets out:

- the roles and responsibilities of the various entities who will deliver the operational aspects of the Capacity Market;

- the business processes underpinning the Capacity Market;

- the supporting infrastructure needed to enable the business processes; and

- how the resources (people, processes, facilities and technologies) required for the Capacity Market interact.

1.2 Bibliography

The Capacity Market policy is part of the overall Electricity Market Reform (EMR) programme:

https://www.gov.uk/government/policies/maintaining-uk-energy-security--2/supporting-pages/electricity-market-reform

A consultation on the proposals for the Capacity Market was published in October 2013[1]. The consultation document includes proposals for the Capacity Market, along with the rationale for the more significant design choices. This document should be read in conjunction with the Electricity Capacity Regulations[2] ('the Regulations'), the

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[1] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/249591/EMR_Consultation_on_Implementation_proposals.pdf

[2] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/249564/electricity_capacity_regulations_2014_si.pdf

Electricity Capacity (Payment) Regulations[3] ('the Payment Regulations') and the Capacity Market Rules[4] ('the Rules'). Together these documents are known as the "October publications".

1.3 Audience

This document is a point of reference for parties who have an interest in the Capacity Market. It is not intended to be a description of the legal requirements and is not investment advice.

1.4 Background

The Capacity Market is intended to cost-effectively bring forward the amount of capacity needed to ensure security of electricity supply. It provides a predictable revenue stream to capacity providers, set through a competitive auction process. In return for payment, successful providers must commit to deliver energy when required (or face penalties). The Capacity Market provides an additional linkage between users of energy and those who provide it, or are able to reduce their demand, as set out in Figure 1.

Figure 1: Capacity Market overview

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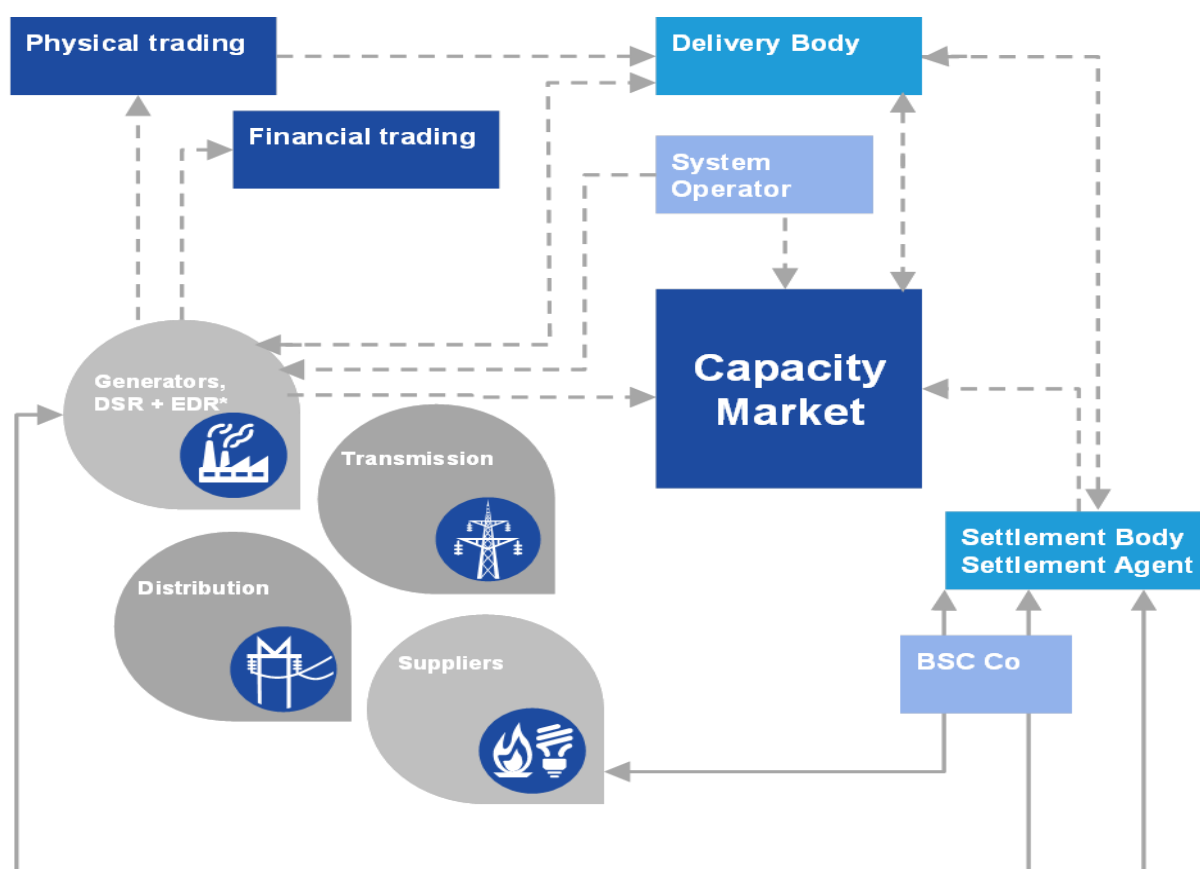
[3]https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/249563/electricity_capacity_payment_regulations_2014_si.pdf

