



Access and Forward-looking charges

Sharing and Trading Explained

SCR Access Subgroup

6 March 2020

Document Control

Version Control

Version	Issue Date	Author	Comments
V1.0	31/01/20	SCR Access Subgroup	Draft transferred to template
V1.1	25/02/20	SCR Access Subgroup	Executive summary added, shared with Delivery Group
V2.0	06/03/20	SCR Access Subgroup	Final version signed-off for publication

Authorities

Version	Issue Date	Authorisation	Comments
V2.0	06/03/20	SCR Delivery Group	Shared for comment and signed-off for publication

Related Documents

Reference 1	Electricity Industry Access and Forward-Looking Charging Review - Significant Code Review launch statement and decision on the wider review – Ofgem publication
Reference 2	

Distribution

--

Contents

1	Executive summary and next steps.....	4
2	Introduction.....	4
3	A Description of “Sharing” and “Trading” Access.....	6
4	Assessment Against Principles	17
5	Assessment of the two different approaches	23
6	When a User would “share” access, and when a User would “trade” access	24
	Annex 1: Expanded Sharing vs. Trading Diagram.....	26
	Annex 2: Product Description.....	27
	Annex 3: Glossary	28

List of Figures

Figure 1:	Illustration of the differences between shared and traded	8
Figure 2:	Simple sharing group of 2 sites with assigned access	11
Figure 3:	Simple sharing group of 2 sites with shared access.....	12
Figure 4:	Simple multi-site sharing arrangement	12
Figure 5:	Illustration of Trading and not sharing.....	13
Figure 6:	Illustration of a Sharing Group.....	13
Figure 7:	Illustration of Access Assignments between two Sharing Group Users	16
Figure 8:	Illustration of Access Assignments between two Sharing Group Users	17
Figure 9:	Generic principles and rules for trading access.....	19
Figure 10:	Generic principles and rules for sharing access.....	22
Figure 11:	Comparison table of shared and traded access.....	23
Figure 12:	Expanded sharing versus trading diagram.....	26

1 Executive summary and next steps

- 1.1 Work under the Access and Forward Looking Charges SCR recognised stakeholder feedback on the potential value in ‘shared access’ rights but also the need to clarify the differences between ‘Sharing’ and ‘trading’ access rights. There are clear differences in the features of each and the potential benefits for different types of users. Figure 11 in this document gives a high level summary comparison of access sharing and access trading.
- 1.2 A key feature of shared access is the assignment of capacity across users within a sharing group either by allocation or cooperation, while trading results in a formal transfer of access from one user to another. This document also includes diagrams highlighting potential scenarios to help explain the differences.
- 1.3 Next steps under the Access Subgroup will include developing more detail on eligibility and potential high level processes for sharing access under different scenarios, including potentially at transmission. There will be further work to define “local shared access”, potential eligibility criteria, and any limitations on the ability of the user to share access. Further work on the trading of access rights will take place under the Energy Networks Association’s Open Networks project.

2 Introduction

Background

- 2.1 The SCR Access subgroup was asked to provide a briefing paper detailing the similarities and differences between the concepts of sharing and trading that have been considered previously in the SCR Access and Non-SCR Industry-led Access subgroups, respectively. It is worth noting that the Non-SCR Industry-led Access subgroup has considered trading in the context of Users trading curtailment behind a constraint and the exchange of access rights between Users. This paper draws heavily on the work of that group.

Purpose of this document

- 2.2 This is the briefing note to stakeholders clarifying the similarities and differences between the concepts of ‘sharing’ and ‘trading’ access.
- 2.3 Annex 1 contains the product scope, proposed by Ofgem and approved by the Challenge and Delivery Groups.
- 2.4 Annex 2 provides a Glossary of terms as it has been necessary to develop new terminology to develop the understanding of sharing and trading of access.

Defining Access

- 2.5 To consider the differences between the sharing and trading of access rights, the thing or quantity being shared or traded needs to be clear. In the absence of a formal definition of an “Access Right”, the working group developed the following working definition for this paper:

Access Right	An Access Right is a commercial contractual arrangement between the connection agreement signatory and the system/ network operator that is defined at the time of connection and can be amended, shared or traded with the agreement of the of system/network operator.
--------------	--

2.6 To aid understanding some additional features of an Access Right are set out below in support of the above definition:

- An Access Right is linked to a specific premises and metering point or held by a legal entity on behalf of a group of sites,
- The owner of the site or connection agreement signatory holds/ owns the Access Right.,
- An Access Right is specified as MW (or MVA) in time,
- An Access Right is initially the same as the agreed MIC/MEC specified by the customer and agreed with the network operator at the time of connection, and
- For an individual premises not involved in sharing, the Maximum Import Capacity (MIC) and/or Maximum Export Capacity (MEC) used for Use of System charges are the same as the Access Right value.

Ownership and management of an Access Right

2.7 The connection agreement signatory holds the Access Right for a particular premises. It can be amended with the agreement of the system/network operator. Access Right ownership has pre-conditions, including technical compliance with the terms of the connection agreement and payment of Use of System (UoS) charges.

2.8 When considering the ownership of an Access Right under sharing and trading arrangements the group has considered the following features:

- Shared access - The User/owner of a particular premises may assign its Access Right to a separate legal entity responsible for managing the access of the sharing groups, i.e. acting as a controlling hand; and
- Trading – The owner of a particular premises User may transfer all or part of its access right to another legal entity on a medium term or permanent basis. Very short term trades may be difficult to monitor and create network risks.

Access rights and Use of System Charges

2.9 The working group has assumed that UoS charges will continue to be charged to suppliers, but there may be a case for any ‘discounts’ for access sharing to be paid to the owners of sharing sites i.e. as flex type payments.

2.10 To provide additional context, the working group has considered different options for the charging of UoS, the subject of trades. There are a number of options and sub options set out below.

- 2.11 The first option is for the premises in a sharing group to continue to receive UoS charges based upon their individual agreed MIC/MEC, and in addition either:
- Apply any use of system ‘discounts’ for access sharing to the individual premises, or
 - Apply any ‘discount’ payment outside of UoS to the sharing group’s legal entity, as a DNO flex type payment.
- 2.12 A second option is for the premises in a sharing group to receive UoS charges based on their respective recorded subsidiary values of assigned capacity, i.e. Assigned MIC/MEC and apply UoS to the subsidiary assigned AMIC/AMEC values. Note, this could create issues for data storage and billing and validation issues for distributors and suppliers:
- Liability for UoS charges would need to correspond to the UoS bill payer being in receipt or charge of data on which its charges are based. This is so that payments can continue to be verified or disputed. To date that’s been network operator invoices to licenced suppliers (in charge of the metering and MPANs). Decisions on data ownership will need to be made depending on the option chosen for UoS.
 - If the network operator manages the recording of the access sharing and the resulting access right details are made known to the premises’ suppliers then multi-site/multi-supplier sharing is feasible as the charges could be based on data visible to the relevant supplier.

3 A Description of “Sharing” and “Trading” Access

Sharing access

- 3.1 In its recently published [“Options for reform of access rights for distribution and transmission – discussion note”¹](#), Ofgem provided the following description of shared access rights:

Shared Access Right	Users across multiple sites in the same broad area obtain access to the whole network, up to a jointly agreed level.
---------------------	--

- 3.2 In the [SCR launch letter²](#), Ofgem provided two simple examples of shared access:
- “two generators in a similar location could agree to share a maximum export capacity”, and
 - “Users who form part of a local energy project working together to optimise capacity usage across several sites”.
- 3.3 Ofgem also describes potential benefits and practical issues of customers sharing access in its [Illustrative Examples \(a Subsidiary Document to its 2019 Winter Working paper\)³](#).

