



# FAIP1819T-1

## Capacity Market - Final Auction Information Pack

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*This Final Auction Information Pack provides information relating to items listed within Section F.5 of the Capacity Market Code for the first Capacity Auction for the first Capacity Year, which is expected to be held on 15th December 2017. The auction will be referred to within this document as the 2018/2019 T-1 Capacity Auction.*

*In accordance with M.2 of the Capacity Market Code, the first Capacity Year commences at the Cutover Time (expected to be the 23rd May 2018, subject to final confirmation by the Regulatory Authorities) and ends on 30th September 2019. The first Capacity Year will be referred to in this document as the 2018/2019 Capacity Year.*

*All information set out in this document relates solely to the 2018/2019 T-1 Capacity Auction.*

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## 1. Introduction

### 1.1 Background and purpose

This Final Auction Information Pack<sup>1</sup> provides information relating to items listed within Section F.5 of the Capacity Market Code for the first Capacity Auction for the first Capacity Year, which is expected to be held on 15<sup>th</sup> December 2017. The auction will be referred to within this document as the 2018/2019 T-1 Capacity Auction.

In accordance with M.2 of the Capacity Market Code, the first Capacity Year commences at the Cutover Time (expected to be 23<sup>rd</sup> May 2018, subject to final confirmation by the Regulatory Authorities) and ends on 30<sup>th</sup> September 2019. The first Capacity Year will be referred to in this document as the 2018/2019 Capacity Year.

All information set out in this document relates solely to the 2018/2019 T-1 Capacity Auction.

In order to participate in a Capacity Auction, a party must be a fully registered and qualified participant in the Capacity Market. Information relating to the registration process can be found via the I-SEM Capacity Market Registration section of the SEMO website<sup>2</sup>. Please note that the registration and qualification period for the 2018/2019 T-1 Capacity Auction has now closed.

Per Section F.5.1.5 of the Capacity Market Code, a Participant is responsible for conducting its own analysis before acting in reliance of any information contained within this document.

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### 1.2 Units

**For quantities specified in MW, 'MW' refers to a megawatt of de-rated capacity, unless otherwise stated.**

**For prices specified in €/MW per year or £/MW per year, 'year' refers to a 12-month year, unless otherwise stated.**

Settlement of prices in units based on a 12 month year for the first Capacity Year of approximately 16 months is provided for in accordance with paragraph F.17.1.1 and interim paragraph H.2.1.1 of the Trading and Settlement Code.

In this document, unless specifically stated, Euro (€) values will apply to Participants located in Ireland and Sterling (£) values will apply to Capacity Providers located in Northern Ireland. The Capacity Auction will be conducted in Euros, with Sterling offers converted to Euros at the Annual Capacity Payment Exchange Rate.

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<sup>1</sup> Capitalised terms in this document have the definition ascribed to them in the Capacity Market Code.

<sup>2</sup> [www.sem-o.com/ISEM/Pages/CapacityMarket.aspx](http://www.sem-o.com/ISEM/Pages/CapacityMarket.aspx)

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### 1.3 Contact Details

*The official contact details below should be used for any queries you may have relating to a Capacity Auction:*

**Postal Correspondence:**

*FAO: Capacity Market  
I-SEM Project  
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### 1.4 Disclaimer

EirGrid plc (EirGrid) and, SONI Limited (SONI) in their capacity as System Operators are required by the Capacity Market Code to publish the Final Auction Information Pack for a Capacity Auction. This publication discharges that obligation.

EirGrid and SONI have followed accepted industry practice in the collection and analysis of data available. Prior to taking business decisions, interested parties should not rely on the data set out in this information pack as a substitute for obtaining separate and independent advice in relation to the matters covered by this information pack. Information in this document does not amount to a recommendation or advice in respect of any possible investment. The use of information contained within this information pack for any form of decision making is done so at the user's own risk. This information pack should be read in conjunction with the Capacity Market Code and Trading and Settlement Code including any amendments to these rules.

Whilst every effort is made to provide information that is useful and care has been taken in the preparation of the information, EirGrid and SONI give no warranties or representations, expressed or implied, of any kind, with respect to the contents of this information pack, including without limitation, its quality, accuracy and completeness.

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### 1.5 Copyright Notice

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Ireland.

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## 2. Capacity Market Code Items

*This document contains values for items listed within Section F.5.1.3 of the I-SEM Capacity Market Code. Information determined by the Regulatory Authorities per Section F.3 is described as approved.*

### 2.1 Final Demand Curve

#### F.5.1.3 (a) the final Demand Curve for the Capacity Auction provided by the Regulatory Authorities under section F.3;

The Demand Curve is determined by the Regulatory Authorities in accordance with section F.3 of the Capacity Market Code. The approved Demand Curve is set out in Table 1 (this demand curve includes the required adjustments to the Capacity Requirement that are set out in F.3.1.4).

