

Integrated Single Electricity Market (I-SEM)

Capacity Remuneration Mechanism 2020/21 T-1 Capacity Auction and 2021/22 T-2 Capacity Auction Parameters

Consultation Paper SEM-19-010

4 March 2019

1 EXECUTIVE SUMMARY

Under the I-SEM, capacity revenues are allocated by a capacity auction for a relevant capacity year. Prior to each capacity auction, a number of capacity auction parameters must be set. The list of parameters that must be determined by the Regulatory Authorities is described in the Capacity Market Code. This paper sets out the SEM Committee's proposals for the relevant parameters to apply in the 2020/21 T-1 and 2021/22 T-2 transitional auctions, scheduled to take place in December 2019.

The proposed parameters for consultation are:

Parameter	Proposed Value for 2020/21 T-1 and 2021/22 T-2 capacity auctions
De-Rating Curves, defining De-Rating Factors by unit Initial Capacity and by Technology Class (including for Interconnectors)	To be calculated by the System Operators and submitted to the Regulatory Authorities for determination.
Capacity Requirement	To be calculated by the System Operators and submitted to the Regulatory Authorities for determination.
Indicative Demand Curve	 The Demand Curve will be based on the following principles: The curve will be horizontal at the Auction Price Cap (1.5 x Net CONE) between 0MW and 100% of the Capacity Requirement; The demand curve will be vertical at 100% of the Capacity Requirement between a price of 1.5 x Net CONE and 1 x Net CONE; The demand curve will be a straight line slope with a zero-crossing point at 115% of the Capacity Requirement.
Auction Price Cap	1.5 times Net CONE

Existing Capacity Price Cap	The SEM Committee welcomes respondents' views on the appropriate ECPC.			
New Capacity Investment Rate Threshold	€300,000 per de-rated MW			
Annual Stop Loss Limit Factor			1.5	
Billing Period Stop Loss Factor		(0.5	
Indicative Annual Capacity Exchange Rate	The Exchange Rate will be proposed by the System Operators and included in the Initial Auction Information Pack.			
Increase Tolerance and Decrease Tolerance by Technology Class	Technology Class All except DSUs DSUs	Inc Tolera	crease ance (%) 0 0	Decrease Tolerance (%) 0 100
Performance Securities	Date / Event More than 13 mo prior to the beginn Capacity Yea From 13 month beginning of Cap Year From beginning Capacity Yea	onths ning of ar s to bacity g of ar	Performa	nce Security Rate (€/MW) 10,000 30,000 40,000

	Date / Event	Termination Charge Rate (€/MW)		
	More than 13 months prior to the beginning of Capacity Year	10,000		
	From 13 months to beginning of Capacity Year	30,000		
Termination Charges	From beginning of Capacity Year	40,000		
Price and Reserve Scarcity	Short Term Reserve (MW)	Administered Scarcity Price (€/MWh)		
Price	Demand Control	25% of VoLL		
	0	25% of VoLL		
	500	500		
Values for determining strike price in accordance with the Trading and Settlement Code	The SEM Committee propo values for the 2020/21 T-1 auctions.	oses to retain the existing and 2021/22 T-2 capacity		

Responses to the proposals within this consultation should be sent to Kenny Dane (<u>kenny.dane@uregni.gov.uk</u>) by Tuesday 2 April 2019. We intend to publish all responses unless they have been marked confidential.

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3 INTRODUCTION AND BACKGROUND

The I-SEM Capacity Remuneration Mechanism ("**CRM**") was developed through an extensive series of consultation and decision papers. The CRM allocates capacity payments through ex-ante capacity auctions, with penalties being issued for capacity that is not delivered when it is needed.

Before each capacity auction, a number of auction parameters need to be set by the Regulatory Authorities ("**RAs**" (the Utility Regulator in Northern Ireland and the Commission for Regulation of Utilities ("**CRU**")).

In SEM-18-009, the SEM Committee signalled their intention to hold transitional auctions for Capacity Year 2020/21 and Capacity Year 2021/22 at the same time, around December 2019. The purpose of this paper is therefore to consult on the parameters to apply for the 2020/21 T-1 and 2021/22 T-2 capacity auctions.

Responses to the proposals within this consultation should be sent to Kenny Dane (<u>kenny.dane@uregni.gov.uk</u>) by Tuesday 2 April 2019. We intend to publish all responses unless they have been marked confidential.