[4]https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/249565/capacity_market_rules_consultation_draft.pdf

Demand Side Response (DSR) and Electricity Demand Reduction (EDR)

The Capacity Market will allow all existing and new forms of capacity to participate, except low carbon capacity including capacity supported by Contracts for Difference, small scale Feed in Tariffs or the Renewables Obligation, and interconnected capacity[5]. Demand side response (DSR) will also be eligible. Capacity and projects that deliver permanent reductions in electricity demand (EDR) is being piloted outside the Capacity Market to assess whether it should become eligible to participate at a later stage.

The Capacity Market will follow a broadly similar timetable in subsequent years. The two diagrams below set out the key events in the Capacity Market to 2020, and the annual process.

Figure 2: Overview of proposed capacity auctions

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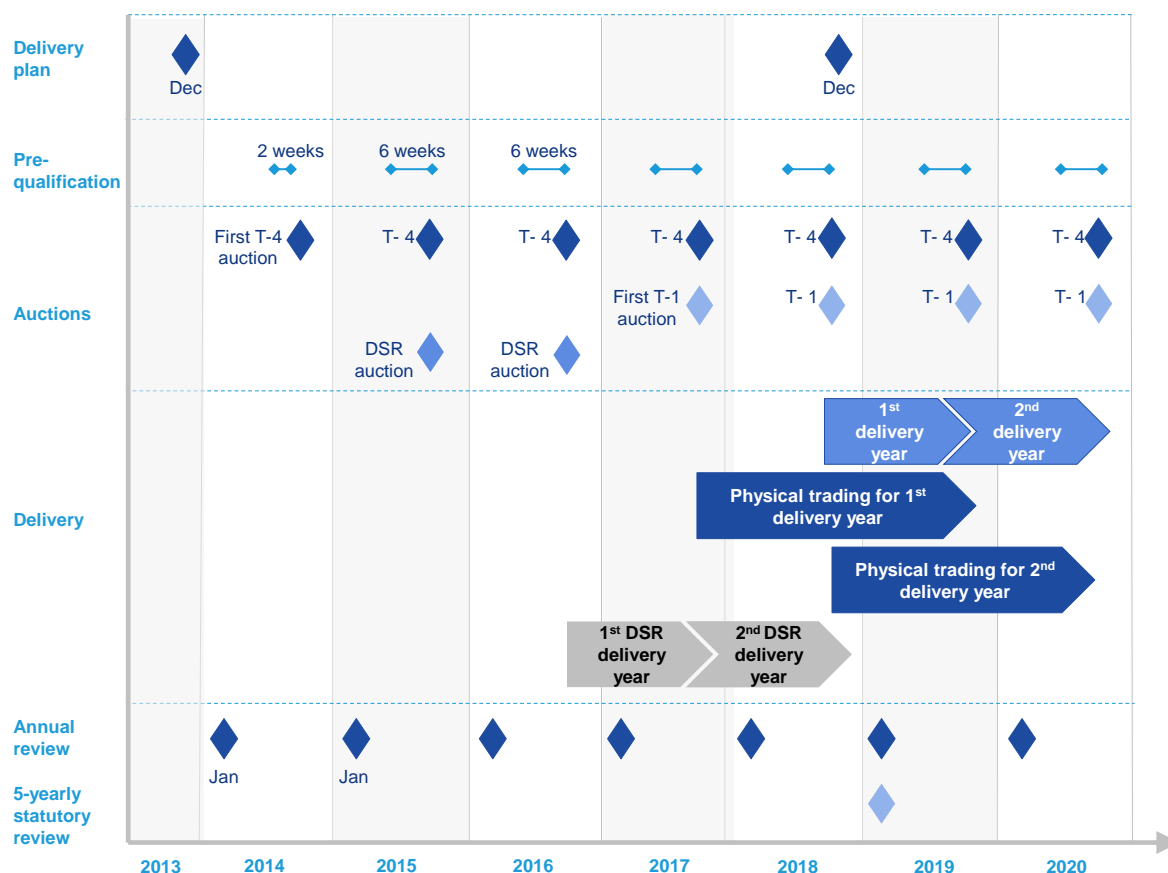
[5] However, we will continue work to seek a solution that might enable the participation of interconnected capacity in future.

