Communications Hub Orders Policy

30 September 2015

Contents

1 Context and background

1. The Smart Energy Code (SEC) and associated Communications Hub Handover Support Materials (CHHSM) documents govern the supply of Communications Hubs to SEC Parties. They describe how monthly forecast and order quantities must be submitted by SEC Parties to ensure sufficient levels of accuracy are achieved to provide efficient control of resources within the Communications Hub supply chain.

2. In accordance with Section F5.17 of the SEC, DCC has the ability to amend CH Orders before acceptance, so that the order is compliant with the requirements of the SEC. The CH Handover Support Materials describes how Parties will be notified where this is necessary. DCC will make all reasonable efforts, including review of supply chain capability and flexibility with the CSPs that will provide Communications Hubs, to meet requests for Communications Hubs Order quantities that are outside forecast tolerance ranges set out in Section F5.10 of the SEC. DCC would stress however that it is limited in this regard by its contracts with the CSPs.

3. Under the CSP Contracts, DCC is required to manage the aggregate total quantity of all Communications Hubs Orders within a tolerance of the aggregate total quantity of all Communication Hubs Forecasts to the same constraints set out in Section F5.10 of the SEC. Specifically, DCC is required to ensure that, for a given Delivery Month, the total DCC Aggregate Order quantity is within +/-50% of the total aggregate forecast submitted ten months in advance of the Delivery Month and within +/-20% of the total aggregate forecast submitted seven months in advance of the Delivery Month. This is necessary because the CSP supply chains and production lines need to be managed to deliver a total volume of Hubs.

4. This Communications Hub Orders Policy provides a definition of the algorithms applied to amend Communications Hub Orders where the aggregate order quantity falls outside the tolerances defined in the CSP Contracts.

5. This Policy will be published on the DCC Website in accordance with Section F5.18 of the SEC. The objective of the Communications Hub Orders Policy is to apply a fair and unambiguous set of rules to determine amendments to non-compliant Communications Hub Orders across all Parties in a manner that balances the:

   a. overall capability of DCC to meet non-compliant Communications Hub Orders;
   b. level of variance against forecast tolerance for each Party's Communications Hub Order; and
   c. total quantity of Communications Hubs ordered in each Party's non-compliant Communications Hub Order

1.1 Definitions

CSP Contract	means the DCC Service Provider Contract for the Communications Services Provider, as published on the DCC Web Site
DCC Aggregate Order Quantity	means the aggregated order quantity of all Communications Hub Orders applicable to a particular Delivery Month and Region.
Maximum DCC Aggregate Order Quantity	means the maximum aggregated monthly order quantity acceptable to the CSP
Minimum DCC Aggregate Order Quantity	means the minimum aggregated monthly order quantity acceptable to the CSP
Party Order Variance	means the amount by which a non-compliant order quantity varies from the tolerance limit
Standard Minimum Adjustment	means a set number that will be the minimum number of Communication Hubs by which an order shall be adjusted
Total Allowable Variance	means the amount by which the aggregated quantity of non-compliant orders is to be adjusted

1.2 Clarifications and assumptions

6. It is recognised that F5.10 applies to separate quantities for Communications Hub HAN Variants. This Communications Hub Orders Policy will be reviewed and where necessary amended following the introduction of Communications Hub HAN Variants.

7. As defined the DCC Aggregate Order Quantity refers to an aggregate of Communications Hub Orders for a Region. In all cases the calculations defined within this document apply to a Region.

8. The four values listed below will be amended where necessary to accord with the provisions of the CH Handover Support Materials clause 3.14 regarding minimum order quantities and the requirement to order complete pallet layers (rounded to nearest pallet layer volume).

    1. Communications Hub Forecasts
    2. Communications Hub Order quantities
    3. Maximum DCC Aggregate Order Quantity
    4. Minimum DCC Aggregate Order Quantity

9. All quantities used within the calculations defined in this document will be the quantities as amended.

10. DCC has included a Standard Minimum Adjustment in its calculations, to ensure that Parties ordering small quantities are not disproportionately affected. All Parties will have their Orders amended to meet their requirement for additional or reduced numbers of Communications Hubs by at least this value.

11. In defining the algorithms described in this document the DCC assumes that:

    a. Communications Hub Orders will be submitted independently by each Party without reference to orders placed by other Parties;

    b. Parties will submit Communications Hub Orders and Communications Hub Forecasts that accurately reflect their genuine requirements; and

    c. all Orders will meet the minimum order quantities as specified in the CH Handover Support Materials, and in particular Order quantities will be at least a full pallet and thereafter in pallet layer increments (CHHSM 3.14).