¹ https://www.ofgem.gov.uk/system/files/docs/2019/09/summer_2019_-_working_paper_-_access_right_note_final_nd.pdf

² https://www.ofgem.gov.uk/system/files/docs/2018/12/appendix_1_-_details_on_scope.pdf

³ https://www.ofgem.gov.uk/system/files/docs/2019/12/winter_2019_-_working_paper_-_illustrative_examples_note_publish.pdf

- 3.4 To date there has been little or no discussions on practically how sharing access could work and this note explores practical arrangements.
- 3.5 To aid understanding some additional features of shared access rights are set out below in support of the above description:
- Involves two or more specific User’s premises and specific metering points;
 - Importantly each Sharing Group User is essentially foregoing their own individual directly acquired Access Rights in favour of a Sharing Group held Access Right;
 - The Users may form sharing agreements and coordinate with each other;
 - The Sharing Group may involve a Sharing Group manager acting as a coordinating hand (managing Users up to the group’s collective access right capacity);
 - A Sharing Group would typically involve only existing Users, but new Users could be added to the group, including new connectees seeking access once connected;
 - Care would be needed in creating rules for the management of Users in a sharing group who approached the system / network operator individually seeking additional access e.g. an increase in capacity. The sharing principle is that the User has already assigned it’s access to the sharing group and can no longer negotiate access in isolation with system / network operator; and
 - The sharing of an Access Right would need to be agreed upfront and defined as part of a User’s access rights, including the User’s sites and metering points involved and the extent to which access rights are shared including the shared access maximum capacity and shape.

Trading access

- 3.6 In the [SCR launch letter](#), Ofgem recognised that “new conditions of access could potentially have value in helping ensure capacity is allocated efficiently” and approaches “could include ‘use it or lose it’ or ‘lose it or sell it’ options so that those who are not using network capacity that is allocated to them have to release it”. But first Ofgem wanted to explore whether “other changes can give adequate incentives to release unused capacity, notably through capacity-based charges or trading”.
- 3.7 Unlike shared access rights Ofgem and the industry has not yet described traded access rights and this document aims to do that. The SCR Access subgroup has therefore attempted to craft a description for an Access Right trade as:

Access Right Trade	Access rights exchanged between two or more parties for [financial] value. A User party trades the right to access, either wholly or in part, to the whole network for a specified time period. The rights, responsibilities and liabilities are either permanently or temporarily transferred to another entity or group of entities.
--------------------	--

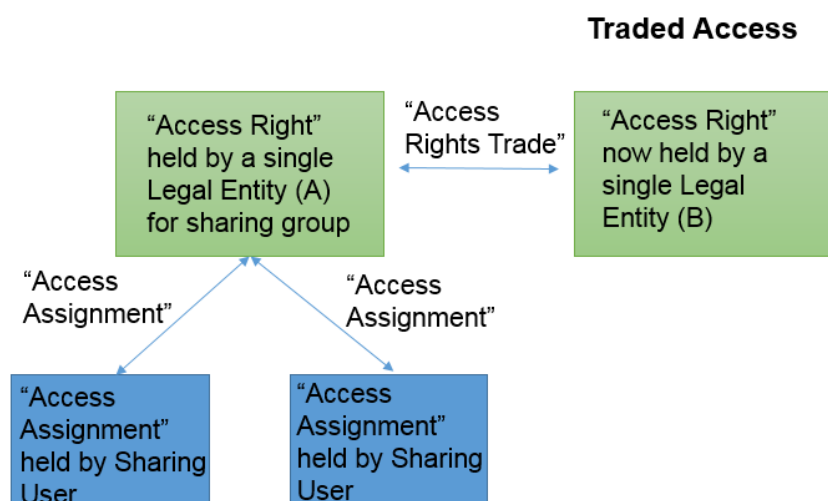
- 3.8 To aid understanding some additional features of access right trades are set out below in support of the above description:
- Envisaged as limited to two parties;

- Envisaged as normally involving only two specific User's premises and specific metering points, although this could be extended;
- A trade could, theoretically, involve a trade between two legal entities who are not Users e.g. a sharing group's managing entity could permanently sell some spare access to a capacity trader (see diagram in Appendix 1). Protections or visibility would need to be in place for end Users in the sharing group if an individual premise's capacity was only temporarily assigned to the sharing group entity, but then sold on permanently;
- The trade would be via a bilateral agreement between two parties;
- A User selling some or all of its access rights could sell parts of its access rights to different buyers via multiple bilateral trade agreements (this is not multiparty trading and does not involve multiparty agreements);
- Unlike shared access, the trading of an Access Right may not need to be defined upfront ahead of a trade as part of access rights themselves; and
- Some initial stakeholder feedback suggests that the value of the trade (assuming money changes hands) should be visible to the network/system operator to assist with overall efficient network development, e.g. if the price of the trade is excessive compared to reinforcement or flex service procurement.

A framework to define Sharing and Trading of access

3.9 The working group is proposing that an "Access Right" is "Shared" when access rights, responsibilities and liabilities are jointly assigned by more than one User to a single entity. The single entity could be managing the sharing group as a controlling hand (i.e. a group manager). The Users must then agree amongst themselves (e.g. via a bilateral/multiparty commercial agreement) or via the group's manager how the access rights, responsibilities and liabilities are apportioned between the entities. Whereas when an Access Right is "Traded" the responsibilities and liabilities are either transferred to another entity or group of entities, with the new owner holding the rights. The transfer could be permanent or for a fixed period. This is illustrated below in Figure 1 and in an expanded diagram at Appendix 1:

Figure 1: Illustration of the differences between shared and traded



3.10 The working group has disaggregated the Shared Access Right description in paragraph 3.1 above into its constituent parts and expanded as:

- An Access Right held by a single entity (be that a single User for a single site or a User with multiple sites or an entity acting on behalf of a sharing group of Users and representing a Sharing Group within a defined geographic area) that is then shared as a subsidiary “Access Assignment” to (Sharing Group) Users;
- With Access Assignments being assignable to individual User Connection Sites (of Sharing Group Users within the Sharing Group);
- Access Assignment across two or more (Sharing Group) User Connection Sites and/or by two or more (Sharing Group) Users. When an Access Right is shared then the sum of the subordinate Access Assignments [at any given time] do not exceed the (parent Sharing Group) Access Right (unless the Sharing Group Manager is required to actively manage diversity of use to keep utilisation within the Access Right it holds);
- There is a legal and contractual construct and coordination between the (Sharing Group) entity holding the Access Right and (Sharing Group) Users obtaining a delegated commercial right to utilise that Access Right through their (Sharing Group’s) tradable Access Assignment mechanisms. The nature of the legal construct will depend on whether it is a group of Users managing themselves or via a Sharing Group Manager, e.g. a common owner of all the sites like a local authority; and
- The working group sees the possibility of a small number of, for example, large sites agreeing with the network or system operator to jointly operate within an allocated Shared Access Right i.e. without the need for a controlling hand or the formation of a single legal entity. The legal entity may be a construct between the network or system operator and the Users such that the Users are jointly liable for breach. However, as the number of sharing sites in a group increases the need for a single responsible legal entity increases for legal clarity and ease of dispute resolution.

3.11 The working group has disaggregated the Access Right Trade description in paragraph 3.7 above into its constituent parts and expanded as:

- An Access Right held by a single legal entity, be that a single User for a single site or a User with multiple sites or an entity acting on behalf of a group of User connections within a defined geographic area,
- With Access Rights being traded to a single entity, be that a single User for a single site or a User with multiple sites, a trader, or a single legal entity acting on behalf of a Sharing Group of Users and those Users’ connections, and being within a defined geographic area, see diagram in Appendix 1.