Table 1 - Final Demand Curve to be used in the Capacity Auction

De-Rated Capacity (MW)	Demand Curve Point (€/MW per year)
0	123,190
6,720	123,190
6,720	82,130
7,774.5	0

### 2.2 Auction Price Cap

#### F.5.1.3 (b) the final Auction Price Cap for the Capacity Auction (in Euro and Sterling);

Consistent with what was set out in the SEM Committee decision ([SEM-17-022](#)), the approved Auction Price Caps are set out in Table 2.

Table 2 - Auction Price Cap

Auction Price Cap (€/MW per year)	Auction Price Cap (£/MW per year)
123,190	110,464.47

### 2.3 Existing Capacity Price Cap

#### F.5.1.3 (c) the final Existing Capacity Price Cap for the Capacity Auction (in Euro and Sterling);

Consistent with what was set out in the SEM Committee decision ([SEM-17-022](#)), the approved Existing Capacity Price Caps are set out in Table 3:

Table 3 - Existing Capacity Price Cap

Existing Capacity Price Cap (€/MW per year)	Existing Capacity Price Cap (£/MW per year)
41,060	36,818.50

**2.4 Locational Capacity Constraints**

**F.5.1.3 (d) for each Locational Capacity Constraint applicable to the Capacity Auction:**

**(i) The final Locational Capacity Constraint Information; and**

In accordance with section C.2 of the Capacity Market Code and the approved Locational Capacity Constraints methodology ([SEM-17-040](#)), the System Operators calculate and submit to the Regulatory Authorities any Locational Capacity Constraints applicable to the Capacity Year for their determination. The approved Level 1 and Level 2 Locational Capacity Constraints are set out in Table 4 and Table 5 respectively.

**Table 4 - Level 1 Locational Capacity Constraints**

Level	Locational Capacity Constraint Area Name	Associated Level 2 Locational Constraint Area(s)	Locational Capacity Constraint Area Nodes	Minimum MW
1	L1-1: Northern Ireland	-	All nodes within Northern Ireland	1,630
1	L1-2: Ireland	L2-1: Greater Dublin	All nodes within Ireland	5,260

**Table 5 - Level 2 Locational Capacity Constraints**

Level	Locational Capacity Constraint Area Name	Associated Level 1 Locational Constraint Area	Locational Capacity Constraint Area Nodes	Minimum MW
2	L2-1: Greater Dublin	L1-2: Ireland	<ol style="list-style-type: none"> <li>1. Adamstown 110 kV station [ADM]</li> <li>2. Artane 110kV station [ART]</li> <li>3. Baltrasna 110kV station [BAL]</li> <li>4. Barnakyle 110kV station [BKY]</li> <li>5. Belcamp 220/110 kV station [BLC]</li> <li>6. Belgard Road 110 kV station [BGD]</li> <li>7. Blackrock 110kV station [BLA]</li> <li>8. Cabra 110kV station [CAB]</li> <li>9. City West 110kV station [CTW]</li> <li>10. Cloghran 110kV station [CLG]</li> <li>11. Clonee 110kV station [CLN]</li> <li>12. College Park 110kV station [COL]</li> <li>13. Cookstown 110/38kV station [COO]<sup>3</sup></li> <li>14. Corduff 220/110kV station [CDU]</li> <li>15. Corkagh 110kV station [CKG]</li> <li>16. Cromcastle 110kV station [CRM]</li> <li>17. Dardistown 110kV station [DTN]</li> <li>18. Finglas 220/110kV station [FIN]</li> <li>19. Fortunestown 110kV station [FTT]</li> <li>20. Francis Street 110kV station [FRA]</li> <li>21. Glasmore 110kV station [GLA]</li> <li>22. Grange 110kV station [GRA]</li> <li>23. Grange Castle 110kV station [GCA]</li> <li>24. Harolds Cross 110kV station [HAR]</li> <li>25. Heuston Square 110kV station [HEU]</li> </ol>	1,300

<sup>3</sup> Cookstown 38 kV is fed from Inchicore which is in the LCC. Cookstown 10 kV is fed from Carrickmines and hence is not in the LCC.