4 CURRENT PARAMETER VALUES

Paragraph D.3.1.3 of the Capacity Market Code requires the Regulatory Authorities to determine the following parameters for each Capacity Auction, and provide them to the System Operators for inclusion in the applicable Initial Auction Information Pack. The list of parameters and the applicable values for the recent 2019/20 T-1 capacity auction and the forthcoming 2022/23 T-4 capacity auction are provided in Appendix A.

For the majority of the parameters, the RAs do not intend to deviate from the existing values.

5 PROPOSED PARAMETERS FOR 2020/21 T-1 AND 2021/22 T-2 CAPACITY AUCTIONS

As described, the Regulatory Authorities must determine the following parameters:

(a) De-Rating Curves

A De-Rating Curve is a curve for a Technology Class that represents the De-Rating Factor applicable by unit Initial Capacity to be used in a Capacity Auction. A De-Rating Factor must be between zero and one, and describes the proportion of Initial Capacity of a Generator Unit or Interconnector that can be used in a Capacity Auction.

The most recent methodology for the calculation of the Capacity Requirement and Derating factors was published in June 2018 (SEM-18-030a). A Least-Worst Regrets analysis is performed to select the demand forecast level to be used for the Capacity Market auction and associated capacity requirement. The de-rating factors are those that are used to derive the capacity requirement selected by the Least-Worst Regrets analysis.

The Regulatory Authorities will follow this methodology in determining the de-rating factors for the 2020/21 T-1 and 2021/22 T-2 transitional auctions, and are not inviting specific comments on this parameter.

(b) The final Capacity Requirement for the Capacity Year to be used in the Capacity Auction

The Capacity Requirement is the de-rated capacity required to satisfy the SEM Security Standard for a specific Capacity Year to be used in a Capacity Auction.

The Capacity Requirement for the 2020/21 T-1 and 2021/22 T-2 Capacity Auctions will be determined by the System Operators prior to the publication of the Initial Auction Information Pack. The Regulatory Authorities are not inviting specific comment on this parameter.

(c) Indicative Demand Curve

A Demand Curve is a curve determined by the Regulatory Authorities representing the deemed per MW value of each level of capacity that could be awarded in the Capacity Auction.

The demand curve for the first two transitional (T-1) auctions were determined in accordance with the following chart:



This chart is based on the following principles:

- The curve will be horizontal at the Auction Price Cap (150% of Net CONE) between 0MW and 100% of the Capacity Requirement;
- The demand curve will be vertical at 100% of the Capacity Requirement between a price of 150% of Net CONE and 100% of Net CONE (point Z on the above diagram);
- The demand curve will be a straight line slope between point Z and a zerocrossing point at 115% of the Capacity Requirement.

The shape of the demand curve for the 2022/23 T-4 auction was amended from the previous two transitional auctions. The revised curve allows the possibility for procuring

less than the Capacity Requirement in the T-4 auction, and buying commensurately more in the respective T-1 auction.

The shape of the demand curve is determined in accordance with the following principles:

- Horizontal at the Auction Price Cap of 1.5 times Net CONE, from 0MW to 92.5% of the Capacity Requirement.
- Slopes down in a straight line to 115% of the Capacity Requirement. The line passes through the point at where the volume is equal 100% of the Capacity Requirement and the price equals Net CONE.



The demand curves for the last two auctions are shown below:

Value for 2019/20 T-1 capacity auction		Value for 2022/23 T-4 capacity auction	
De-Rated Capacity (MW)	Demand Curve Point (€/MW/year)	De-Rated Capacity (MW)	Demand Curve Point (€/MW/year)
0	123,190	0	138,450
7,030	123,190	6,959.59	138,450
7,030	82,130	7,524.00	92,300
8,084.5	0	8652.60	0

An indicative Demand Curve for the 2020/21 T-1 and 2021/22 T-2 capacity auctions will be calculated and provided to the System Operators for inclusion in the Initial Auction Information Pack. This will be based upon the Capacity Requirement, the Auction Price Cap and Net CONE, It is intended that the shape of the demand curve will be similar to that for the previous transitional auctions. Factors that may amend the shape of the demand curve include:

- Any volume of all-island / Local Capacity Constraint Area operating reserve to be included.
- Any volume withheld from the T-2 auction to the subsequent T-1 auction.
 However, the RAs are not currently minded to hold a T-1 auction for the 2021/22 Capacity Year.

(d) The Auction Price Cap

The Auction Price Cap is the maximum price allowed in a Capacity Auction. It is the maximum price which all Qualified Bidders can submit. It is also the maximum price the auction can clear at, and the maximum Reliability Option fee that any capacity provider can be paid.