3.12 When Access Rights are traded between the legal entities holding the Access Rights and the trading is with a Sharing Group, then Access Assignment e.g. to individual Users within the Sharing Group may need to be adjusted to reflect the traded change in the parent Sharing Group Access Right.

Sharing Group Management

- 3.13 The working group has considered the necessity for and potential role for a Sharing Group Manager especially for groups with larger numbers of sites. An important consideration is that there needs to be clarity on which legal entity is responsible for monitoring compliance with the Sharing Groups agreed total shared capacity. This is important as the network/system operator also needs clarity on which legal entity is responsible for any breach of the agreed total sharing capacity.
- 3.14 If a Sharing Group breaches its total capacity (in the absence of physical control equipment) this may affect the network and other customers. If the network/system operator needs to take corrective actions there may be costs associated with those actions and the Sharing Group may be liable for those costs. For example, excess capacity charges may apply and if additional flexibility services need to be procured the costs of those services may be re-chargeable to the Sharing Group.
- 3.15 The working group considered whether the number of customers or the type of customers in the Sharing Group could have a bearing on the need for a Sharing Group Manager. This is important as some stakeholders may see this as an unnecessary administrative burden.
- 3.16 The working group's view is that the need for coordination and management increases with the number of customer's involved and whether the customers are individually, technically and commercially competent to comply with the Sharing Group's rules. The working group was open minded as to the triggers for the need for a Sharing Group Manager. For example, two generators could share a capacity ceiling in a tripartite agreement with the network/system operator. The two generators would therefore be legally affiliated by the tripartite agreements with joint responsibility for compliance and jointly liable for any breach.
- 3.17 A different type of Sharing Group could be formed by a local authority with multiple premises in a Sharing Group. The local authority could opt to act as its own Sharing Group Manager. A different commercial model may be for a third party aggregator or supplier to form a Sharing Group of multiple like-minded, but commercially separate, non-domestic Users. The aggregator or supplier could take the role of Sharing Group Manager with the capacity of each customer being assigned to it for centralised management to derive mutual benefit.
- 3.18 The role of the Sharing Group Manager and the features of a Sharing Group's agreement could include:
- Who will pay which charges;
 - Monitoring individual and collective demands or exports;
 - Ensuring compliance with individually assigned capacities and the MIC and MEC;
 - Ensuring compliance with collective Sharing Group's capacity ceiling;
 - Taking legal liability for the breach of MIC or MEC by individual Users in the Sharing Group;
 - Taking legal liability for the breach of the Sharing Group's agreed capacity ceiling;
 - Providing DSO flexibility services on behalf of the Sharing Group;
 - Collecting any financial benefits delivered by the Sharing Group and sharing amongst the group;

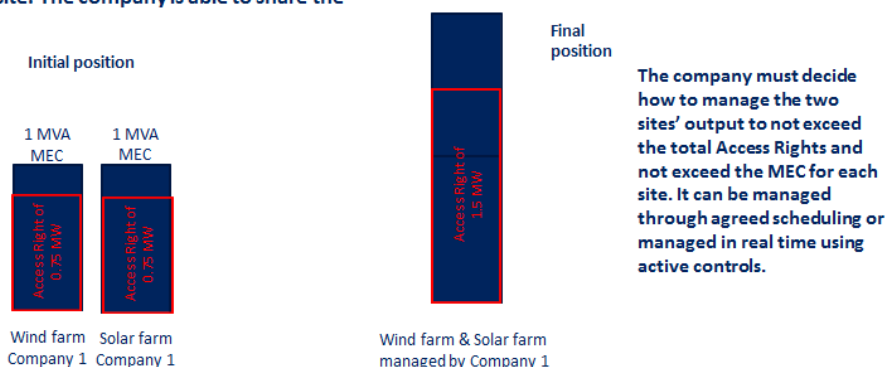
- recognises a Sharing Group Manager/ Trader and their authority, including by appointment, to trade a Sharing Group's Access Rights and to act on behalf of the Sharing Group's Users in the sale and acquisition of Access Rights;
- the means for accession and secession of Users to the Sharing Group to be recorded and known over time by the market operator and network/system operator; and
- the means for accession and secession of the Sharing Group Manager/ Trader for the relevant Sharing Group to be recorded and known over time by the market operator and system/network operator.

3.19 The above examples are simply that and are not intended to be prescriptive. Stakeholder views on alternative models would be welcomed.

Existing Arrangements (Non-sharing)

3.20 The diagram below at figure 2 shows a simple non-sharing arrangement for 2 generation User sites, where each generator site has its own Access Right linked to each site's MPAN. Company 1 owns both sites and therefore owns 2 separate Access Rights of 0.75MW each. This is not shared access as the 2 Users are not sharing a single Access Right. Because Company 1 owns both sites it is also responsible if one of the sites breaches its MEC.

A company (1) owns a wind farm with a MEC of 1 MVA and a Solar Farm with a MEC of 1 MVA and holds an export Access Right of 0.75MVA for each site. The company is able to share the Total Access Right



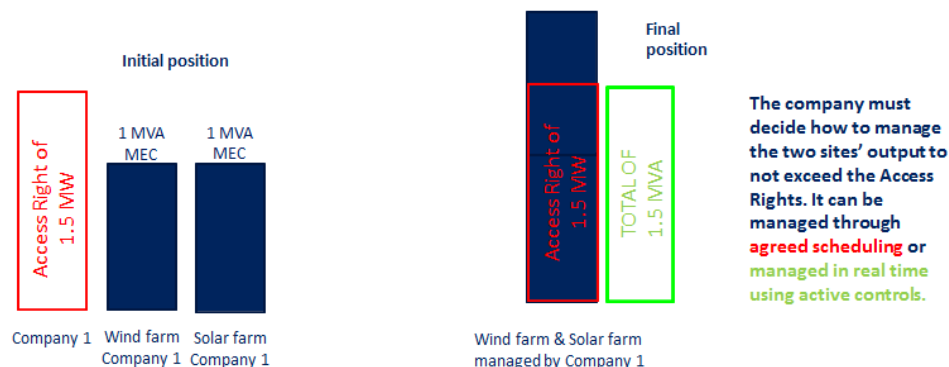
Notes:

1. An Access Right is linked to MEC or MIC (ie MPR) of a site
2. An Access Right is held for each sites
3. Each site must not exceed it's MEC and the combined outputs must not exceed the total Access Right at any point in time.

Figure 2: Simple sharing group of 2 sites with assigned access

3.21 Figure 3 shows a simple sharing arrangement where Company 1 owns the 2 sites, but has a shared access agreement for 1.5MW to cover its two User sites. Company 1 is legally responsible for compliance with the 1.5MW shared Access Right. Because Company 1 owns both sites it is also responsible if one of the sites breaches its MEC.