			26. Huntstown 220kV station [HUN] 27. Inchicore 220/110kV station [INC] 28. Irish Town 220kV station [ISH] 29. Kildonan 110 kV station [KLD] 30. Kilmahud 110kV station [KUD] 31. Kilmore 110kV station [KLM] 32. Macetown 110kV station [MCE] 33. McDermott 110kV station [MCD] 34. Milltown 110kV station [MIL] 35. Misery Hill 110kV station [MHL] 36. Nangor 110kV station [NAN] 37. Newbury 110kV station [NBY] 38. North Quays 110kV station [NQS] 39. North Wall 220kV station [NW] 40. Pelletstown 110kV station [PTN] 41. Poolbeg 220/110kV stations [PB] 42. Poppintree 110kV station [POP] 43. Ringsend 110kV station [RE] 44. Ryebrook 110kV station [RYB] 45. Stevenstown 110kV station [SVN] 46. Shellybanks 220kV station [SHL] 47. Trinity 110kV station [TRN] 48. West Dublin 220/110kV station [WDU] 49. Whitebank 110kV station [WBK] 50. Wolfe Tone 110kV station [WOL]	
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**(ii) The final Capacity Market Units that have Qualified for the Capacity Auction and that are in the System Operators’ reasonable opinion capable of contributing to satisfying the constraint;**

In accordance with section E.9.4 for the Capacity Market Code and F.5.1.3 (d) (ii), the Qualified Capacity Market Units that can contribute to meeting a Locational Capacity Constraint Required Quantity are set out in Table 6.

**Table 6 - Qualified Capacity Market Units in each Locational Capacity Constraint Area**

Level	Locational Capacity Constraint Area Name	Capacity Market Unit IDs for Qualified Capacity Market Units that contribute to the Locational Capacity Constraint
1	L1-1: Northern Ireland	Capacity Market Unit IDs commencing with “GU_5”, “DSU_5” or “CAU_5” Interconnector “I_NIMOYLE”
1	L1-2: Ireland	Capacity Market Unit IDs commencing with “GU_4”, “DSU_4” or “CAU_4” Interconnector “I_ROIEWIC”
2	L2-1: Greater Dublin	DSU_401620, DSU_401800, DSU_401850, DSU_403020, DSU_403030, DSU_403040, DSU_403050, DSU_403080, GU_400311, GU_400324, GU_400325, GU_400480, GU_400500, GU_400540, GU_402030

**2.5 Final Capacity Auction Timetable**

**F.5.1.3 (e) the final Capacity Auction Timetable as it relates to events after the publication of the Final Auction Information Pack (subject to section D.2).**

The approved Capacity Auction Timetable is set out in Table 7.

**Table 7 - Capacity Auction Timetable**

	Event	Date
1	Initial Auction Information Pack Date: the last publication date for the Initial Auction Information Pack	3 <sup>rd</sup> July 2017
2	Exception Application Date: the last time a Participant can make an Exception Application to the Regulatory Authorities	3 <sup>rd</sup> Aug 2017
3	Opt-out Notification Date: the last date a Participant can submit an Opt-out Notification	3 <sup>rd</sup> Aug 2017
4	Qualification Application Date: the last date a Participant can submit an Application for Qualification in respect of the Capacity Auction	3 <sup>rd</sup> Aug 2017
5	Provisional Qualification Results Date: the date by which the System Operators are expected to inform persons who submit Applications for Qualification of Provisional SO Qualification Decisions in respect of the Capacity Auction	6 <sup>th</sup> Oct 2017
6	Final Qualification Submission Date: the date by which the System Operators are expected to provide Final Qualification Results in respect of the Capacity Auction to the Regulatory Authorities for approval	17 <sup>th</sup> Nov 2017
7	Final Qualification Results Date: the date by which the System Operators are expected to inform persons who submit Applications for Qualification of Final Qualification Decisions in respect of the Capacity Auction	1 <sup>st</sup> Dec 2017
8	Qualification Results Publication Date: the date by which the System Operators are expected to publish the total Qualified capacity in respect of the Capacity Auction	1 <sup>st</sup> Dec 2017
9	Date for finalising the Locational Capacity Constraint Limits for the Capacity Auction	1 <sup>st</sup> Dec 2017
10	Final Auction Information Pack Date: the date by which the System Operators are expected to publish the Final Auction Information Pack for the Capacity Auction	1 <sup>st</sup> Dec 2017
11	Capacity Auction Submission Commencement: the earliest date and time that Participants may submit Capacity Auction Offers in respect of Capacity Market Units Qualified to participate in the Capacity Auction	11 <sup>th</sup> Dec 2017
12	Capacity Auction Submission End: the last date and time until Participants may submit Capacity Auction Offers in respect of Capacity Market Units Qualified to participate in the Capacity Auction	10AM on 15 <sup>th</sup> Dec 2017
13	Capacity Auction Run Start: the day and time that the System Operators initiate the run of the software program referred to in paragraph F.8.5.1 in respect of the Capacity Auction	11AM on 15 <sup>th</sup> Dec 2017
14	Capacity Auction Completion Date: the date by which the System Operators are expected to complete the Capacity Auction (including the Capacity Auction Monitor's review)	18 <sup>th</sup> Dec 2017
15	Capacity Auction Provisional Results Date: the date by which the System Operators are expected to provide provisional Capacity Auction results to Participants	18 <sup>th</sup> Dec 2017
16	Capacity Auction Approval Date: the date by which the Regulatory Authorities are expected to approve the Capacity Auction results	25 <sup>th</sup> Jan 2018
17	Capacity Auction Results Date: the date the System Operators are expected to publish the Capacity Auction results	25 <sup>th</sup> Jan 2018