In previous auctions, this has been set at 1.5 times Net CONE (Cost of New Entry). Its value therefore depends on:

- Net CONE: this is determined by the value of a Best New Entrant ("**BNE**") reference plant, net of infra-marginal rent and DS3 income
- The multiplier: this currently contains a 50% margin for uncertainty in setting Net CONE.

Consultation Proposal

The SEM Committee propose to continue to set the Auction Price Cap at 1.5 times Net CONE.

(e) Existing Capacity Price Cap

The Existing Capacity Price Cap ("**ECPC**") is the price cap applicable to Existing Capacity in a Capacity Auction. It is a uniform (i.e. non-technology specific) cap which caps the price that Existing Generators and interconnectors can offer volume at, unless they apply to the Regulatory Authorities for a higher Unit Specific Price Cap ("**USPC**")¹. New Capacity² and DSUs are not subject to the ECPC, and may bid up to the Auction Price Cap.

The first CRM parameters decision (<u>CRM-17-022</u>) describes the SEM Committee's rationale for setting the ECPC at 0.5 times Net CONE for the first transitional auction (2018/19 T-1), noting that the ECPC performs two key functions, and the level of ECPC needs to reflect these two key functions.

- Firstly, it limits the ability of generators with market power, but low Net Going Forward Costs ("NGFCs") to exercise their market power through making high offers. Given the significant concerns about market power in the CRM (see SEM-16-010), it is important that the ECPC is not set at a level significantly above where the market is expected to clear in current market conditions.
- Secondly it provides a filter to ensure that only those USPC applications which the RAs need to scrutinise (because they may have a material impact on the clearing price or pay-as-bid prices) are scrutinised. If the ECPC is set too low, then offer prices which are below the clearing price (and therefore will have no impact on the clearing price or pay-as-bid prices) will need to be reviewed, imposing an unnecessary administrative burden on both the RAs and bidders.

The rationale for originally setting the ECPC at 0.5 is that:

 It was estimated that the vast majority of plant required to meet the Capacity Requirement could bid at its Net Going Forward Cost without needing to apply for a unit specific bid limit;

¹ Or submit an Opt-Out Notification on the grounds that they are going to close before the end of the relevant Capacity Year

² Generators which meet the criteria for new build generation will not be subject to the Existing Capacity Price Cap and may bid at a price up to the Auction Price Cap

- It is consistent with relevant international benchmarks;
- It strikes an appropriate balance between the objectives of protecting consumers from the potential for bidders to exercise market power, and not placing an excessive workload on market participants and RAs from having to respectively submit and review significant volumes of USPC applications.

For the 2020/21 T-1 and 2021/22 T-2 capacity auctions, the ECPC will continue to be set as a multiplier of Net CONE.

When setting the ECPC for the initial transitional auction, the risk of a significant number of USPC applications, and the consequent administrative burden on both the industry and the RAs at a time close to I-SEM go-live, was a factor in not setting a tighter multiplier than 0.5. However, the RAs have now performed three iterations of reviewing USPC applications, and have developed a robust approach and an increasing efficiency in processing these applications. In the event that the volume of USPC applications were to increase in response to a reduction in the ECPC, the RAs consider that this increased workload could be managed.

Consultation Proposal:

The SEM Committee welcome feedback on the potential for reducing the value of ECPC for the 2020/21 T-1 and 2021/22 T-2 capacity auctions. We have observed bidding behaviour in relation to ECPC from the first two transitional auctions, and by the time we come to make a decision on this parameter, we will also have data from the upcoming 2022/23 T-4 auction.

(f) New Capacity Investment Rate Threshold

The New Capacity Investment Rate Threshold is an amount determined by the RAs that must be exceeded by the cost per MW of constructing New Capacity for that capacity to be eligible to be allocated Awarded Capacity with a duration of more than one year.

For the 2022/23 T-4 capacity auction, the SEM Committee set the New Capacity Investment Rate Threshold ("**NCIRT**") at €300/de-rated kW. This is consistent with the NCIRT level for the first two transitional T-1 auctions (for Capacity Year 2018/19 and 2019/20).

Consultation Proposal:

The SEM Committee propose to retain the NCIRT at €300/de-rated kW for the 2020/21 T-1 and 2021/22 T-2 auctions.