A company (1) owns a wind farm with a MEC of 1 MVA and a Solar Farm with a MEC of 1 MVA and holds an export Access Right of 1.5 MW



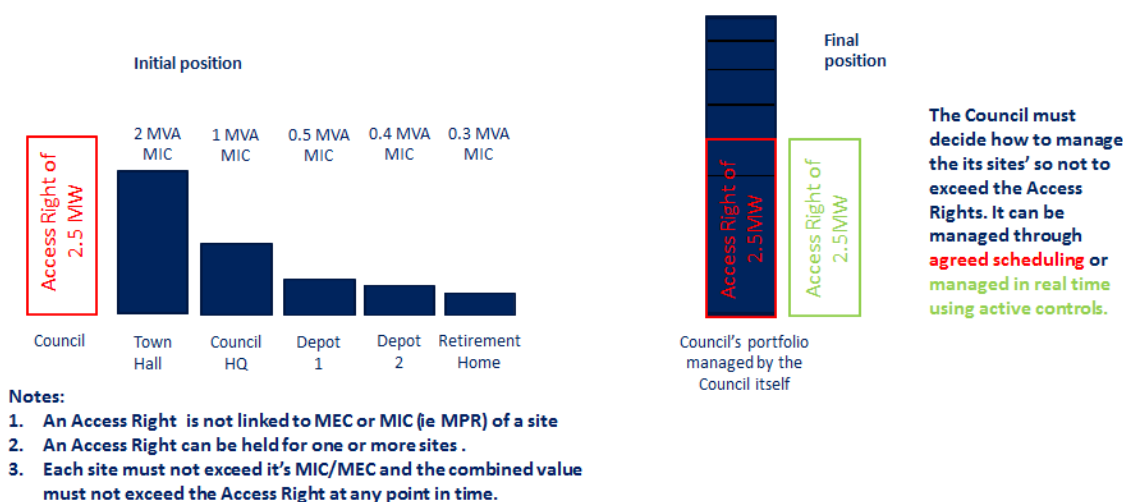
Notes:

1. An Access Right is not linked to MEC or MIC (ie MPR) of a site
2. An Access Right can be held for one or more sites.
3. Each site must not exceed its MEC and the combined outputs must not exceed the Access Right at any point in time.

Figure 3: Simple sharing group of 2 sites with shared access

3.22 Figure 4 shows a simple multi-site sharing arrangements where a local authority holds an Access Right for a portfolio of 5 sites. The local authority decides how to share the capacity across its sites. For example it could assign set capacity limits to each site or have arrangements which are more fluid up to the agreed MIC of each site. The local authority will need to decide if it takes on the role and responsibilities of a Sharing Group Manager e.g. to monitoring compliance against the 2.5MW access limit or whether it wishes to appoint a third party to fulfil the shared access responsibilities on its behalf.

A Council holds an import Access Right of 2.5 MW which it utilizes across its portfolio of properties



Notes:

1. An Access Right is not linked to MEC or MIC (ie MPR) of a site
2. An Access Right can be held for one or more sites .
3. Each site must not exceed its MIC/MEC and the combined value must not exceed the Access Right at any point in time.

Figure 4: Simple multi-site sharing arrangement

Sharing Group Manager as Group Trader

3.23 Where a shared Access Right owner delivers a real improvement in the efficiency of using the network, for example by operating 2 sites such that there is an overall reduction in the total capacity requirement, the owner of the access right might opt to sell its spare capacity. This

sale could be performed by the Sharing Group Manager (or Company 1 in Figure 3 or the local authority in Figure 4). In this scenario the Sharing Group Manager/legal entity takes on an additional role of selling (or buying) capacity on behalf of the sharing group i.e. becoming a Group Trader. The Sharing Group’s own arrangements will determine how the financial benefits of a sale are held or shared.

A simple trade

3.24 To fully understand the nature of the trading of Access Rights it is worth re-emphasise what is NOT Sharing. Fig.2 below shows where Sharing of an Access Right is NOT conducted. The two illustrated legal entities have their own Access Rights, for their own connection sites, agreed with the relevant network/system operator. Trading is between the two legal entities that hold the Access Rights or wish to acquire the Access Rights. Neither party is assigning/sharing the use of their Access Rights either pre or post-Trade.