18	Performance Security Date: the last date for Participants to provide Performance Securities to the System Operators for Awarded New Capacity allocated in the Capacity Auction	1 <sup>st</sup> Feb 2018
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## 2.6 Participant Requirements

### F.5.1.3 (f) details of what is required of Participants participating in the Capacity Auction in order to submit Capacity Auction Offers;

Participants are required to complete Communication Channel Qualification Testing (CCQT) and Participant Interface Testing (PIT) in order to take part in the first Capacity Auction. All details regarding the required CCQT and PIT testing can be found in the I-SEM [CCQT](#) and [PIT](#) Guides.

For information on submitting Capacity Auction Offers, users are advised to view the [Capacity Market Platform User Guides](#) to assist with trouble shooting. In addition, the System Operators have prepared a [Helicopter Guide to the Capacity Auction Process](#). It is advised that Participants are familiar with these documents ahead of the Auction.

## 2.7 Allowed Timeframe

### F.5.1.3 (g) the final Allowed Timeframe;

In accordance with paragraph F.8.5.2 of the Capacity Market Code, the Allowed Timeframe for the 2018/2019 T-1 Capacity Auction is 24 hours. Further information on this is contained in the Interim Auction Solution Methodology that is published with the Final Auction Information Pack.

The Interim Auction Solution Methodology (IASM1819T-1), which has been approved by the Regulatory Authorities, in accordance with M.6.1.4 of the Capacity Market Code, contains a description of the methodology that will be used to clear the 2018/2019 T-1 Capacity Auction. The Interim Auction Solution Methodology implements the requirements of the Capacity Market Code set out in F.8 as modified by the Interim Auction Solution set out in M.4 and the Alternative Auction Solution Methodology set out in M.6.

## 2.8 Annual Capacity Payment Exchange Rate

### F.5.1.3 (h) the final Annual Capacity Payment Exchange Rate to be used by the System Operators in conducting the Capacity Auction and applicable to Awarded Capacity in the Capacity Auction;

The approved Annual Capacity Exchange Rates are set out in Table 8.

Table 8 - Annual Capacity Exchange Rates

Annual Capacity Payment Exchange Rate (€/£)	Annual Capacity Payment Exchange Rate (£/€)
0.9116	1.0970

This rate has been calculated in accordance with the methodology approved under Chapter K of the CMC.

## 2.9 Final Capacity Requirement

### F.5.1.3 (i) the final Capacity Requirement to be used in the Capacity Auction;

The Capacity Requirement has been calculated by the System Operators based on the approved methodology ([SEM-17-040](#)) and submitted to the Regulatory Authorities for their determination. The approved Capacity Requirement is set out in Table 9.

Table 9 - Capacity Requirement

Capacity Requirement (MW)
7,030 MW

**2.10 Awarded Capacity**

**F.5.1.3 (j) at the date of the Final Auction Information Pack, how much Awarded Capacity has already been procured for the relevant Capacity Year;**

The Awarded Capacity is set out in Table 10 below:

Table 10 - Awarded Capacity

Awarded Capacity (MW)
0

**2.11 Annual Stop-Loss Limit Factor**

**F.5.1.3 (k) the final Annual Stop-Loss Limit Factor applicable to Awarded Capacity allocated in the Capacity Auction;**

As set out in the SEM Committee decision ([SEM-17-022](#)), the approved Annual Stop-Loss Limit Factor is set out in Table 11.

Table 11 - Annual Stop-Loss Limit Factor

Annual Stop-Loss Limit Factor
1.5

**2.12 Billing Period Stop-Loss Limit Factor**

**F.5.1.3 (l) the final Billing Period Stop-Loss Limit Factor applicable to Awarded Capacity allocated in the Capacity Auction;**

As set out in the SEM Committee decision ([SEM-17-022](#)), the approved Billing Period Stop-Loss Limit Factor is set out in Table 12.

Table 12 - Billing Period Stop-Loss Limit Factor

Billing Period Stop-Loss Limit Factor
0.5

Note: The calculation of billing Period Stop-Loss Limit is carried out in settlement in accordance with F.18.3.2 and F.18.3.4 of part B of the Trading and Settlement Code. These calculations include the product of the Billing Period Stop-Loss Factor and the Annual Stop-Loss Factor, which is 0.75. In the Initial Auction Information Pack, this value (0.75) was listed as the Billing Period Stop-Loss Limit Factor; however, this was an error and the Billing Period Stop-Loss Limit Factor should have been listed as 0.5.