(g) Annual Stop-Loss Limit Factor

The Annual Stop-Loss Limit Factor is the multiplier used to establish the annual stoploss limited for Non-Performance Difference Charges from a Capacity Market Unit. For the 2022/23 T-4 capacity auction, this factor was set at 1.5. This is consistent with the NCIRT level for the first two transitional T-1 auctions.

Consultation Proposal:

The SEM Committee propose to retain the Annual Stop-Loss Limit Factor at 1.5 for the 2020/21 T-1 and 2021/22 T-2 auctions.

(h) Billing Period Stop-Loss Limit Factor

The Billing Period Stop-Loss Limit Factor is the multiplier used to establish the billing period stop-loss limit for Non-Performance Difference Charges from a Capacity Market Unit.

For the 2022/23 T-4 capacity auction, this factor was set at 0.5. This is consistent with the Billing Period Stop-Loss Limit Factor for the first two transitional T-1 auctions.

Consultation Proposal

The SEM Committee propose to retain the Billing Period Stop-Loss Limit Factor at 0.5 for the 2020/21 T-1 and 2021/22 T-2 auctions.

(i) The indicative Annual Capacity Payment Exchange Rate

The Annual Capacity Charge Exchange Rate is an exchange rate applicable to a Capacity Year which converts the Capacity Payment Price for a Primary Trade or a Secondary Trade from Euros to Sterling.

Only the indicative Annual Capacity Exchange Rate must be determined for the Initial Auction Information Pack. The final Annual Capacity Payment Exchange Rate will be included in the Final Auction Information Pack.

The indicative rate for the 2022/23 T-4 capacity auction was 0.9478GBP/EUR, based on market quotes for the 2022/23 capacity year forward period.

Under K.2.1.5 of the Capacity Market Code, the System Operators will determine and publish an indicative Annual Capacity Payment Exchange Rate for the Initial Auction Information Pack for the first Capacity Auction in respect of that Capacity Year.

These are the first auctions for these Capacity Years. The Exchange Rates will therefore be determined and published by the System Operators.

 (j) 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;

The Increase Tolerance is a percentage upwards tolerance that a Participant is permitted to apply to a Capacity Market Unit de-rating in an Application for Qualification. There may be different Increase Tolerances for different Technology Classes.

The Decrease Tolerance is a percentage downwards tolerance that a Participant is permitted to apply to Capacity Market Unit de-ratings in an Application for Qualification. There may be different Decrease Tolerances for different Technology Classes.

Within the Initial Auction Information Pack for the 2022/23 T-4 capacity auction, the Increase and Decrease Tolerances are as follows:

Technology Class	Increase Tolerance (%)	Decrease Tolerance (%)
All except DSUs	0	0
DSUs	0	100

There are two additional issues to note regarding Decrease Tolerances:

- Note 1: the decrease tolerance 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).
- Note 2: in accordance with SEM Committee decision SEM-18-030, where satisfactory evidence is provided to the System Operators, the decrease tolerance shall be 100% for a Candidate Unit that, due to relevant emissions legislation, has its running hours restricted to an extent that would reasonably be considered to prevent reliable delivery of their Derated Capacity at times of scarcity, e.g. the 500 hour limits set out in Annex V of the Industrial Emission Directive (2010/75) in relation to NO_x emissions.

Consultation Proposal:

The SEM Committee proposes to retain the following Increase and Decrease Tolerance levels for the 2020/21 T-1 and 2021/22 T-2 capacity auctions.

Technology Class	Increase Tolerance (%)	Decrease Tolerance (%)
All except DSUs	0	0
DSUs	0	100

- (k) In respect of Performance Securities:
 - (i) The final Performance Securities Posting Dates / Events applicable to Awarded 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 Capacity allocated in the Capacity Auction;

A Performance Security is a security required as a condition of capacity award for Awarded New Capacity that has not reached Substantial Completion

A Performance Security Posting Date/ Event is a date or event from which a specified €/MW rate shall be applied to Awarded Capacity in setting Performance Securities. There may be multiple different Performance Security Posting Dates/ Events.

The Performance Security Dates and Rates for the 2022/23 T-4 Capacity Auction a	are:
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Date / Event	Performance Security Rate (€/MW)
More than 13 months prior to the beginning of Capacity Year	10,000
From 13 months to beginning of Capacity Year	30,000
From beginning of Capacity Year	40,000

Consultation Proposal

The SEM Committee proposes to retain the Performance Securities from the 2022/23 T-4 Capacity Auction.