12. DCC notes that stakeholders identified a concern that Section 5.10 of the SEC might be read to suggest that CH Orders outside of prescribed tolerances are not allowed under the SEC. DCC has confirmed with DECC that, contrary to what might be suggested by Section F5.10, CH Orders outside of the prescribed tolerances are allowed under the SEC, as per Sections F5.16 and F5.17 and the CH Handover Support Materials. This is supported by the requirement in Section F5.18 of the SEC for a CH Orders Policy.

13. DCC notes that it is obliged to fulfil CH Orders within the tolerances prescribed in Section F5.10. As per Section F5.17, DCC will take all reasonable steps to accommodate a CH Order which is outside of the tolerances prescribed in Section F5.10 - in whole or part, or subject to amendments in accordance with the CH Orders Policy.

14. DCC adds that DECC has advised that it is reviewing the wording of Section F5.10, which currently says that CH Orders must be within prescribed tolerances. A revision of this clause may be considered to make it clear that the DCC is obliged to fulfil CH Orders within those prescribed tolerances but that this does not preclude Parties from submitting CH Orders outside of those prescribed tolerances. DCC is also aware that DECC is also considering the appropriateness of the phrase 'not compliant' in Section F5.16.

15. DCC stresses that Parties should submit CH Orders which reflect their genuine need and are not unnecessarily constrained by their individual forecasts.

2 Orders above and below thresholds

16. It may reasonably be expected that some Parties will submit Orders that are above or below the thresholds specified in Section F5.10 of the SEC, in any month. Therefore, without compromising its commercial obligations under the CSP Contracts, DCC will be able to either:

    a. wholly accept all non-compliant Orders where the DCC Aggregate Order Quantity falls within the tolerance range; or

    b. wholly or partially accept non-complaint Orders where the DCC Aggregate Order Quantity falls outside the tolerance range.

17. Where, under (b) overall variance against tolerance is too great to accommodate all non-compliant Orders, DCC will amend Communications Hub Orders according to the Policy described below.

3 Compliant DCC Aggregate Order Quantities

18. Where the overall DCC Aggregate Order Quantity is compliant with the constraints of the CSP Contracts, all non-compliant Communication Hub Order submissions placed by Parties will be accepted without further amendment to the quantities of Communications Hubs in each Communications Hub Order.

4 Non-compliant DCC Aggregate Order Quantities

19. Where the overall DCC Aggregate Order Quantity is not compliant with the constraints of the CSP Contracts, the DCC will firstly establish if the CSP is prepared to accept a non-compliant DCC Aggregate Order Quantity. Where the CSP is prepared to accept such an aggregate Order, in whole or in part, the Maximum DCC Aggregate Order Quantity or the Minimum DCC Aggregate Order Quantity will be adjusted to reflect the agreement reached with the DCC. Where the CSP cannot accept a non-compliant DCC Aggregate Order Quantity, the Maximum DCC Aggregate Order Quantity and the Minimum DCC Aggregate Order Quantity will remain unchanged and will reflect the contracted tolerance thresholds described above.

4.1 Low order quantity

4.1.1 Where the DCC Aggregate Order Quantity is non-compliant due to low order quantity but is now greater than or equal to the updated agreed Minimum DCC Aggregate Order Quantity then non-compliant Communications Hub Orders will be accepted without amendment.

4.1.2 Where the DCC Aggregate Order Quantity is non-compliant due to low order quantity and is still less than the agreed Minimum DCC Aggregate Order Quantity then non-compliant Communications Hub Orders will be subject to amendment.

The calculations DCC shall employ in the event of 4.1.2 are as follows:

20. All Communications Hub Orders that are above or equal to the minimum forecast Order quantity threshold set out in Section F5.10 shall be accepted by the DCC

without amendment (this will include any that are above the maximum forecast Order quantity).

21. The remaining non-compliant Communications Hub Orders shall be subject to amendment as follows:

1. DCC shall define a Standard Minimum Adjustment which shall by default be a complete pallet layer of Communications Hubs.

2. DCC shall calculate the total quantity of Communications Hubs available to Parties which have submitted Communications Hub Orders that are below the minimum forecast Order quantity threshold set out in Section F5.10. This is referred to as the 'Total Allowable Variance' and it is calculated thus:

Total Allowable Variance

$$\text{agreed Minimum Aggregate Order Quantity} = \text{MinAQ}$$

$$\text{total quantity of Communications Hubs in all Orders accepted by DCC} = \sum AO$$

$$\text{sum of minimum forecast Order quantity for all Orders subject to amendment} = \sum PFQ$$

$$\text{total Standard Minimum Adjustment values for Orders to be amended} = \sum SMA$$

$$\text{Total Allowable Variance} = \text{AV}$$

$$\text{AV} = \text{MinAQ} - \sum AO - \sum PFQ - \sum SMA$$

3. DCC shall then calculate, for each Communications Hub Order to be subject to amendment, the quantity the Order is below the minimum forecast Order quantity threshold according to Section F5.10 (the Party Order Variance). Each Order that is subject to amendment will subsequently be modified to increase the Order quantity.

