DCP 328 Options

Summary

1. This paper is intended to outline the solution options for DCP 328 which the Working Group has agreed to progress.

2. Under the BSC, private networks within which some (or all) customers wish to access the competitive supply market have three distinct options for the way in which metering data is collected and entered into settlement, namely:

   - difference metering;
   - full settlement metering; or
   - shared metering

   More detail is provided on each of these in subsequent sections.

3. The Working Group has agreed that **a different approach should be used for sites with difference metering to sites with full settlement or shared metering**. A single option is proposed for sites with difference metering only. Two options are discussed which are both applicable to sites with full settlement or shared metering only.

Background

4. Where private networks exist, there is only one connection to the licensed distributor's network at the point where the private network connects to the wider network. The private network then serves multiple customers, generally operating under an exemption from holding a distribution licence. A simple example is shown in Figure 1.

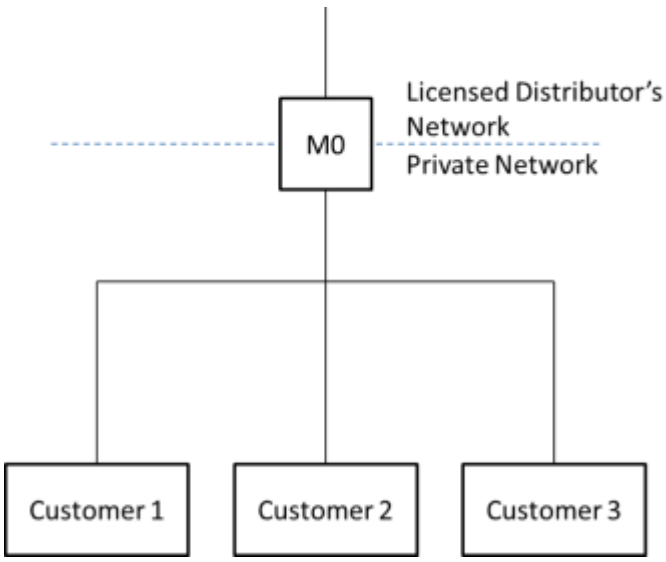

Figure 1 - three customers on a private network

5. The meter marked as 'M0' will be used in settlement, and the commercial arrangement with the supplier will be with the PNO. The PNO is then likely to pass through the charges from the supplier to the end customers – to do so, it may use private (i.e. non-settlement) meters for each customer to derive the amount due from each customer.

Difference Metering Options

Metering Arrangements

6. In order for difference metering to be used to facilitate competition in supply for customer 1, metering arrangements as shown in Figure 2 would be required.

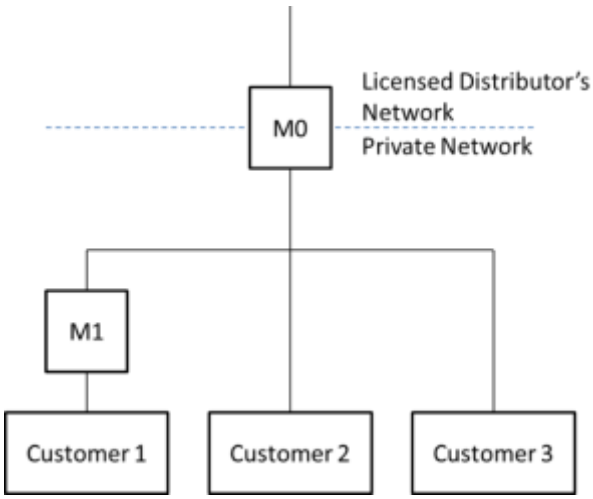

Figure 2 - competition in supply using difference metering

7. Under a difference metering approach, settlements metering measuring customer 1's usage ('M1') will be used in settlement for their units under a separate MPAN. These units will also have flowed through the boundary meter ('M0') and so a correction is required to avoid double counting. This is made by subtracting units used by customer 1 ('M1') from units measured through the boundary ('M0'). For example, if customer 1 were to now be supplied by 'Supplier A' using 'MPAN A' and customers 2 and 3 continue to be supplied by the PNO, who in turn takes energy from 'Supplier X' using 'MPAN X' , the units in settlement for the two suppliers would be as follows:

   - *Supplier A Units = MPAN A = M1*
   - *Supplier X Units = MPAN X = M0 - M1*

8. Through the standard settlement processes:

   - each of the suppliers will receive metering data for sites which they supply after the differencing calculation has been applied; and
   - the licensed distributor will receive metering data for all sites after the differencing calculation has been applied.

9. To maintain the integrity of these differencing calculations, the BSC requires that the same supplier agents (data collector and meter operator) are used by all suppliers involved. This means that a single data collector has visibility of all metering data, including the 'gross' boundary meter data ('M0'), the metering data for each embedded customer ('M1') and the data used in settlement as detailed under paragraph 7.