(I) €/MW fee rates for calculating Termination Charges

A Termination Charge is a fee payable by a Participant where Awarded New Capacity is terminated

The approved final Termination Charge rates for the 2022/23 T-4 capacity auction are:

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

Consultation Proposal

The SEM Committee proposes to retain the Termination Charges from the 2022/23 T-4 Capacity Auction.

(*m*) Anticipated values for the Full Administered Scarcity Price and the Reserve Scarcity Price Curve applicable to the Capacity Year;

The Administered Scarcity Price function sets a floor on the Balancing Market price when a scarcity event occurs. The Full Administered Scarcity Price is the maximum value of the Administered Scarcity Price. The Reserve Scarcity Price Curve is a piecewise linear curve defining the relationship between the Reserve Scarcity Price and the Short Term Reserve Quantity. The approved values for the 2022/23 T-4 capacity auction are:

Short Term Reserve (MW)	Administered Scarcity Price (€/MWh)
Demand Control	25% of VoLL ³
0	25% of VoLL
500	500

Consultation Proposal

The SEM Committee proposes to retain the values for Full Administered Scarcity Price from the 2022/23 T-4 capacity auction for the 2020/21 T-1 and 2021/22 T-2 capacity auctions.

- (n) Anticipated values for the following parameters be applied in determining the Strike Price for the Capacity Year.
 - (i) The Carbon Price (PCARBON_m) for Month, m;
 - (ii) The Natural Gas Fuel Price (PFUELNG_m) for Month, m;
 - (iii) The Oil Fuel Price (PFUELO_m) for Month, m.
 - (iv) The Peaking Unit Theoretical Efficiency (FTHEORYPU_y) for Capacity Year, y;
 - (v) The Natural Gas Carbon Intensity Factor (FCARBONING_y) for Capacity Year, y;
 - (vi) The Oil Carbon Intensity Factor (FCARBONIO_y) for Capacity Year, y; and
 - (vii) The Demand Side Unit Theoretical Price (PTHEORYDSU_y) for Capacity Year, y.

³ Value of Lost Load

The approved anticipated values for the 2022/23 T-4 capacity are:

Strike Price Component	Value	Unit
PCARBON _m	PCARBON _m Index	€/tCO ₂ e
PFUELNGm	[PFUELNG _m Index (p/therm) x 0.01 (£/p) +	€/MWh
	PFUELNG _m Transport (£/therm)] x Exchange Rate	
	€/£) x 9.48 (therms/GJ) x 3.6 (GJ/MWh)	
PFUELOm	[PFUELO _m Index (\$/t) x Exchange Rate (€/\$) +	€/MWh
	PFUELO _m Transport (€/t)] x 0.025 (t/GJ) x	
	3.6(GJ/MWh)	
PCARBON _m Index	ICE ECX EUA Futures – EUA – (monthly) ⁴	€/tCO ₂ e
PFUELNG _m Index	ICE UK Natural Gas Index (monthly)	p/therm
PFUELNG _m Transport	0.0424 ⁵	£/therm
PFUELO _m Index	Platt's Forward Curve (monthly) for monthly forward	\$/T
	swap transactions for 1% sulphur free on board	
	(FOB) fuel oil cargoes on North West Europe (NWE)	
	for the relevant month (AAEGR00)	
PFUELO _m Transport	50 ⁶	€/t
FTHEORYPUy	15	%
FCARBONING _y	0.202	tCO ₂ e/MWh
FCARBONINO _y	0.277	tCO ₂ e/MWh
PTHEORYDSUy	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	
therm per GJ	9.487	therm/GJ
LSFO calorific value	0.025 ⁸	t/GJ

Consultation Proposal:

The SEM Committee proposes to retain these values for the 2020/21 T-1 and 2021/22 T-2 capacity auctions.

 ⁴ The December price for a given year applies to all months falling within that year
 ⁵ NI natural gas transport adder used in I-SEM PLEXOS Forecast model 2016-17
 ⁶ Based on ROI LSFO transport adder used in I-SEM PLEXOS Forecast Model 2016-17
 ⁷ I-SEM PLEXOS Model 2016-17

⁸ I-SEM PLEXOS Model 2016-17

6 NEXT STEPS

Responses to the proposals within this consultation should be sent to Kenny Dane (<u>kenny.dane@uregni.gov.uk</u>) by Tuesday 2 April 2019. We intend to publish all responses unless they have been marked confidential.

A decision on the parameter values will be made in April 2019, and the parameter values included in the Initial Auction Information Pack developed by the System Operators.