Figure 3: Capacity Market annual lifecycle (enduring arrangements)
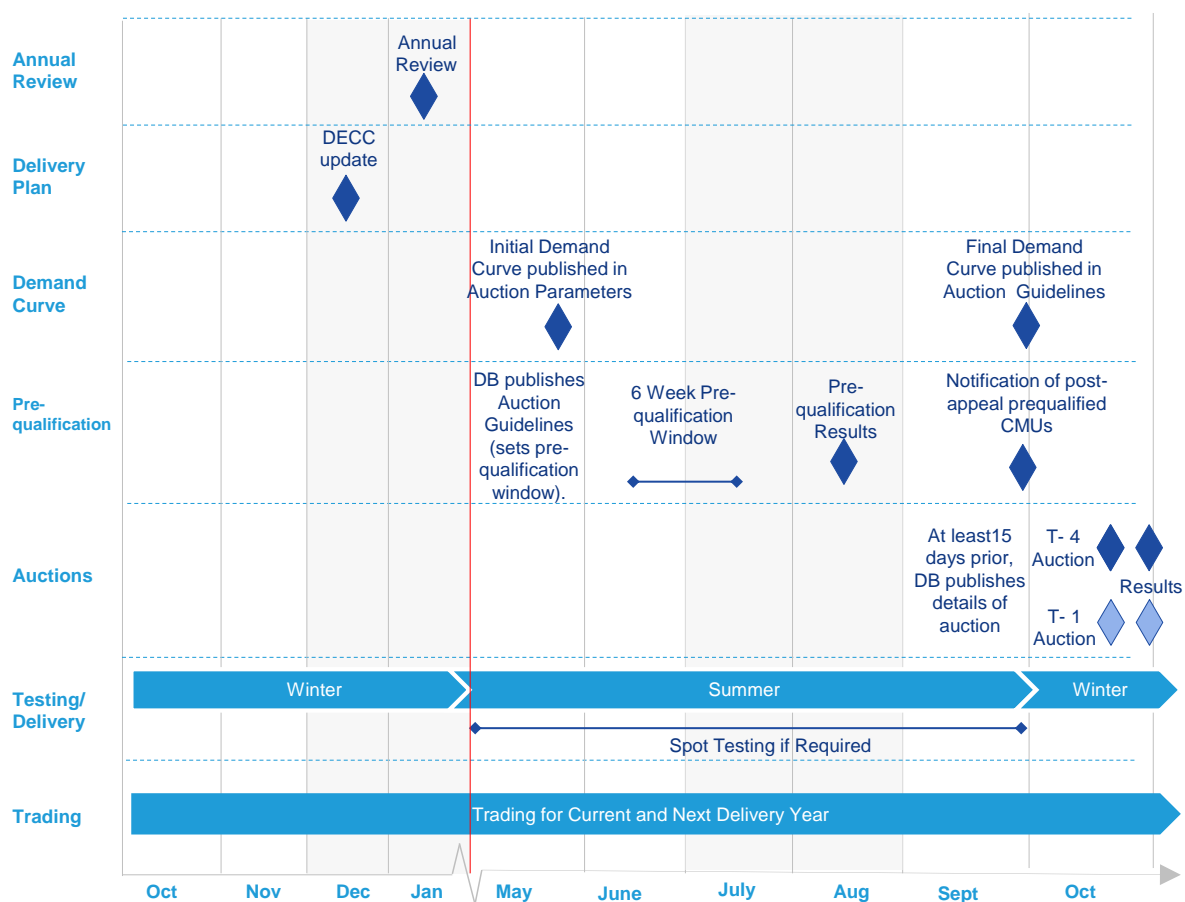
1.5 Change control