## 2.13 Performance Securities

### F.5.1.3 (m) in respect of Performance Securities:

- (i) the final Performance Security Posting Dates/ Events applicable to Awarded New Capacity allocated in the Capacity Auction; and
- (ii) for each Performance Security Posting Date/ Event, the final €/MW rate to be applied in setting Performance Securities applicable to Awarded New Capacity allocated in the Capacity Auction;

As set out in the SEM Committee decision ([SEM-17-022](#)), the approved final Performance Security Posting Dates/ Events and final performance security rates are set out in Table 13 below:

Table 13 - Performance Security Dates and Rates

Date / Event	Performance Security Rate (€/MW)
More than 13 months prior to beginning of Capacity Year	10,000
From 13 months prior to beginning of Capacity Year	30,000
From beginning of Capacity Year	40,000

## 2.14 Termination Charges

### F.5.1.3 (n) the final €/MW fee rates for calculating Termination Charges applicable to Awarded New Capacity allocated in the Capacity Auction;

As set out in the SEM Committee decision ([SEM-17-022](#)), the approved final Termination Charge rates are set out in Table 14 below:

Table 14 - Termination Charge Rates

Date / Event	Termination Charge Rate (€/MW)
More than 13 months prior to beginning of Capacity Year	10,000
From 13 months prior to beginning of Capacity Year	30,000
From beginning of Capacity Year	40,000

## 2.15 Scarcity Price

### F.5.1.3 (o) anticipated values for the Full Administered Scarcity Price and the Reserve Scarcity Price Curve applicable to the Capacity Year;

As set out in the SEM Committee decision ([SEM-17-022](#)), the approved anticipated values of the Full Administered Scarcity Price and the Reserve Scarcity Price Curve are set out in Table 15 below:

Table 15 - Full Administered Scarcity Price Curve

Short Term Reserve (MW)	Administered Scarcity Price (€/MWh)
Demand Control	3000

0	3000
500	500

## 2.16 Strike Price

### D.3.1.2 (p) anticipated values for the parameters listed in paragraph F.16.1.1 and F.16.1.5 of the Trading and Settlement Code to be applied in determining the Strike Price in accordance with the Trading and Settlement Code for the Capacity Year;

The approved anticipated values to be applied in determining the Strike Price are set out in Table 16:

**Table 16 - Anticipated Strike Price calculation components**

Strike Price Component	Value	Unit
PCARBON <sub>m</sub>	PCARBON <sub>m</sub> Index	€/tCO <sub>2e</sub>
PFUELNG <sub>m</sub>	[PFUELNG <sub>m</sub> Index (p/therm) x 0.01 (£/p) + PFUELNG <sub>m</sub> Transport (£/therm)] x Exchange Rate (€/£) x 9.48 (therm/GJ) x 3.6 (GJ/MWh)	€/MWh
PFUELO <sub>m</sub>	[PFUELO <sub>m</sub> Index (\$/t) x Exchange Rate (€/£) + PFUELO <sub>m</sub> Transport (€/t)] x 0.025 (t/GJ) x 3.6 (GJ/MWh)	€/MWh
PCARBON <sub>m</sub> Index	ICE ECX EUA Futures – EUA - (monthly) <sup>4</sup>	€/tCO <sub>2e</sub>
PFUELNG <sub>m</sub> Index	ICE UK Natural Gas Index (monthly)	p/therm
PFUELNG <sub>m</sub> Transport	0.0424 <sup>5</sup>	£/therm
PFUELO <sub>m</sub> Index	Platt's Forward Curve (monthly) for monthly swap transactions for 1% sulphur free on board (FOB) fuel oil cargoes in North West Europe (NWE) for the relevant month (AAEGR00)	\$/t
PFUELO <sub>m</sub> Transport	50 <sup>6</sup>	€/t
FTHEORYPU <sub>y</sub>	15	%
FCARBONING <sub>y</sub>	0.202	tCO <sub>2e</sub> /MWh
FCARBONINO <sub>y</sub>	0.277	tCO <sub>2e</sub> /MWh
PTHEORYDSU <sub>y</sub>	500	€/MWh
Exchange Rate (€/£)	The Trading Day Exchange Rate as defined in the Trading and Settlement Code	€/£
Exchange Rate (€//\$)	The rate set at 17:00 the day before the Trading Day, from the same source as used for the Trading Day Exchange Rate	€//\$

<sup>4</sup> The December price for a given year will apply to all months falling within that year.

<sup>5</sup> NI natural gas transport adder used in SEM PLEXOS Forecast Model 2016-17.