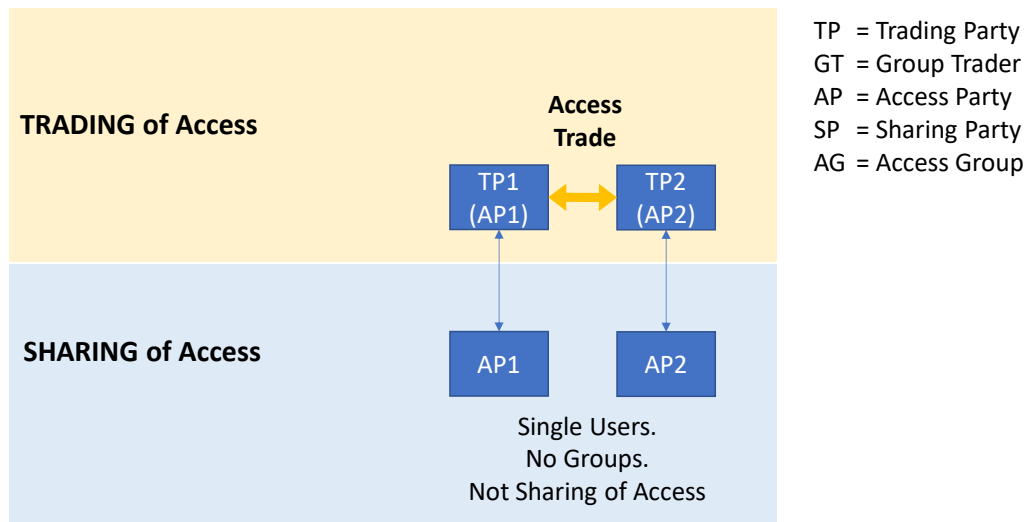


Figure 5: Illustration of Trading and not sharing

3.25 In the example shown in Figure 6 below, an arrangement that is Sharing Access Rights is described.

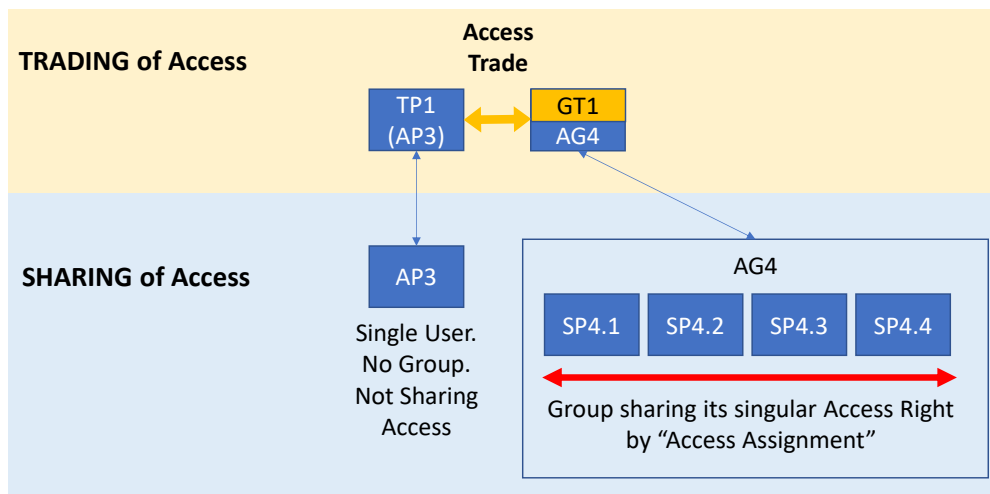


Figure 6: Illustration of a Sharing Group

- 3.26 Access Rights in the Figure 6 example are being traded between two legal entities (TP1 and GT1), one party being a single User for a single site (AP3) that is trading its own Access Rights with a second legal entity being a Group Trader who is trading Access Rights and holds those Access Rights on behalf of and for the benefit of the Sharing Group it is administering. Sharing of access may be usefully defined as a market Access Right or network Access Right held independently of any given User Connections Site, that is then assigned to User connection sites that are party to that Access Right holder's Sharing Group, with Access Assignment (again being limited to no more than the MIC/MEC of the given User connection site) potentially describable as "Communal Access Right Sharing". The following content sets out the principles of sharing of Access Rights granted independent of any given User connection site as a comprehensive test of sharing of Access Rights as more closely aligning to Ofgem's definition of Shared Access Rights as being "Users across multiple sites in the same broad area obtain access to the whole network, up to a jointly agreed level".
- 3.27 It is important to note that the Trading of Access Rights changes the absolute magnitude of Access Rights between two market trading parties that hold those Access Rights, and in the case in Figure 3 the Sharing Group's access is traded by participant "Group Trader 1 (GT1)" with Access Rights legally accruing to "Access Group 4 (AG4)" through Group Trader 1's trading actions.
- 3.28 The sharing of the Sharing Group's Access Rights, acquired for the example Sharing Group AG4 by the Group Trader GT1, requires an additional subsidiary market, commercial and data arrangements to transact the sharing of the Sharing Group's Access Right, as "Access Assignments" to and between Sharing Group Users, in the example above between sharing parties SP4.1, SP4.2, SP4.3 and SP4.4.
- 3.29 The Sharing Group Users may all be different legal entities themselves, or have multiple connection sites or be a mixture of multiple legal entities with multiple connection sites. Importantly each Sharing Group User is essentially foregoing their own individual directly acquired Access Rights in favour of a Sharing Group held and traded Access Right. In doing so the Sharing Group User is foregoing their ability to directly gain Access Rights in favour of a Sharing Group acquired Access Rights and obtaining utilisable access permission through a Sharing Group administered assignment mechanism of some kind. Legally the same Access Rights cannot be contracted twice, so if the Sharing Group entity directly acquires Access Rights, the subsidiary beneficiary Sharing Group User cannot directly acquire Access Rights.
- 3.30 Though each Sharing Group User's Access Assignment/"Assigned AMIC/AMEC" is subsidiary to the parent Sharing Group Access Right obtained by the Sharing Group Trader, the relevant Access Assignment for a given Sharing Group User's connection site needs to be available and visible to the network/system operator. The exact mechanism of sharing the Access Rights as Access Assignments within the Sharing Group does not need to be comprehensively defined but does need to contain specific elements to ensure control and visibility for both market operator and network/system operator, ensuring that:
- The Sharing Group is defined in a consistent structured market data form, with the sites (and Users for each Sharing Group User connection site) being set out in the Sharing Group definition within market data that is visible to the market operator and network/system operator. This requires codification of each Sharing Group User's unique connection site or metering or registration identifiers and with timed association to the Sharing Group's market/system identifiers as to enable interoperation of Market and Network Operator data and processes;

- The sum of Access Assignments within the Sharing Group is managed against the Sharing Group's Access Right;
- If the Sharing Group administrator inadvertently allocates "Access Assignments" in sum excess of the Sharing Group's Access Right then greater management of the Sharing Group by the Sharing Group administrator is required to maintain concurrent utilisation within the Sharing Group's Access Rights;
- The sum of the "Access Assignments" within the Sharing Group could be less than the Sharing Group Access Right, for example if Access Assignments are unallocated or have been relinquished or if Access Rights are newly acquired through trading by the Sharing Group entity and have yet to be Access Assigned amongst the Sharing Group users;
- Access Assignments to a Sharing Group user's connection site does not exceed the agreed MIC/MEC. This needs to be at all times, cognisant that the User's Maximum Power Requirements may be more complicated than a single year round capacity;
- Governance mechanisms needs to exist in the arrangements to:
 - i. recognise a Sharing Group Trader and their authority, including by appointment, to trade a Sharing Group's Access Rights and to act on behalf of the Sharing Group's Users in the acquisition of Access Rights;
 - ii. the means for accession and secession of Users to the Sharing Group to be recorded and known over time by the market operator and system/network operator; and
 - iii. the means for accession and secession of the Group Trader for the relevant Sharing Group to be recorded and known over time by the market operator and system/network operator;
- The trading of Access Rights is conducted by the legal Sharing Group entity or for example by a contracted party, either way acting as the Group Trader;
- The trading of Access Assignments within the Sharing Group is conducted by the Sharing Group Trader and for the Access Assignment and changes in Access Assignment to the Sharing Group Users' connection sites to be recorded, communicated to and accepted by the market operator and system/network operator; and
- The assigning of Access Assignments by the Sharing Group Trader to Sharing Group Users needs to be recorded separately to Access Rights held by the Sharing Group Trader as an additional dependent market data item, such that the Sharing Group's Access Right, which is the main market traded product, and the subordinate Access Assignments are distinguishable from each other in market and agreement mechanisms.

- 3.31 Access Assignment within a Sharing Group may occur without a Trade of Access Right occurring. Figure 7 below illustrates a trade of Access Assignments between two Sharing Group Users, subordinate to an unchanging Sharing Group Access Right, i.e. with no change in market Access Rights themselves. Communication and verification of the Access Assignment trade with market operator and system/network operator is required.
- 3.32 Within a Sharing Group, “trading” between individual Users (up to the agreed MIC/MEC) should be possible without system/network operator involvement (depending on UoS charging arrangements). However, if two sites in separate “shared access” agreements want to trade, then this must be done at the “Sharing Group Trader” level, rather than at the individual Connection Site level.

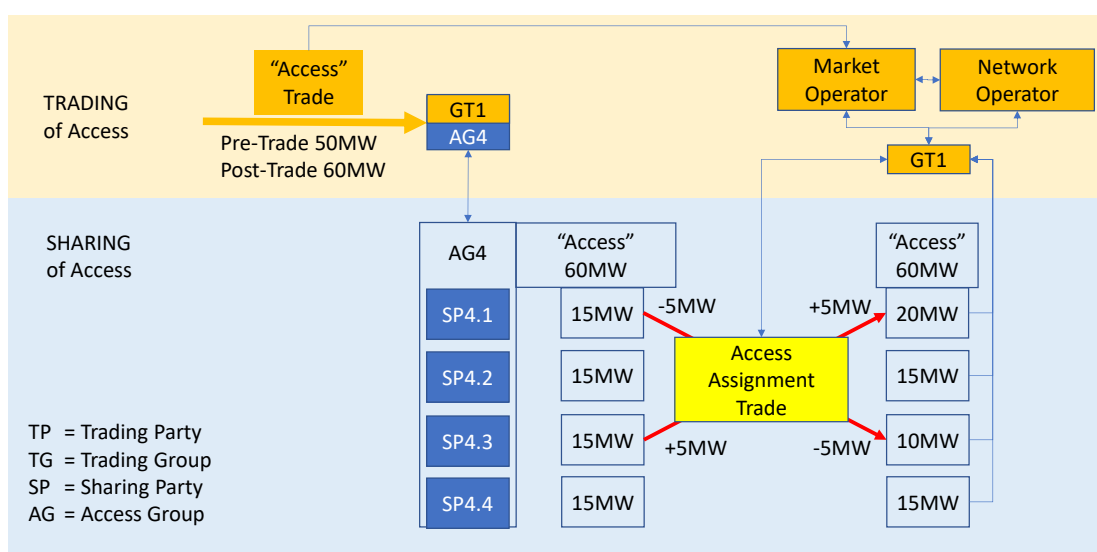


Figure 7: Illustration of Access Assignments between two Sharing Group Users

- 3.33 An Access Assignment trade that increases a Sharing Group user’s access must be limited to the Agreed MIC/MEC of the relevant Sharing Group User’s connection site as illustrated in Figure 8 below. This needs to be at all times, cognisant that the User’s maximum power requirements may be more complicated than a single year-round capacity.