The process maps and data flows contained in Annexes A and B are owned by the Capacity Market Business Design Authority. The CM Business Design Authority has been established as part of the National Grid's role as Implementation Coordinator for the CM regime.
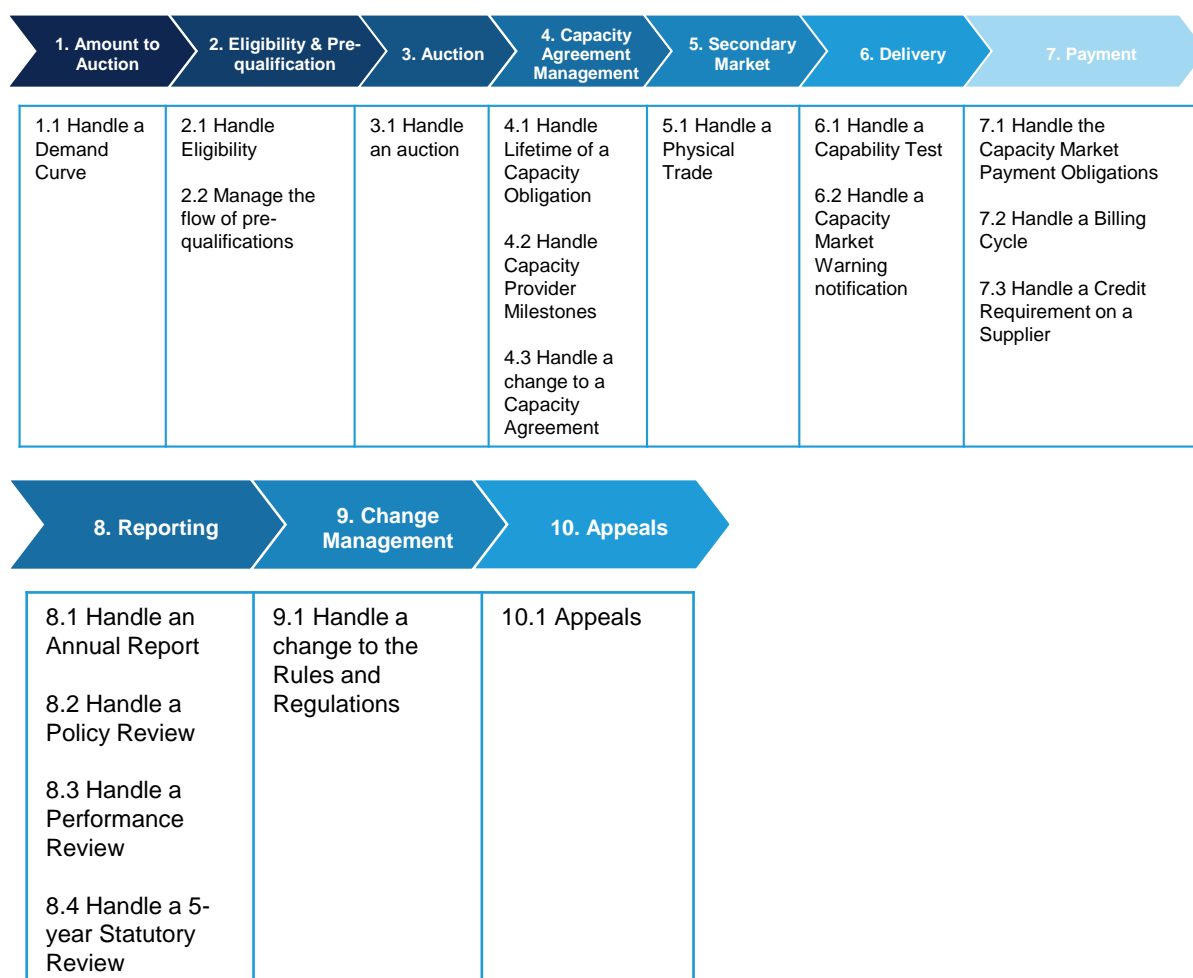
1.6 Related documentation

The OM sits alongside the Implementation Plan, which sets out how delivery partners and industry participants will prepare for and implement the first auction.