<sup>6</sup> Based on ROI LSFO transport adder used in SEM PLEXOS Forecast Model 2016-17.

therm/GJ	9.48 <sup>7</sup>	therm/GJ
LSFO calorific value	0.025 <sup>8</sup>	t/GJ

Note: - Some of the values and units in table 16 have changed from the table given in the Initial Auction Information Pack. These changes have been made to align with the Trading and Settlement Code definitions and relate to unit conversions. The calculation methodology has not changed.

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<sup>7</sup> SEM PLEXOS Forecast Model 2016-17

<sup>8</sup> SEM PLEXOS Forecast Model 2016-17

### 3. Other Capacity Market Code Items

The additional information provided in this section is not required to be published in the Final Auction Information Pack, but is provided for reference.

#### 3.1 De-Rating Curves

This section gives the Final De-rating Curves. These were published in section 2.1 of the Initial Auction Information Pack. These values have not changed and are only included here for reference.

#### D.3.1.2 (a) the final De-Rating Curves, defining De-Rating Factors by unit Initial Capacity and by Technology Class (including for Interconnectors) to be used in the Capacity Auction;

The De-Rating Curves have been calculated by the System Operators based on the approved methodology ([SEM-17-040](#)) and submitted to the Regulatory Authorities for their determination. The approved De-Rating Curves are set out in Table 17, Table 18, Table 19 and Table 20 below:

Table 17 - De-Rating Curves by Technology Class and Initial Capacity

Initial Capacity Band (MW not de-rated)	DSU	Gas Turbine	Hydro	Steam Turbine	Interconnector <sup>9</sup>	System Wide <sup>10</sup>
1 -> 10	0.922	0.926	0.906	0.909	0.921	0.922
11 -> 20	0.921	0.925	0.904	0.908	0.919	0.921
21 -> 30	0.920	0.924	0.903	0.906	0.917	0.920
31 -> 40	0.919	0.923	0.901	0.904	0.915	0.919
41 -> 50	0.918	0.923	0.900	0.902	0.913	0.918
51 -> 60	0.917	0.922	0.898	0.900	0.910	0.917
61 -> 70	0.916	0.921	0.897	0.899	0.908	0.916
71 -> 80	0.915	0.921	0.896	0.897	0.906	0.915
81 -> 90	0.914	0.920	0.894	0.895	0.904	0.914
91 -> 100	0.913	0.919	0.893	0.893	0.902	0.913
101 -> 110	0.911	0.918	0.891	0.891	0.900	0.911
111 -> 120	0.909	0.917	0.890	0.888	0.898	0.909
121 -> 130	0.907	0.915	0.888	0.886	0.896	0.907
131 -> 140	0.905	0.914	0.886	0.883	0.894	0.905
141 -> 150	0.904	0.912	0.885	0.881	0.892	0.904
151 -> 160	0.902	0.911	0.883	0.879	0.890	0.902
161 -> 170	0.900	0.911	0.880	0.876	0.887	0.900
171 -> 180	0.898	0.910	0.878	0.874	0.885	0.898
181 -> 190	0.897	0.909	0.876	0.872	0.882	0.897
191 -> 200	0.895	0.909	0.873	0.870	0.879	0.895
201 -> 210	0.893	0.908	0.871	0.868	0.877	0.893
211 -> 220	0.891	0.906	0.869	0.865	0.874	0.891
221 -> 230	0.889	0.905	0.868	0.863	0.871	0.889
231 -> 240	0.887	0.904	0.866	0.860	0.868	0.887
241 -> 250	0.886	0.903	0.864	0.858	0.866	0.886
251 -> 260	0.884	0.902	0.863	0.855	0.863	0.884
261 -> 270	0.881	0.900	0.861	0.853	0.860	0.881
271 -> 280	0.879	0.899	0.859	0.850	0.857	0.879
281 -> 290	0.877	0.897	0.857	0.847	0.855	0.877
291 -> 300	0.875	0.896	0.855	0.844	0.852	0.875

<sup>9</sup> The final de-rating factor for Interconnectors is calculated by multiplying the marginal de-rating factor that applies to their size class by the External Market De-rating Factor. The External Market De-rating Factor for this auction will be 0.60 for interconnectors from Great Britain to Ireland or Northern Ireland.

<sup>10</sup> New Technology (i.e. a technology for which there is currently no technology class) should use the System Wide derating curve.