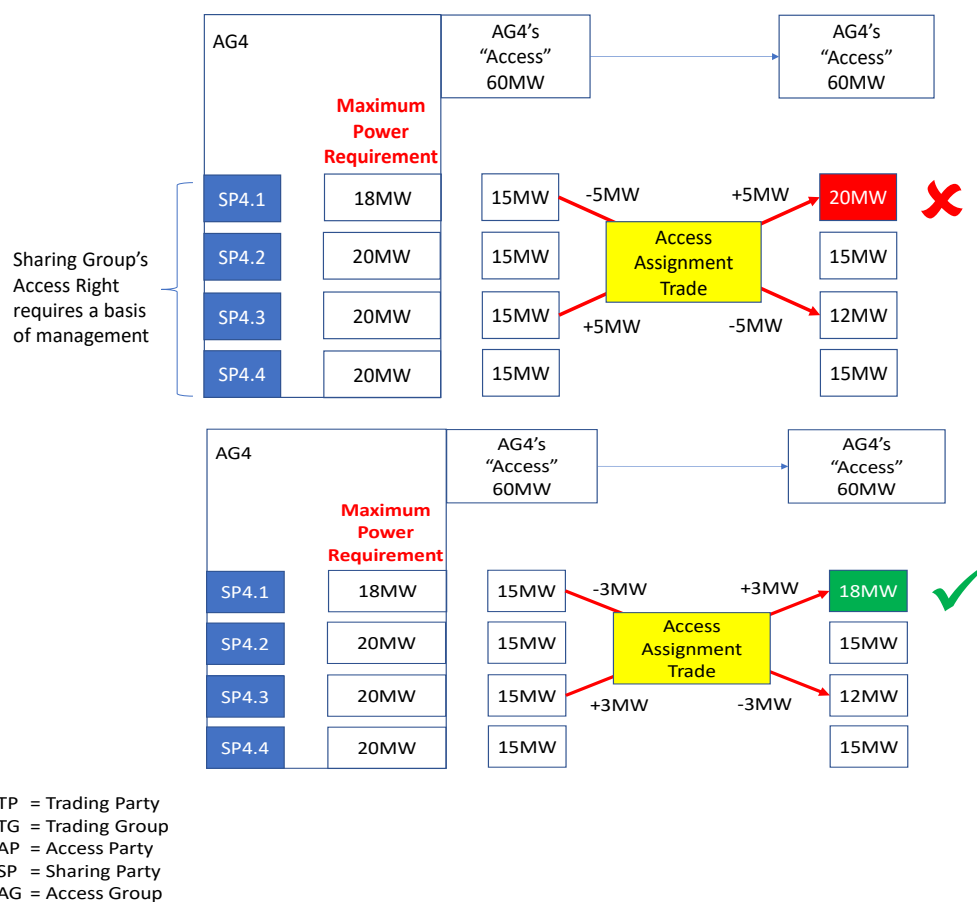


Figure 8: Illustration of Access Assignments between two Sharing Group Users

4 Assessment Against Principles

Trading Access Principles – New additional principles under this paper

4.1 The Non-SCR Industry-led Access subgroup developed a set of principles and potential trading rules that could underpin the trading of curtailment obligations between generators in a LIFO (last in, first out) stack. Or the trading of 'Uncurtailed Capacity'. These have been tested at high level in the market simulations as part of the [LEO](#) and [TRANSITION](#) projects. These are detailed below and the applied to both as generic principles for trading generally and sharing generally (e.g. rather than for trading curtailment). The principles are:

1. Transparent information sharing
2. Ability to maintain network continuity
3. Visibility of other potential trading parties, and
4. Transparent trading arrangements.

Principles applied to trading

4.2 This section takes the four principles from the Non-SCR Industry-led Access subgroup and applies them to trading more generically.

Principle 1	Principle 1 definition
Transparent information sharing	Sufficient information must be made available to enable customers to undertake trade access, and to enable network operators to approve the new arrangements.
Potential trading rules for Principle 1	
<p>A set of rules is necessary for the trades to take place practically – our initial view is that these are, at least:</p> <ul style="list-style-type: none"> • A customer’s current access arrangement, geographic location, voltage of supply and network connectivity, plus (for those customers behind a network constraint): <ul style="list-style-type: none"> • The network operator must make information available about a constraint to the network Users impacted by that constraint. This information should include the possible extent of the constraint (in MW or MWh) and times or network conditions at which curtailment will be necessary to alleviate the constraint; • The network operator must publish the process it will follow to determine which generators to curtail to alleviate the constraint under each plausible scenario; and • Parties who have traded must provide the network operator with details of the trade, including which parties have traded, the magnitude of the trade and the time periods for which the trade will be applicable. This sharing of information may be facilitated through a trading platform where applicable. 	
Principle 2	Principle 2 definition
Ability to maintain network continuity	Trading of access must not undermine the ability of the network operator to maintain the continuity of its network.
Potential trading rules for Principle 2	
<p>A set of rules is necessary for the trades to take place practically – our initial view is that these are, at least:</p> <ul style="list-style-type: none"> • The network operator must pre-authorise any customer wishing to trade, by checking the electrical equivalence of traded capacity from one party to another (to ensure no adverse effect on the network): <ul style="list-style-type: none"> • The network operator must pre-authorise any customer wishing to trade, by confirming that customer has the ability to comply should it become liable for a curtailment obligation; and • The MW reduction agreed by the customer taking on the curtailment obligation must have an equivalent impact on the constraint as the MW reduction already required by the generator with the curtailment obligation, as determined by substitution factors. 	
Principle 3	Principle 3 definition
Visibility of other potential trading parties	Those customers which have ‘opted in’ to trading must be aware of potential trading opportunities and understand other trading parties’ capability for flexibility.
Potential trading rules for Principle 3	
<p>A set of rules is necessary for the trades to take place practically – our initial view is that</p>	

<p>these are, at least:</p> <ul style="list-style-type: none"> • Customers wishing to trade must opt in to potential trading. • A register (or platform) for visibility of potential trading opportunities. This could either be: <ul style="list-style-type: none"> ○ In the case of bilateral trading, a list of customers connected to the network and which have opted in to trading must be made available, including: <ul style="list-style-type: none"> ▪ their current access arrangements, ▪ their current curtailment obligation (if applicable); ▪ their flexibility or curtailment granularity; and ▪ their effectiveness in alleviating the constraint (i.e. their sensitivity factor). ○ In the case of platform facilitated trading, a list of all potential trades offered by the parties behind the constraint including: <ul style="list-style-type: none"> ▪ whether they are offering to increase or bidding to decrease a curtailment obligation; ▪ the parameters of their potential trade i.e. level of curtailment and time period; ▪ their effectiveness in alleviating the constraint (i.e. their sensitivity factor); and ▪ their bid/offer price for making the trade. 	
Principle 4	Principle 4 definition
Transparent trading arrangements	The parameters within which trading can take place must be well-defined and available to all trading parties.
Potential trading rules for Principle 4	
<p>A set of rules is necessary for the trades to take place practically – our initial view is that these are, at least:</p> <ul style="list-style-type: none"> • Trades must be defined in time periods of [minimum trade duration]; and • Trades can take place at any point between [time period] and [time period] before the time at which the trade will take effect. 	

Figure 9: Generic principles and rules for trading access

Principles applied to sharing

- 4.3 This section takes the four trading principles from the Non-SCR Industry-led Access subgroup and applies them to sharing more generically.
1. Transparent information sharing
 2. Ability to maintain network continuity
 3. Visibility of other potential sharing parties, and
 4. Transparent sharing arrangements.