APPENDIX A CURRENT PARAMETER VALUES

Parameter	Value for 2019/20 1	F-1 capacity auction	Value for 2022/23 T-4 capacity auction		
De-Rating Curves,					
defining De-Rating					
Factors by unit Initial	The De-Rating Curves for	r the 2019/20 T-1 Capacity	The De-Rating Curves for the 2022/23 T-4 Capacity		
Capacity and by	Auction can be found in the Initial Auction Information		Auction can be found in the Initial Auction Information		
Technology Class	Pack		Pack		
(including for					
Interconnectors)					
Capacity Requirement	7,030MW		7,524MW ⁹		
Indicative Demand					
Curve	De-Rated Canacity	Demand Curve Point	De-Rated Capacity (MW)	Demand Curve Point	
	(MW)	(€/MW/year)		(€/MW/year)	
	0	123,190	0	138,450	
	7,030	123,190	6,959.59	138,450	
	7,030	82,130	7,524.00	92,300	
	8,084.5	0	8652.60	0	
	1.5 times Net CONE =		1.5 times Net CONE =		
Auction Price Cap	€123,190 per	MW per year /	€138,540 per MW per year /		
	£110,710.85 per MW per year		£131,222.91 per MW per year		
	0.5 times N	let CONE =	0.5 times Net CONF =		
Existing Capacity Price	€41 060 per	MW per year /	€46 150 per MW per vear /		
Сар	£36,900,62 pc	er MW per vear	£43.740.97 per MW per vear		
	200,000.02 pt				

⁹ A proportion of the Capacity Requirement will be held back from the T-4 capacity auction to the corresponding T-1 capacity auction for 2022/23. The amount to be withheld will be determined by the Regulatory Authorities at the T-4 Final Auction Information Pack stage. This will be reflected as adjustments to the Demand Curve and the LCC Area minimum MW values.

New Capacity Investment Rate Threshold	€300,000 per de-rated MW / £269,610 per de-rated MW				€300,000 per de-rated MW / £284,340 per de-rated MW			
Annual Stop Loss Limit Factor	1.5			1.5				
Billing Period Stop Loss Factor	0.5			0.5				
Annual Capacity Exchange Rate	£0.8987 per Euro / €1.1127 per Sterling			£0.9478 per Euro / €1.0551 per Sterling				
Increase Tolerance								
and Decrease	Technology	Inc	rease	Decrease	Technology	Inc	crease	Decrease
Tolerance by	Class	Tolera	ance (%)	Tolerance (%)	Class	Tolera	ance (%)	Tolerance (%)
Technology Class	All except DSUs		0	0	All except DSUs		0	0
	DSUs		0	100	DSUs	0		100
Performance	Date / Event		Performance Security Rate (€/MW)		Date / Event		Performance Security Rate (€/MW)	
Securities	More than 13 months prior to the beginning of Capacity Year From 13 months to beginning of Capacity Year From beginning of Capacity Year		10,000		More than 13 months prior to the beginning of Capacity Year		10,000	
			30,000		From 13 months to beginning of Capacity Year		30,000	
			40,000		From beginning of Capacity Year		40,000	

Termination Charges				
	Date / Event	Termination Charge Rate (€/MW)	Date / Event	Termination Charge Rate (€/MW)
	More than 13 months prior to the beginning of Capacity Year	10,000	More than 13 months prior to the beginning of Capacity Year	10,000
	From 13 months to beginning of Capacity Year	30,000	From 13 months to beginning of Capacity Year	30,000
	From beginning of Capacity Year	40,000	From beginning of Capacity Year	40,000
Full Administered				
Scarcity Price and Reserve Scarcity Price	Short Term Reserve (MW)	Administered Scarcity Price (€/MWh)	Short Term Reserve (MW)	Administered Scarcity Price (€/MWh)
	Demand Control	3,000	Demand Control	25% of VoLL ¹⁰
	0	3,000	0	25% of VoLL
	500	500	500	500
Values for determining strike price in accordance with the Trading and Settlement Code	The Anticipated Strike Price calculation components can be found on page 15/16 of the <u>Initial Auction</u> Information Pack for the 2019/20 T-1 Capacity Auction.		The Anticipated Strike Price calculation components can be found on page 15/16 of the <u>Initial Auction Information</u> <u>Pack for the 2022/23 T-4 Capacity Auction</u> .	

¹⁰ Value of Lost Load: In Calendar Year 2018, VoLL was set to €11,128.26/MWh. In SEM-18-055, the SEM Committee decided to set VoLL on an October to September year, rather than the previous calendar year basis.