Proposed Solution

10. The Working Group's proposed solution for sites with difference metering is for the licensed distributor to issue only one use of system invoice for the entire site, to the boundary supplier. This aligns with the approach in use across a number of private networks with difference metering.

11. In order for the licensed distributor to calculate this invoice and the boundary supplier to validate that invoice, both will need to receive the 'gross' boundary metering data (as metered by 'M0' in Figure 2). An obligation will be placed on the data collector to send this data.

12. The licensed distributor will need to create a non-settlement MPAN for the gross boundary meter data to be registered against. An invoice will then be issued to the boundary supplier using that non-settlement MPAN as the identifier. To avoid double-invoicing those units, the licensed distributor will apply zero rated charges to the data it receives through settlement after the differencing has been applied (MPAN A and MPAN X in Figure 2).

13. The non-settlement MPAN will only be used for the calculation of use of system charges. The energy use of each supplier's customers will continue to be based on the data as entered into settlement. The boundary supplier is likely to pass through the full use of system charge for the entire private network to the PNO. The PNO can then divide this charge between its customers based on its own use of system charging methodology.

14. This approach is similar to that proposed under DCP 158 'DNO DUoS re EDNOs'[1]. Ofgem rejected DCP 158, citing concerns around the introduction of an additional administrative burden and a lack of engagement from PNOs in the consultation process. Since then, this approach has been proven to be effective across a number of private networks. Hence rather than introducing a new administrative burden, the implementation of this approach into DCUSA would simply ensure a consistent approach across all sites.

Full Settlement and Shared Metering Options

Metering Arrangements – Full Settlement Metering

15. In order for full settlement metering to be used to facilitate competition in supply all the customers on the private network need to have settlement metering as shown in Figure 3 below.

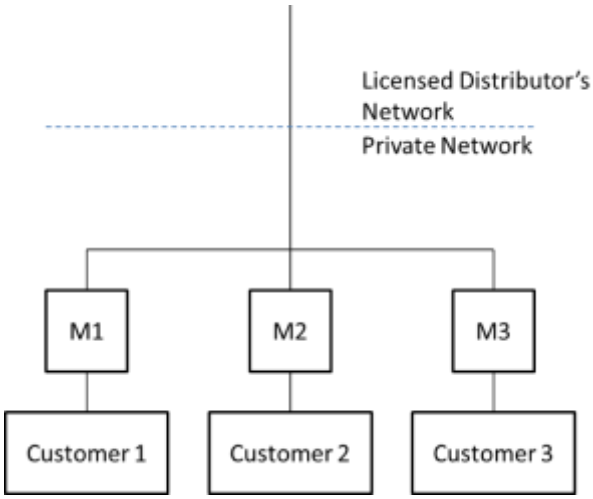

Figure 3 - competition in supply using full settlement metering

1. [1]https://www.dcusa.co.uk/Lists/Change%20Proposal%20Register/DispForm.aspx?ID=121

16. Under a full settlement metering approach, settlements metering that measures the usage of customer 1, customer 2 and customer 3 would be used in settlement under separate MPANs, with the boundary meter (previously 'M0') no longer used.

17. Under this arrangement there is no settlements meter at the boundary and all customers on the private network have a chosen a supplier. Let us assume for this example that customer 1 is still supplied by 'Supplier A' using 'MPAN A', customer 2 is supplied by 'Supplier B' using 'MPAN B' and customer 3 is supplied by 'Supplier C' using 'MPAN C'. The units in settlement for the three suppliers would be as follows:

- *Supplier A Units = MPAN A = M1*
- *Supplier B Units = MPAN B = M2*
- *Supplier C Units = MPAN C = M3*

Metering Arrangements – Shared Metering

18. In order for shared metering to be used to facilitate competition in supply for customer 1, metering arrangements as shown in Figure 4 would be required.

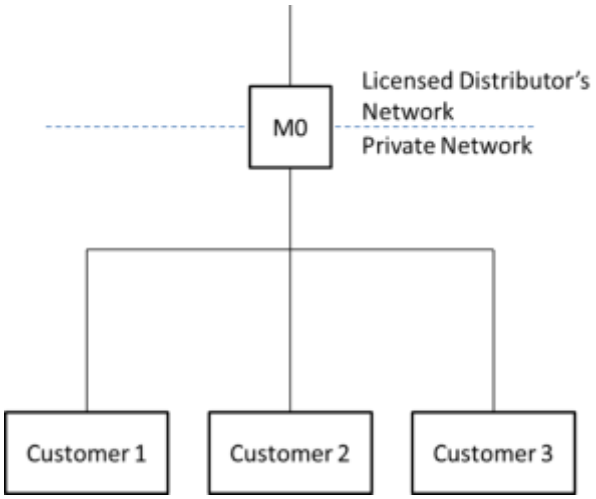

Figure 4 - competition in supply using shared metering

19. Under a shared metering approach, settlements metering at the boundary (i.e. measuring the usage of all three customers) is used to determine the total units entered into settlement, with an agreed allocation method being used to determine the usage of each individual customer which is in turn allocated to each supplier. The means of allocation is agreed between the suppliers in question, which can be based on private metering measuring each customer's individual usage or through a simple mechanism such as a fixed proportion.