Shared Access Principle 1	Shared Access Principle 1 definition
----------------------------------	---

Transparent information sharing	A Sharing Group must be sufficiently defined to enable effective Market Operator and Network Operator management of Access Assignment.
Potential sharing rules for Principle 1	
A set of high level rules is necessary for sharing of Access to take place practically. The subgroup's view is that the following are defined, as a minimum:	
Within an Access Sharing platform, structured data is available to the Network Operator, the Sharing Group members (could be a very small self- managed Sharing Group), the Sharing Group Manager/site portfolio owner, Sharing Group Trader (where the distinct role is necessary or appropriate) the market operator (if such a distinct role is necessary, it could be the network operator).	
Key requirements	Relationship
A. SHARING GROUP Identities of sharing parties or the Sharing Group's legal identity (aka name(s), address(s), company reg(s)) and unique Sharing Group identifier. Liabilities for payments entitlements to 'sharing discounts'. Liability for non-compliance/ breach. With effect from (representing start of the Sharing Group) with effect to (representing termination of the Sharing Group)	1
B. SHARING GROUP AREA The Sharing Group's geographic area, typically connected at the same voltage level, connected to the same physical asset e.g. same primary substation i.e. the same geographic archetype. Area is structured GIS data form with effect from and to (recognising this may evolve).	1:n association to SHARING GROUP
C. SHARING GROUP TRADER The appointed Sharing Group Trader, if not the Sharing Group entity itself, with unique trading identifier and authority to trade in the relevant market, with effect from and to (recognising trading agents may be contracted by a Sharing Group entity)	1:n association to SHARING GROUP
D. SHARING GROUP ACCESS RIGHT The Sharing Group's Access Rights with unique Access Right identifier by capacity, type and time against unique Sharing Group Identifier, e.g. 1000kVA Import or 500kVA Export, with effect from and to (recognising that Access Rights for the Sharing Group will change over time with market and network operator agreement).	1:n association to SHARING GROUP
E. SHARING GROUP USER The Sharing Group Users' with unique User identifiers and assignments to the Sharing Group, with effect from and to (recognising that a Sharing Group can grow or shrink in membership and that User association to a Sharing Group needs to cancel any extent direct User Access Rights)	2:n association to SHARING GROUP

<p>F. USER CONNECTION SITE The Sharing Group Users Connection Sites with unique Connection Site identifiers with association to Sharing Group User and assignment to the Sharing Group with effect from and to (recognising that the number of Connection Sites that Sharing Group Users have within the Sharing Group may change over time)</p>	<p>1:n association to SHARING GROUP and to SHARING GROUP USER</p>
<p>G. USER CONNECTION SITE MAXIMUM CAPACITY The Sharing Group Users' connection site Maximum Capacity and type against unique connection site identifier, e.g. 1000kVA Import or 500kVA Export, with effect from and to (recognising that the agreed Connection Site capacities for Sharing Group User's Connection Sites within the Sharing Group can change over time with network operator agreement).</p>	<p>1:n association to USER CONNECTION SITE</p>
<p>H. USER CONNECTION SITE ACCESS ASSIGNMENT The Sharing Group Users' connection site Access Assignment against unique connection site identifier, e.g. 800Kva Import or 200kVA Export with effect from and to (recognising that Sharing Group User trades of "Access Assignment" mean that their access entitlement for a given connection site can change over time but always subject to current connection site capacity agreed with the network operator)</p>	<p>1:n association to USER CONNECTION SITE</p>

The definition of the Sharing Group, Group Trader, group Users, group user's connection sites, connection site Maximum Capacities and connection site Access Assignment rights must be sufficiently defined at any point in time to enable effective market operator and system/network Operator control and overview of the Sharing Group.

Shared Access Principle 2	Shared Access Principle 2 definition
Ability to maintain network continuity;	Sharing of access across the group must not undermine the ability of the system/network operator to maintain the continuity of its network.
Potential rules for Shared Access Principle 2	
<p>A set of rules is necessary for the sharing to take place practically – our initial view is that these are, at least:</p> <ul style="list-style-type: none"> • The network operator must pre-authorise any customer capacity assignments/reassignments within the Sharing Group: <ul style="list-style-type: none"> • The customer joining the Sharing Group may be a new connectee; • To check that assigned capacity increases do not exceed the capacity of the customer's connection and the network (the equivalent of a customer requesting increased capacity) i.e. because the assigned additional capacity will exceed the previously agreed MIC/MEC; • To check that assigned access does not breach any curtailment obligations on a customer; • To adjust the new MIC/MEC for UoS/access charges; • The system/network operator must pre-authorise any customer's new MIC/MEC by confirming that customer has the ability to comply should it become liable for 	

<p>a curtailment obligation; and</p> <ul style="list-style-type: none"> The assigned capacity increase e.g. for customer A. must have an equivalent impact on the network as the capacity reduction for customer B (potentially as determined by substitution factors). 	
Shared Access Principle 3	Shared Access Principle 3 definition
Visibility of the Sharing Group to other potential sharing parties	The extent to which the Sharing Group opts to be 'visible' and open to new members or opts to be 'closed' to a predefined group of members.
Potential trading rules for Shared Access Principle 3	
<p>A set of rules is necessary for the chosen visibility of the Sharing Group and its members e.g.it could be a market type group open to new members such as new connectees. Alternatively, it could be a closed group, for example, managed by a local authority for its own portfolio of properties.</p> <ul style="list-style-type: none"> The status of the group needs to be clear to the group members. If there is a controlling hand (for larger groups) the level of required visibility must be agreed with the system/network operator to protect both parties from breaches of confidentiality. The system/network operator need visibility of members, including sites joining or leaving the group e.g. to match to new connection requests. 	
Shared Access Principle 4	Shared Access Principle 4 definition
Transparent sharing arrangements	The parameters within which Access Assignment can take place within a Sharing Group must be well-defined and available to its Sharing Group members and controlling hand roles (for larger groups). Including, where relevant, the site portfolio owner, Sharing Group Trader, Sharing Group Users, market operator and system/network operator.
Potential trading rules for Shared Access Principle 4	
<p>A set of rules is necessary for the sharing of the group's headline access/capacity to take place practically and protect all the parties involved to ensure, at least:</p> <ul style="list-style-type: none"> Assigned access to group members is managed effectively to ensure that the total assigned access does not exceed the headline capacity for the group; and Assigned access to a Sharing Group member/User is sufficient to meet its requirements. 	

Figure 10: Generic principles and rules for sharing access

Identification of common and different features and enablers

4.4 Figure 11 below gives a high level summary comparison of access sharing and access trading in the context of particular features, enablers, principles and rules.

Features and principles	Shared access rights	Traded access rights
A Sharing Group	Yes	No
Listed Sharing Group members	Yes	No
Bilateral trades	No	Yes
Access Assigned to a User	Yes	No

Assignment across a group	Yes	No
Access sold and bought	No/Potentially	Yes
Site portfolio owner	Potentially	No
Suitable for larger groups	Yes if managed	Not envisaged
Transparent information sharing	Required	Required
Maintaining network continuity	Required	Required
Users visible to other parties	Not necessarily	Needed
Transparent arrangements (rules)	Needed	Needed

Figure 11: Comparison table of shared and traded access

5 Assessment of the two different approaches

Assessment framework

5.1 In this section sharing and trading are assessed against the following three principles:

- Arrangements support efficient use and development of the energy system;
- Arrangements reflect the needs of consumers as appropriate for an essential service; and
- Any changes are practical and proportionate.

Assessment of sharing

Assessment of Sharing Access	Consideration against principles
Arrangements support efficient use and development of the energy system	Yes, subject to rules and system/network operator pre-authorisation of access assignments /reassignments. Yes, for smaller Sharing Groups and potentially for 'managed' larger local groups. Not for very large group as there is no benefit above existing natural diversity across Users.
Arrangements reflect the needs of consumers as appropriate for an essential service	Yes, but rules and management are both necessary to ensure individual group members have sufficient access for their needs.
Any changes are practical and proportionate	Potential practical and proportionate for small groups and 'managed' larger local groups. Potentially impractical and disproportionate for very large groups, including due to the level of administration and monitoring required when compared to benefits.