4. The amended Party Order quantity shall be equal to the Party's minimum forecast Order quantity, minus a Standard Minimum Adjustment, minus a proportion of the Total Allowable Variance that is equivalent to the proportion of the total of all Party Order Variances to the relevant Party Order Variance. Where necessary the value will be rounded to the pallet layer.

5. Where necessary the value will be rounded to the pallet layer and may be adjusted to ensure the minimum order quantity.

6. The DCC shall evaluate the Party Order Variance and amended Party Order quantity as follows:

Party Order Variance

$$\text{Party Order Variance} = POV$$

$$\text{unamended Party Order quantity} = UOQ$$

$$\text{Party's minimum forecast Order quantity} = PFQ$$

$$POV = PFQ - UOQ$$

Amended Party Order quantity

$$\text{Standard Minimum Adjustment} = SMA$$

$$\text{amended Party Order quantity} = POQ$$

$$POQ = PFQ - SMA - \frac{POV}{\sum POV} AV$$

4.2 High order quantity

4.2.1 Where the DCC Aggregate Order submission is non-compliant due to high order quantity but is now less than or equal to the updated agreed Maximum DCC Aggregate Order Quantity then non-compliant Communications Hub Orders will be accepted without amendment;

4.2.2 Where the DCC Aggregate Order submission is non-compliant due to high order quantity and is still greater than the updated agreed Maximum DCC Aggregate Order Quantity then non-compliant Communications Hub Orders will be subject to amendment.

The calculations DCC shall employ in the event of 4.2.2 are as follows:

22. All Communications Hub Orders that are below or equal to the maximum forecast Order quantity threshold set out in Section F5.10 shall be accepted by the DCC without amendment (this will include any that are below the minimum forecast Order quantity).

23. The remaining non-compliant Communications Hub Orders shall be subject to amendment as follows:

    1. DCC shall define a Standard Minimum Adjustment which shall by default be a complete pallet layer of Communications Hubs.

    2. DCC shall calculate the total quantity of Communications Hubs available to Parties which have submitted Communications Hub Orders that are above the maximum forecast Order quantity threshold set out in Section F5.10 – the Total Allowable Variance:

Total Allowable Variance

agreed Maximum Aggregate Order Quantity = MaxAQ

total quantity of Communications Hubs in all Orders accepted by DCC = $\sum AO$

sum of maximum forecast Order quantity for all Orders subject to amendment = $\sum PFQ$

total Standard Minimum Adjustment values for Orders to be amended = $\sum SMA$

Total Allowable Variance = AV

$$\text{AV} = \text{MaxAQ} - \sum AO - \sum PFQ - \sum SMA$$

3. DCC shall then calculate, for each Communications Hub Order to be subject to amendment, the quantity the Order is above the maximum forecast Order quantity threshold according to Section F5.10 (the Party Order Variance). Each Order that is subject to amendment will subsequently be modified to decrease the Order quantity.

4. The amended Party Order quantity shall be equal to the Party's maximum forecast Order quantity, plus a Standard Minimum Adjustment, plus a proportion of the Total Allowable Variance that is equivalent to the proportion of the total of all Party Order Variances to the relevant Party Order Variance.

5. Where necessary the value will be rounded to the pallet layer and may be adjusted to ensure the minimum order quantity.

6. The DCC shall evaluate the Party Order Variance and amended Party Order quantity as follows:

Party Order Variance

Party Order Variance = POV

unamended Party Order quantity = UOQ

Party's maximum forecast Order quantity = PFQ

$$POV = UOQ - PFQ$$

Amended Party Order quantity

Standard Minimum Adjustment = SMA

amended Party Order quantity = POQ

$$POQ = PFQ + SMA + \frac{POV}{\sum POV} AV$$

5 Worked examples

24. DCC produces two worked examples below: one covering a low aggregate order quantity (4.1.2) and one covering a high order quantity (4.2.2).

25. In order to simplify the worked examples it is assumed that the month 10 forecast is the same as the month seven forecast and therefore only the 20% tolerance applies in the examples. Were both the month 10 and month seven tolerances to be breached the threshold which is most at variance to the order quantity will be used in the calculations.

5.1 Low order quantity

26. The calculation sheet above shows an example of the calculations described in this policy, where the DCC is obliged to amend order quantities due to the total order volume being below the minimum monthly value as defined by the CSP Contract.

27. The calculation sheet presents the calculation in three sections:

    1. Thresholds. This section shows the calculation of the ‘minimum forecast order quantity’, which is the limit the CSP can oblige the DCC to fulfil in the overall order.
    2. Orders. This section shows the calculation of the order quantities against the ‘minimum forecast order quantity’ giving the Party Order Variance as the difference.
    3. Managing non-compliant orders. This section shows any revised Minimum DCC Aggregate Order Quantity that the DCC has agreed with the CSP and calculates the Allowable Variance based on the formula defined in the policy. This in turn provides the amended Order Quantity.