301 -> 310	0.872	0.894	0.854	0.841	0.849	0.872
311 -> 320	0.870	0.893	0.852	0.838	0.846	0.870
321 -> 330	0.867	0.892	0.850	0.835	0.843	0.867
331 -> 340	0.864	0.890	0.848	0.832	0.840	0.864
341 -> 350	0.861	0.889	0.846	0.829	0.836	0.861
351 -> 360	0.858	0.887	0.844	0.826	0.833	0.858
361 -> 370	0.855	0.886	0.842	0.822	0.830	0.855
371 -> 380	0.853	0.884	0.839	0.819	0.826	0.853
381 -> 390	0.850	0.883	0.837	0.816	0.823	0.850
391 -> 400	0.847	0.881	0.834	0.813	0.820	0.847
401 -> 410	0.844	0.880	0.832	0.809	0.816	0.844
411 -> 420	0.842	0.878	0.829	0.805	0.812	0.842
421 -> 430	0.839	0.876	0.827	0.801	0.809	0.839
431 -> 440	0.836	0.874	0.825	0.797	0.805	0.836
441 -> 450	0.833	0.872	0.822	0.794	0.801	0.833
451 -> 460	0.830	0.870	0.819	0.790	0.798	0.830
461 -> 470	0.827	0.867	0.817	0.786	0.794	0.827
471 -> 480	0.824	0.865	0.814	0.782	0.790	0.824
481 -> 490	0.821	0.863	0.811	0.777	0.785	0.821
491 -> 500	0.818	0.861	0.808	0.773	0.781	0.818

**Table 18 - De-Rating Curves for pumped hydro storage units by Initial Capacity and duration of storage at full output**

Unit Size (MW)	Hours of Storage											
	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0 or greater
1 -> 10	0.249	0.420	0.543	0.630	0.690	0.731	0.759	0.779	0.796	0.813	0.835	0.859
11 -> 20	0.241	0.412	0.535	0.621	0.681	0.722	0.749	0.769	0.787	0.805	0.827	0.851
21 -> 30	0.232	0.403	0.527	0.613	0.672	0.712	0.740	0.760	0.778	0.796	0.819	0.843
31 -> 40	0.224	0.395	0.519	0.604	0.663	0.703	0.731	0.751	0.769	0.788	0.811	0.835
41 -> 50	0.219	0.390	0.514	0.599	0.657	0.698	0.726	0.746	0.765	0.785	0.807	0.830
51 -> 60	0.218	0.388	0.513	0.597	0.655	0.697	0.725	0.747	0.766	0.786	0.807	0.828
61 -> 70	0.215	0.385	0.508	0.592	0.651	0.694	0.723	0.745	0.764	0.785	0.806	0.826
71 -> 80	0.210	0.379	0.501	0.586	0.645	0.688	0.718	0.740	0.761	0.782	0.803	0.822
81 -> 90	0.205	0.372	0.494	0.578	0.638	0.682	0.712	0.735	0.757	0.778	0.798	0.817
91 -> 100	0.200	0.364	0.485	0.570	0.630	0.674	0.704	0.728	0.750	0.772	0.792	0.811
101 -> 110	0.196	0.358	0.478	0.563	0.623	0.667	0.698	0.722	0.745	0.766	0.787	0.805
111 -> 120	0.193	0.353	0.472	0.557	0.617	0.661	0.693	0.718	0.740	0.762	0.782	0.801
121 -> 130	0.191	0.349	0.466	0.551	0.611	0.656	0.687	0.713	0.736	0.758	0.778	0.797
131 -> 140	0.188	0.344	0.461	0.545	0.606	0.650	0.682	0.708	0.731	0.753	0.774	0.793
141 -> 150	0.186	0.339	0.455	0.540	0.600	0.644	0.677	0.703	0.727	0.749	0.770	0.789
151 -> 160	0.183	0.335	0.449	0.534	0.594	0.639	0.671	0.699	0.722	0.745	0.765	0.785
161 -> 170	0.180	0.330	0.444	0.528	0.588	0.633	0.666	0.694	0.718	0.740	0.761	0.781
171 -> 180	0.178	0.325	0.438	0.523	0.583	0.628	0.661	0.689	0.713	0.736	0.757	0.777
181 -> 190	0.175	0.321	0.432	0.517	0.577	0.622	0.656	0.684	0.709	0.732	0.753	0.773
191 -> 200	0.173	0.316	0.427	0.511	0.571	0.616	0.650	0.680	0.704	0.727	0.748	0.769

**Table 19 – De-Rating Curves for other storage units by Initial Capacity and duration of storage at full output**

Unit Size (MW)	Hours of Storage											
	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0 or greater
1 -> 10	0.251	0.429	0.556	0.646	0.708	0.751	0.780	0.801	0.819	0.838	0.862	0.888
11 -> 20	0.244	0.422	0.550	0.640	0.701	0.744	0.773	0.794	0.812	0.832	0.856	0.881
21 -> 30	0.237	0.415	0.544	0.633	0.695	0.737	0.766	0.787	0.806	0.826	0.849	0.875
31 -> 40	0.231	0.409	0.538	0.627	0.688	0.730	0.759	0.781	0.799	0.819	0.843	0.868
41 -> 50	0.228	0.406	0.536	0.624	0.685	0.728	0.757	0.779	0.798	0.818	0.842	0.866