Assessment of trading

Assessment of Trading Access	Consideration against principles
Arrangements support efficient use and development of the energy system	Yes, subject to rules and system/network operator pre-authorisation of trades to ensure electrical equivalence. System/network operators need visibility of trades to ensure trades are not more costly than

	flexibility or reinforcement solutions. Transparency and rules are needed so that sellers do not sell more access than they hold.
Arrangements reflect the needs of consumers as appropriate for an essential service	Yes, but rules and management are both necessary, including rules for exceedance so that if sellers sell more than they need there are liabilities/mitigations. Rules are needed so that trades result in sellers and buyers both having sufficient access to meets their needs.
Any changes are practical and proportionate	Potential practical and proportionate for one to one trades and for one seller to a small number of buyers. Potential for trading platforms to manage User visibility and proposed trades for network operator authorisation. Trades should be permanent transfers of capacity for significant/fixed minimum duration as trading access for short durations could be administratively burdensome.

6 When a User would “share” access, and when a User would “trade” access

6.1 Ofgem recognised that sharing or trading access rights has the potential to unlock local network capacity as well as helping to signal the benefits of local matching. This section has illustrative example to help understand the benefits to Users.

Illustrative Sharing examples

6.2 Two generators behind a constrained local network asset have agreed capacities of 2 MVA and 3 MVA respectively. By coordinating their export profiles they decide they can both operate under a combined shared headline capacity of 4MVA and assign profiled capacity between them.

6.3 A local authority installing low carbon technologies, including solar, heat pumps and storage across a portfolio of properties assesses that it can present a different net import profile to the network operator with a lower combined maximum demand. The local authority agrees a reduced combined access level across its portfolio, it assigns access levels to individual properties and establishes a monitoring system to ensure compliance and avoid exceedance.

Illustrative Trading examples

6.4 A large generator has spare agreed capacity and identifies through a news article that a new generator may be seeking to locate in the same area. The first generator recalls that at the time when it was connecting the spare local capacity was becoming limited. If the first generator could identify the new generator there may be potential for a trade.

- 6.5 A network/system operator sets up an open consented listing of export and storage Users willing to provide flexibility services via 'generation turn-up' in certain locations. Any generators with an interest in securing additional export capacity might approach one or more of the Users on the list to see if they are willing to permanently sell any spare capacity they hold rather than provide flexibility to the network/system operator. This would be a commercial choice for a potential seller.

Annex 1: Expanded Sharing vs. Trading Diagram

The diagram below expands Figure 1 in the document to show more detail on sharing and more examples of trading.

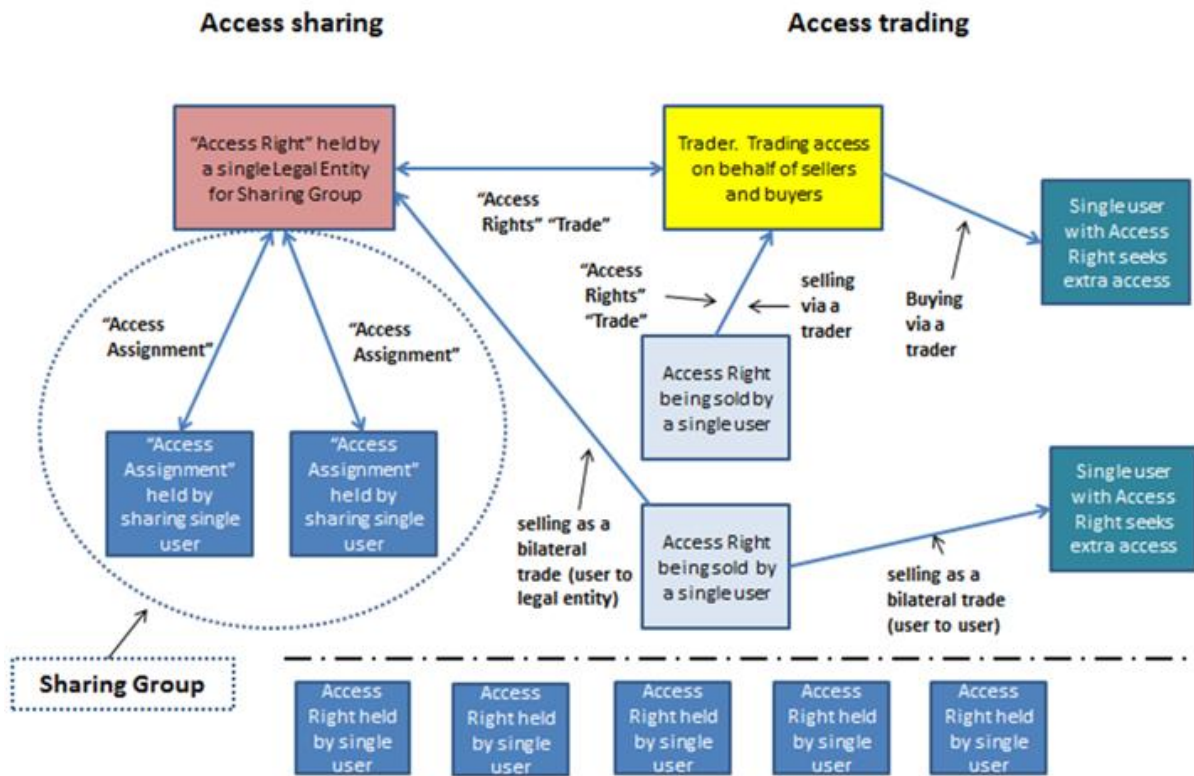


Figure 12: Expanded sharing versus trading diagram

Annex 2: Product Description

Title	2K: What are the respective roles of sharing and trading access?
Objective	Provide clarity on the respective roles of sharing and trading access
Acceptance criteria	<ul style="list-style-type: none"> • A description of “sharing access” and “trading access” <ul style="list-style-type: none"> - Identification of common features/enablers - Identification of different features/enablers. • Assessment of the two different approaches, against the following criteria: <ul style="list-style-type: none"> - Arrangements support efficient use and development of the energy system; - Arrangements reflect the needs of consumers as appropriate for an essential service; and - Any changes are practical and proportionate. • A note that captures when a User would “trade” access, and when a User would “share” access.
High-level timescales (Secretariat to develop detailed project plan).	<ul style="list-style-type: none"> • Final draft by end of December.
Dependencies - takes input from	<ul style="list-style-type: none"> • Access Report 2: options variants of access choices • Summer working paper
Dependencies - provides input to	Will help to inform assessment of charging options and locational granularity
Which DG members should be involved?	All network companies would be asked to provide data but it is not necessarily expected that all DG members (or their companies) would need to be on the subgroup.
Ofgem Lead	Stephen Perry
Internal or external	External
Any comments on methodology used	A qualitative word document would probably work best.
Other comments	

Annex 3: Glossary

Term	Definition
Access Assignment	Working definition: Assigning an amount, quantity, or level of access to a member User in a Sharing Group.
Access Right	Working definition: An Access Right is a commercial contractual arrangement between the connection agreement signatory and the system/ network operator that is defined at the time of connection and can be amended, shared or traded with the agreement of the system/network operator.
Connection Site(s)	Working definition: A premises with one or more connections to Users (with MPANs) under the control of a customer.
Group Trader	Working definition: Where relevant, a legal entity employed by a Sharing Group to trade capacity on the group's behalf e.g. to secure additional capacity or to sell spare capacity.
Sharing Group	Working definition: A group of clearly identifiable of User's connections, that can be listed, connected in a geographical area behind the same constrained network asset.
User	Working definition: A User of a connection (that has an MPAN). The person or legal entity responsible for the connection and compliance with the National Terms Of Connection.