Process Overview

This section sets out the processes that underpin the Capacity Market. The processes for the Capacity Market can be split into two categories:

1. Core processes, which are activities required to undertake auctions and delivery of capacity, are set out in processes numbered 1 to 7 in the diagram below; and
2. Underpinning processes, which are those that cover the activities needed to enable core processes, are set out in processes numbered 8 to 10 in the diagram below.

Figure 4: Capacity Market Level 0 Process topography

1. Amount to Auction	2. Eligibility & Pre-qualification	3. Auction	4. Capacity Agreement Management	5. Secondary Market	6. Delivery	7. Payment
1.1 Handle a Demand Curve	2.1 Handle Eligibility 2.2 Manage the flow of pre-qualifications	3.1 Handle an auction	4.1 Handle Lifetime of a Capacity Obligation 4.2 Handle Capacity Provider Milestones 4.3 Handle a change to a Capacity Agreement	5.1 Handle a Physical Trade	6.1 Handle a Capability Test 6.2 Handle a Capacity Market Warning notification	7.1 Handle the Capacity Market Payment Obligations 7.2 Handle a Billing Cycle 7.3 Handle a Credit Requirement on a Supplier

| 8. Reporting	9. Change Management	10. Appeals
8.1 Handle an Annual Report 8.2 Handle a Policy Review 8.3 Handle a Performance Review 8.4 Handle a 5-year Statutory Review	9.1 Handle a change to the Rules and Regulations	10.1 Appeals

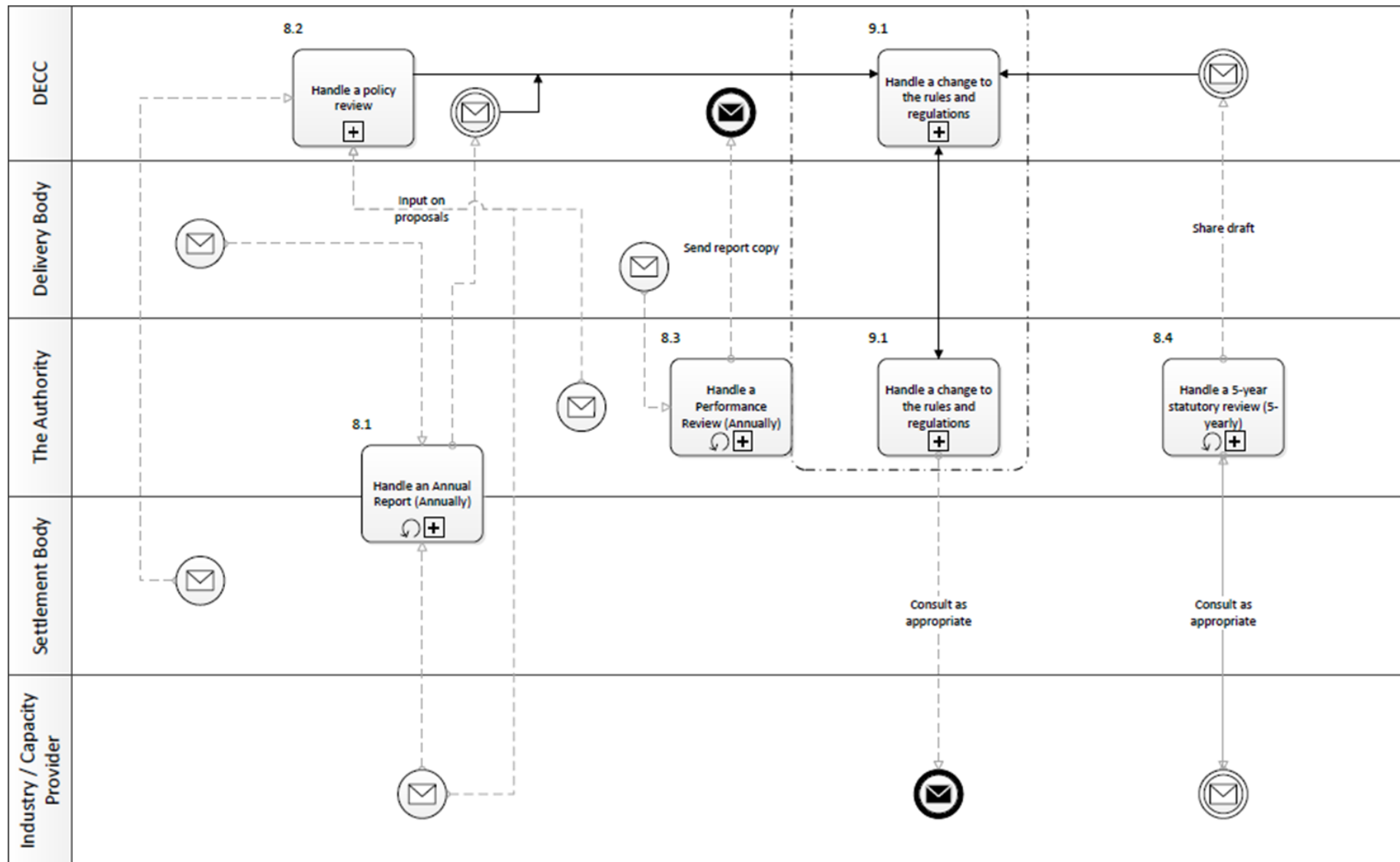Supporting this high level topography of the processes are:

- The full process maps for the Capacity Market, set out in Annex A
- Data flows, set out in Annex B and described further in Chapter 3

The lifecycle of the Capacity Market is in process form, below.

Figure 5: Capacity Market Lifecycle diagram
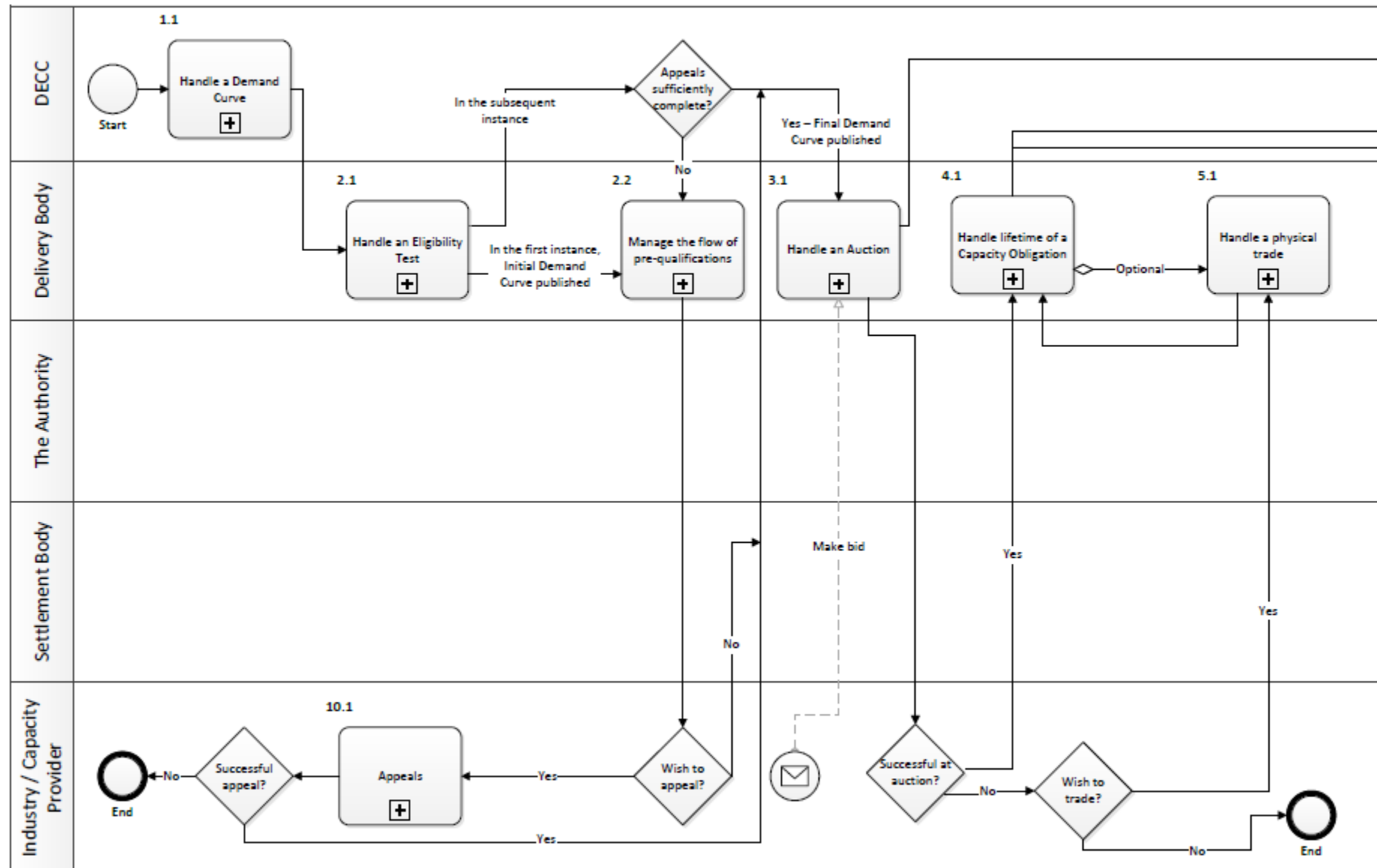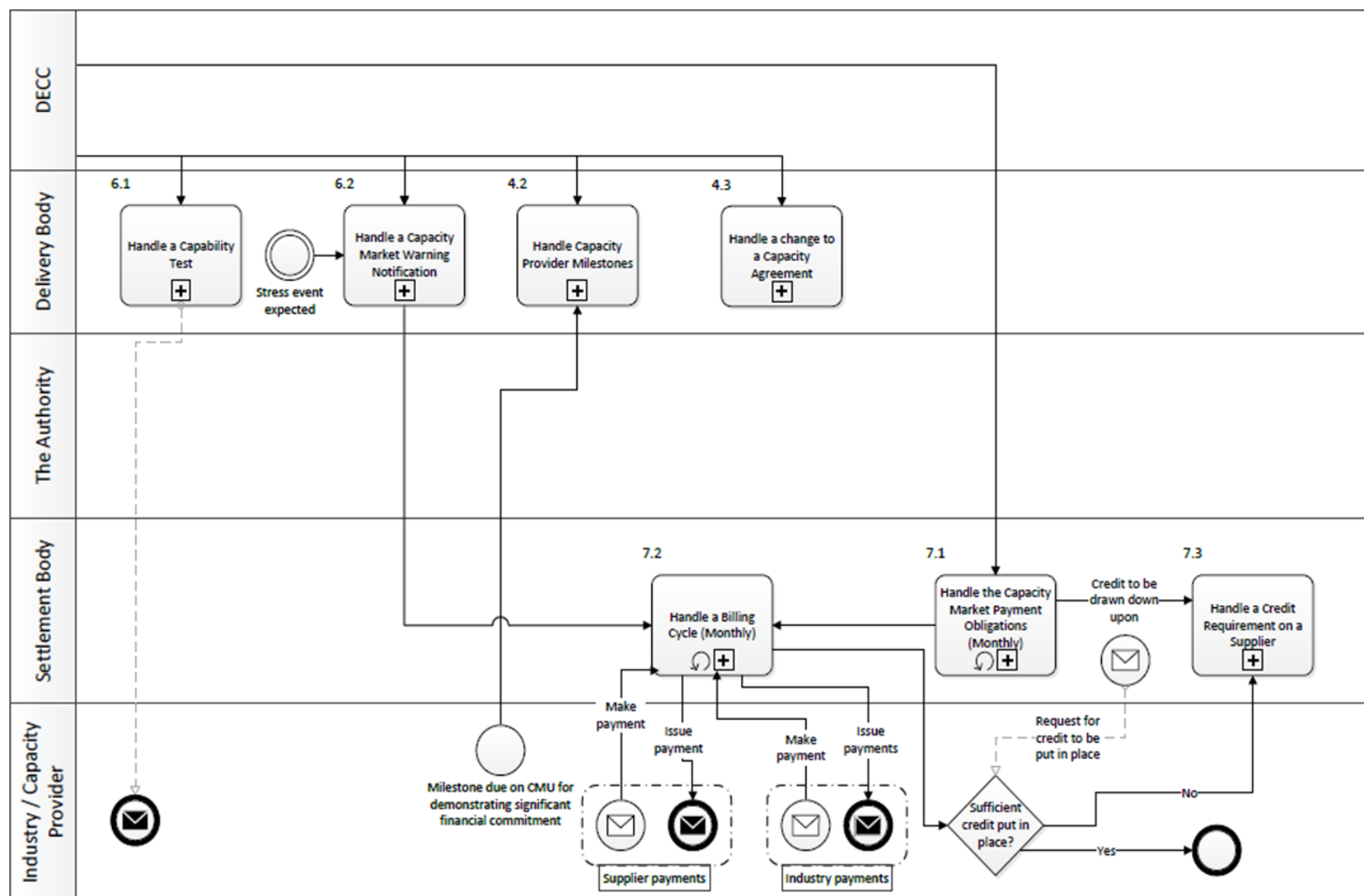
Data flows