51 -> 60	0.229	0.407	0.537	0.625	0.686	0.730	0.760	0.782	0.802	0.823	0.846	0.868
61 -> 70	0.228	0.405	0.535	0.623	0.684	0.729	0.759	0.782	0.803	0.825	0.846	0.867
71 -> 80	0.224	0.400	0.528	0.617	0.679	0.724	0.755	0.779	0.801	0.823	0.844	0.864
81 -> 90	0.219	0.394	0.521	0.610	0.673	0.718	0.750	0.774	0.797	0.819	0.841	0.861
91 -> 100	0.215	0.387	0.513	0.602	0.665	0.711	0.744	0.769	0.792	0.815	0.836	0.856
101 -> 110	0.211	0.381	0.506	0.595	0.659	0.705	0.738	0.763	0.787	0.809	0.830	0.850
111 -> 120	0.208	0.376	0.500	0.589	0.652	0.699	0.731	0.757	0.781	0.803	0.824	0.844
121 -> 130	0.206	0.371	0.494	0.583	0.646	0.692	0.725	0.751	0.775	0.797	0.818	0.838
131 -> 140	0.203	0.367	0.488	0.577	0.640	0.686	0.719	0.745	0.768	0.791	0.812	0.831
141 -> 150	0.200	0.362	0.483	0.570	0.633	0.679	0.712	0.739	0.762	0.785	0.805	0.825
151 -> 160	0.197	0.357	0.477	0.564	0.627	0.673	0.706	0.733	0.756	0.779	0.799	0.819
161 -> 170	0.195	0.352	0.471	0.558	0.620	0.667	0.699	0.727	0.750	0.773	0.793	0.812
171 -> 180	0.192	0.347	0.465	0.552	0.614	0.660	0.693	0.721	0.744	0.767	0.787	0.806
181 -> 190	0.189	0.342	0.459	0.545	0.608	0.654	0.687	0.715	0.738	0.760	0.780	0.800
191 -> 200	0.187	0.338	0.453	0.539	0.601	0.648	0.680	0.709	0.732	0.754	0.774	0.794

Note: the values of Initial Capacity in units of MW are values prior to the application of De-Rating Factors.

Table 20 - De-rating Factors for Wind and Solar

Wind	Solar
0.103	0.055

### 3.2 Increase and Decrease Tolerance

*This section gives the Increase and Decrease Tolerances by Technology Class that may be applied by a Participant in its Application for Qualification to Capacity Market Unit de-ratings. These were published in section 2.12 of the Initial Auction Information Pack. These values have not changed and are only included here for reference.*

#### D.3.1.2 (l) the final allowed Increase Tolerance and Decrease Tolerance by Technology Class that may be applied by a Participant in its Application for Qualification to Capacity Market Unit de-ratings;

As set out in the SEM Committee decision ([SEM-17-022](#)), the approved Increase and Decrease Tolerances are set out in Table 21 below:

Table 21 - Increase and Decrease Tolerances per Technology Class

Technology Class	INCTOL(%)	DECTOL(%)
All except DSUs	0	0
DSUs	0	100

The DECTOL for the DSU Technology Class also applies to any demand reduction component of a Candidate Unit that is part of an Autoproducer Site (where the demand reduction component is calculated as the Autoproducer Demand Reduction Volume / Maximum Export Capacity).



### 3.3 Capacity Market Code Items Change Table

*This section gives the Capacity Market Code Items Change Table. This is an updated version of the table published in the Initial Auction Information Pack. All of the items required under the Capacity Market Code have been finalised in this Final Auction Information Pack with the exception to anticipated values which may vary, in the case of the Administered Scarcity Price via the change process set out in the Trading and Settlement Code and in the case of the Strike Price due to variations in the fuel and carbon indices set out in this document.*

Table 21 - Capacity Market Code Items Change Table

Code Item	IAIP	FAIP
De-Rating Curves	Final	Final
Capacity Requirement	Final	Final
Indicative Demand Curve	Indicative	Final
Locational Capacity Constraint Areas	Final	Final
Locational Capacity Constraint Minimum Requirement		Final
Awarded Capacity	Final	Final
Auction Price Cap	Final	Final
Existing Capacity Price Cap	Final	Final
New Capacity Investment Rate Threshold	Final	Final
Annual Stop-Loss Limit Factor	Final	Final
Billing Period Stop-Loss Limit Factor	Final	Final
Annual Capacity Payment Exchange Rate	Indicative	Final
Increase and Decrease Tolerance	Final	Final
Performance Securities	Final	Final
Termination Charges	Final	Final
Administered Scarcity Price	Anticipated	Anticipated
Strike Price	Anticipated	Anticipated
Capacity Auction Timetable	Indicative	Final