	Supplier 1	Supplier 2	Supplier 3	Supplier 4	Supplier 5	Supplier 6	Supplier 7	Total
Month 7 forecast	143,584	79,968	186,368	85,344	38,080	1,792	92,064	627,200
Thresholds								
Minimum forecast order quantity (rounded)	114,912	64,064	149,184	68,320	30,464	1,344	73,696	501,984
Minimum forecast order quantity (layers)	513	286	666	305	136	6	329	2,241
Orders								
Order quantities	98,336	86,016	127,232	64,960	28,000	1,568	75,040	481,152
Order quantities (layers)	439.0	384.0	568.0	290.0	125.0	7.0	335.0	2,148
Threshold check								
Party Order Variance	16,576	0	21,952	3,360	2,464	0	0	44,352
Party Order Variance (layers)	74	0	98	15	11	0	0	198
Managing non compliant orders								
CSP obligated quantity	114,912	86,016	149,184	68,320	30,464	1,568	75,040	525,504
CSP obligated quantity (layers)	513	384	666	305	136	7	335	2,346
Minimum DCC Aggregate Order Quantity								501,984
Minimum DCC Aggregate Order Quantity (layers)								2,241
CSP adjustment (layers)								105
Standard Minimum Adjustment	224	0	224	224	224	0	0	896
Standard Minimum Adjustment (layers)	1	0	1	1	1	0	0	4
Party Order Variance	73	0	97	14	10	0	0	194
% Party Order Variance (weighted ave)	37.6%	0.0%	50.0%	7.2%	5.2%	0.0%	0.0%	
Balance to be allocated in layers								101
Balance allocated across Suppliers - prorated	38	0	51	7	5	0	0	
Allowable Variance	8,512	0	11,424	1,568	1,120	0	0	22,624
Amended Order Quantity	106,176	86,016	137,536	66,528	29,120	1,568	75,040	501,984

Table 1: Low order quantity worked example

5.2 High order quantity

28. The calculation sheet above shows an example of the calculations described in this policy, where the DCC is obliged to amend order quantities due to the total order volume being above the maximum monthly value as defined by the CSP Contract.

29. The calculation sheet presents the calculation in three sections:

    1. Thresholds. This section shows the calculation of the 'maximum forecast order quantity', which is the limit the DCC can oblige the CSP to fulfil in the overall order.
    2. Orders. This section shows the calculation of the order quantities against the 'maximum forecast order quantity' giving the Party Order Variance as the difference.
    3. Managing non-compliant orders. This section shows any revised Maximum DCC Aggregate Order Quantity that the DCC has agreed with the CSP and calculates the Allowable Variance based on the formula defined in the policy. This in turn provides the amended Order Quantity.

	Supplier 1	Supplier 2	Supplier 3	Supplier 4	Supplier 5	Supplier 6	Supplier 7	Total
Month 7 forecast	143,584	79,968	186,368	85,344	14,784	2,464	92,064	604,576
Thresholds								
Maximum forecast order quantity (rounded)	172,256	95,872	223,552	102,368	17,696	2,912	110,432	725,088
Maximum forecast order quantity (layers)	769	428	998	457	79	13	493	3,237
Orders								
Order quantities	189,056	86,016	239,904	118,272	29,344	3,584	87,360	753,536
Order quantities (layers)	844.0	384.0	1,071.0	528.0	131.0	16.0	390.0	3,364
Threshold check								
Party Order Variance	16,800	0	16,352	15,904	11,648	672	0	61,376
Party Order Variance (layers)	75	0	73	71	52	3	0	274
Managing non compliant orders								
CSP obligated quantity	172,256	86,016	223,552	102,368	17,696	2,912	87,360	692,160
CSP obligated quantity (layers)	769	384	998	457	79	13	390	3,090
Maximum DCC Aggregate Order Quantity								725,088
Maximum DCC Aggregate Order Quantity (layers)								3,237
CSP adjustment (layers)								147
Standard Minimum Adjustment	224	0	224	224	224	224	0	1120
Standard Minimum Adjustment (layers)	1	0	1	1	1	1	0	5
Party Order Variance	74	0	72	70	51	2	0	269
% Party Order Variance (weighted ave)	27.5%	0.0%	26.8%	26.0%	19.0%	0.7%	0.0%	
Balance to be allocated in layers								142
Balance allocated across Suppliers - prorated	39	0	38	37	27	1	0	
Allowable Variance	8,736	0	8,512	8,288	6,048	224	0	31,808
Amended Order Quantity	181,216	86,016	232,288	110,880	23,968	3,360	87,360	725,088

Table 2: High order quantity worked example