The Capacity Market data flows are set out in Annex B. For each of the Capacity Market data flow descriptions, Annex B specifies:

- The data flow description name
- A reference number to the relevant process map
- The initiator
- The receiver
- Whether the flow involves a 'push' or 'pull' of information by the initiator
- The triggers for the data flow
- The method of the data flow
- The responses to the data flow
- The information field and description
- Who approves the data flow (if relevant)
- Any assumptions and notes

In a number of cases, the field data is not yet completed as the specific format may be dependent on the chosen system (however the content would be in line with finalised policy). Accordingly, the data flows will be updated and refined in subsequent versions of this document.

3.1 Tools, Registers and Systems

The Capacity Market will require systems, technology and data transfer solutions to ensure that the Capacity Market processes are effectively and robustly delivered. An overview of these tools, registers and systems is provided below:

Figure 6: System descriptions summary

System	What it does	Owner	User/ Viewer	1.Amount	2.Eligibility & Prequalification	3.Auction	4. Capacity Agreement	5. Secondary Market	6.Delivery	7.Payment	8.Reporting	9.Change Management	10.Appeals
Relevant processes													
Tools													
Pre-qualification assessment tool	Determines which market participants prequalify to participate in the CM auction	DB	DB, SB, industry		✓						✓		
Demand Curve Methodology	In the delivery plan, DECC publishes their methodology for calculating demand curves for capacity auctions.	DECC	Industry, CP and S	✓							✓		
Registers													
Capacity Market Register	An electronic register of CA and CO data for all CPs who have opted-in and opted-out	DB	SB, Ofgem, Industry, CP, partially publicly available		✓	✓	✓	✓	✓	✓	✓		✓
Payment Register	Register of CPs+ suppliers who have not paid invoices in the time required	SB	SB, CP, S publicly available							✓	✓		
Credit Default Register	Register of credit cover drawn down including name of supplier, amount drawn down, date and whether the supplier raised a dispute	SB	SB, CP, S, publicly available							✓	✓		
Disputes Register	Register of interim reports, disputes reports and decisions of the SB in relation to disputes	SB	SB, CP, S publically available.						✓	✓	✓		
Systems													
IT Auction System	The IT infrastructure hosting the Capacity Auction	DB	DB, Bidders, Auction Monitor		✓						✓		
Capacity Market Data and Settlement System	Settlement Agent is responsible for set up and maintenance of systems that allow it to collect, securely store and transmit "Capacity Market data" which is necessary for settlement and capacity market calculations. See pg7 Regulations & pg140	SB	SB, CP, S						✓	✓	✓		

Consultation Document.										

Where:

DB = Delivery Body

SB = Settlement Body

CP = Capacity Provider

S = Supplier

CA = Capacity Agreement

CO = Capacity Obligation

Annex A Process maps

Annex B Data Flows