20. Assuming the customers use the same suppliers as under the full settlement example, customers 1, 2 and 3 would be supplied by 'Supplier A', 'Supplier B' and 'Supplier C' respectively using 'MPAN A', 'MPAN B' and 'MPAN C' respectively. The units in settlement for the three suppliers would be as follows:

- *Supplier A Units = MPAN A = M0 x X*
- *Supplier B Units = MPAN B = M0 x Y*
- *Supplier C Units = MPAN C = M0 x Z*

Where X + Y + Z = 1.

Similarities between Full Settlement and Shared Metering

21. The structure of data received by each supplier and the licensed distributor under full settlement and shared metering options is the same, with the key difference being how that data is derived.

22. Under both full settlement and shared metering, each customer connected to the private network has its own MPAN. The licensed distributor sees consumption for each MPAN separately in settlement and each supplier sees consumption for MPANs which relate to its customers through settlement. The only difference is how the consumption for each MPAN is derived:

    - For a site using full settlement metering the consumption for each MPAN is based on actual meter reads from each customer's meter.
    - For a site using shared metering the consumption for each MPAN is derived based on an agreed or calculated proportion of consumption metered at the boundary.

23. As a result, the options considered below are discussed in the context of sites using full settlement metering, but are equally applicable to those with shared metering.

Proposed Solutions

24. The Working Group has considered two options:

    - Licensed distributor charges as if the customer were connected to its network with the PNO able to claim a rebate for voltage the PNO has provided ('PNO rebate').
    - Licensed distributor introduces new tariffs based on deducting certain elements from its existing tariffs to reflect costs which are being borne by the PNO rather than the licensed distributor ('new tariffs').

PNO Rebate Option

25. Under this option, the licensed distributor would apply its standard use of system charges for each end customer connected to a private network. Those charges would be levied on the registered supplier of each customer. In so doing, the licensed distributor would be charging both for its own assets and some private network assets, so the PNO will be able to claim a rebate from the licensed distributor for the charges which the licensed distributor has levied on the supplier for private network assets.

26. A framework for calculating the rebates would be introduced to DCUSA. Different levels of rebate would be calculated for different voltages of connection between the licensed distribution network and the private network and for different end customer types. The level of rebate would likely be based on the difference between the licensed distributor's tariff for a given type of end user and that tariff with elements which relate to voltages provided by the PNO removed. This would give a 'rebate tariff' with unit rates and fixed charges (and capacity charges for HH site specific settled end customers). In order to simplify the process, this would be converted to a £/customer/year rebate based on the average consumption of a customer of that type in that licensed distributor's region.

27. The PNO would identify itself to the licensed distributor and provide a list of MPANs which are connected to its network. The licensed distributor would:

- validate the information;
- determine the count of end users of each type based on the line loss factor class used in settlement);
- calculate the total rebate due by applying the rebate rate to the customer count for each user type; and
- provide a payment to the PNO.

This could be done on a monthly, quarterly or annual basis.

28. Careful consideration is needed as to exactly which costs are included in the PNO rebate and which are retained by the DNO. This issue is common to both solution options – see paragraph 38.

29. IDNOs will be broadly neutral to this option. IDNOs would continue to charge the 'full' use of system charge which the host DNO would charge. Existing industry processes would result in the host DNO charging the IDNO for the voltage levels which the host DNO has provided. The PNO will then also be able to claim for the voltages the PNO has provided, leaving the IDNO with revenue only in respect of the voltages the IDNO has provided.

30. If the licensed distributor is a DNO, in order to avoid the payment of the PNO rebate causing that DNO to under-recover, a mechanism will be needed to either treat the PNO rebate as either:

    - a pass-through item in DNO revenue allowances; or
    - negative use of system revenue.

31. Both of these options would likely require changes to the distribution licence, either to the Charge Restriction Conditions (CRCs) to create an additional pass-through term in CRC2B, or to amend the definition of 'Regulated Distribution Network Revenue' to deduct PNO rebates. The drafting required for either change would be straightforward, but would be subject to Statutory Consultation by Ofgem.

32. Outstanding questions for consideration:

    - Should a de-minimis PNO claim value be introduced to avoid burdensome administrative processes being deployed for small claims?
    - How should export MPANs be treated?
    - What is the timescale for the PNO claim, i.e. how long after the billing period can a claim be made for that billing period?
    - How much of this can be introduced in DCUSA? The DCUSA can put requirements on DNOs to negotiate rebates with PNOs and provide a framework for their calculation – but cannot put any requirements on PNOs as PNOs are not DCUSA parties. Can this be dealt with in other codes? Or must it be resolved by bilateral DNO to PNO agreements?
    - Is there a risk of unintended benefits of operating as a PNO rather than as an IDNO?

New Licensed Distributor Tariffs Option

33. Under this option the licensed distributor would assign new tariffs to end customers connected to private networks. Different tariffs would be calculated for different voltages of connection between the licensed distribution network and the private network and for different end customer types. Those tariffs would be based on the licensed distributor's tariff for that type of end user with cost elements which relate to voltages provided by the PNO removed.

34. Careful consideration is needed as to exactly which costs are included in the PNO rebate and which are retained by the DNO. This issue is common to both solution options – see paragraph 38.

35. This option relies on licensed distributors assigning the appropriate tariffs (likely through the use of new LLFCs to identify MPANs which relate to customers connected to private networks) to customers connected to private networks, and so relies on the licensed distributor being able to identify all MPANs in its registration system which are connected to private networks.

36. It results in suppliers being charged non-standard use of system charges, and so may have impacts on the retail tariffs available to the end customers in question, particularly if the PNO also charges for its network.

37. Outstanding questions for consideration:

- How will IDNOs be treated under this option?
    - The IDNO would likely charge the same tariff which the host DNO would have charged for each end user (in order to ensure compliance with the IDNO's relative price control). The DNOs charge to the IDNO may need to be based on new discount percentages reflecting that the IDNO has not provided all of the downstream voltages (some are provided by the PNO).
- How will a 'tariff reduction' be calculated for generation credits?
- Is it necessary to convert all charges to unit rates to avoid double-charging fixed charges?
    - For fixed charges this is likely not necessary – if fixed charges are adjusted to remove the elements recovered through the fixed charge which are provided by the PNO then it is appropriate for the licensed distributor to continue to recover the remainder (which under current arrangements will often be zero as fixed charges typically relate only to the assets closest to the connection).
    - Capacity charges are more problematic as the licensed distributor will need to assign some capacity to each of the customers connected to the private network which is not appropriate. Elements of capacity charges which remain once those elements which should be recoverable by the PNO have been removed, it may be appropriate to recover as a fixed charge based on a typical capacity rather than allocating capacity to each user.
- Is there a risk of unintended benefits of operating as a PNO rather than as an IDNO?

Cost Allocation for Both Options

38. Both of the options considered for sites with full settlement metering rely on disaggregating the costs included in the licensed distributors tariff into those which such be recoverable by the PNO and those which should be recoverable by the licensed distributor, as referenced in paragraphs 28 and 34. In order to reach a solution which does not unduly discriminate between IDNOs and PNOs it is important to acknowledge the differences between them. This was considered under DCP 251 'Clarification and Extension of the Application of LDNO Tariffs Under the CDCM'[2] and DCP 252 'Clarification and Extension of the Application of LDNO Tariffs Under the EDCM'[3].

1.

[2] https://www.dcusa.co.uk/Lists/Change%20Proposal%20Register/DispForm.aspx?ID=277
[3] https://www.dcusa.co.uk/Lists/Change%20Proposal%20Register/DispForm.aspx?ID=276

39. The DCP 251/252 Working Group documentation describes the cost allocation approach used to derive IDNO tariffs: *"The IDNO provides the "last mile" of network and the associated services and obligations in operating such a network. In doing so it substitutes an activity that an incumbent DNO would otherwise have to do if it owned and operated that network… In undertaking those activities, the IDNO is allocated the same input costs/ charges that the upstream (incumbent) DNO would make to its own "notional business" if it owned and operated the last mile network; i.e. the "last mile" operator would be entitled to the same margin (if its charges to the consumer were the same as those of the incumbent)."*

40. It then goes on to consider the differences between IDNOs and PNOs. Note – the DCP 251/252 Working Group used the acronym DEH to refer to Distribution Exemption Holders. The DCP 328 Working Group is using the acronym PNO to refer to the same entities. *"Under current industry arrangements it is unlikely that a DEH will be in a position to fully substitute the activities undertaken or fulfil the services that the DNO provides to the same extent as an IDNO in facilitating competition in supply (e.g. services relating to settlement, registration, supplier billing). Further licensees are required to fund Ofgem, the DCC and other industry parties, whereas DEHs are not."*

41. These extracts identify a number of costs which will need careful treatment for either of these solutions to ensure that the solution does not allocate costs to the PNO which are in fact incurred by the licensed distributor.