DATED 2018

UK POWER NETWORKS (OPERATIONS) LIMITED (1)

and

[ ] (2)

POWER POTENTIAL DER FRAMEWORK AGREEMENT

DRAFT FOR CONSULTATION

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This **AGREEMENT** is made on the [ ] day of [ ] 201[ ]

BETWEEN:

(A) **UK Power Networks (Operations) Limited** ("**UKPN**") a company registered in England with number 03870728 whose registered office is at, Newington House, 237 Southwark Bridge Road, London, SE1 6NP ("**UKPN**", which expression shall include its successors and/or permitted assigns); and

(B) **[ ] Limited** a company registered in England with number [ ] whose registered office is at, [ ], ("**Provider**", which expression shall include its successors and/or permitted assigns);

(together, the "**Parties**").

1. **DEFINITIONS AND INTERPRETATION**

1.1. Words and expressions set out in Schedule 1 shall have the meanings set out therein.

1.2. In this **Agreement**:

1.2.1. unless the context otherwise requires, all references to a particular clause or Schedule shall be a reference to that clause or schedule in or to this **Agreement**;

1.2.2. headings are inserted for convenience only and shall be ignored in construing this **Agreement**;

1.2.3. references to the words "include" or "including" are to be construed without limitation to the generality of the preceding words;

1.2.4. references to a month are to a calendar month;

1.2.5. unless the context otherwise requires any reference to an Act of Parliament or any part or section or other provision of or section to an Act of Parliament shall be construed, at the particular time, as including a reference to any modification, extension or re-

enactment thereof then in force and to all instruments, order or regulations then in force and made under or deriving validity from the relevant Act of Parliament;

1.2.6. references to the masculine shall include the feminine and references in the singular shall include the plural and vice versa and words denoting persons shall include any individual, partnership, firm, company, corporation, joint venture, trust, association, organisation or other entity, in each case whether or not having separate legal personality; and

1.2.7. any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organisation or other entity, in each case whether or not having separate legal personality.

2. CONDITIONS PRECEDENT

2.1. This **Agreement** (other than this clause 2) shall in all respects be conditional on the following conditions precedent being satisfied in full or waived by **UKPN** by not later than the **Longstop Date**:

2.1.1. publication by **UKPN** of the **DER Commissioning Test Procedure** and **DER Commissioning Test Specification** by not later than [ ];

2.1.2. demonstration by the **Provider** to the satisfaction of **UKPN** that the **Provider's DER Unit** complies with the requirements of the **DER Technical Requirements Document**;

2.1.3. demonstration by the **Provider** to the satisfaction of **UKPN** that the **DER Unit** has successfully completed the **DER Commissioning Tests** in accordance with the **DER Commissioning Test Procedure**;

2.1.4. agreement between the **Parties** of two [Mandatory Trial Windows] by not later than [ ]; and

2.1.5. written confirmation from **UKPN** that the **Power Potential Inter-Operator Agreement** has become unconditional and is in full force and effect.

3. COMMENCEMENT AND TERM

3.1. This **Agreement** shall commence on the **Actual Trial Commencement Date** and shall continue, subject to clause 10 (*Suspension and Termination*), in full force and effect until the **Expiry Date**.

3.2. The **Expiry Date** shall be extended automatically if the **Power Potential Inter-Operator Agreement** is extended by agreement between **UKPN** and the **System Operator,** subject always to the consent of the **Authority**, including:

3.2.1. [by reason of any suspension of the respective rights and obligations of **UKPN** and the **System Operator** under clause 10 (*Suspension and Termination*) of the **Power Potential Inter-Operator Agreement**;

3.2.2. by reason of any suspension of the respective rights and obligations of **UKPN** and the **System Operator** under clause 18 (*Force Majeure*) of the **Power Potential Inter-Operator Agreement**; or

3.2.3. by reason of the commencement of the **Power Potential Inter-Operator Agreement** being delayed beyond the **Scheduled Trial Commencement Date**) under clause 3.2.3 of the **Power Potential Inter-Operator Agreement]**.

4. **GENERAL REQUIREMENTS**

4.1. The **Parties** shall at all relevant times comply with the conditions set out in the **Market Procedures**.

4.2. The **Provider** shall, throughout the **Trial Period**, operate, maintain and repair the **DER Unit** with a view to making the **Power Potential Services** available in accordance with the **Service Parameters**.

5. **REACTIVE POWER SERVICE**

5.1. During **Wave 1 UKPN** shall notify the **Provider of** any changes to the timings of the **Mandatory Technical Trial Windows** and **Optional Technical Trial Windows** that it subsequently requires on not less than [ ] days' notice prior to the **Trading Day** on and from which such changes are to take effect;

5.2. During **Wave 2** and **Wave 3 UKPN** shall notify the **Provider**:

5.2.1. of the number of **Service Windows** on each **Trading Day** and their respective start and finish times that it initially requires for the purposes of the **Power Potential Services** by not later than **[ ]** days prior to the **Actual Trial Commencement Date**; and

5.2.2. of any changes to the timings of the **Service Windows** that it subsequently requires during the **Trial Period** on not less than **[ ]** days' notice prior to the **Trading Day** on and from which such changes are to take effect.

5.3. The **Provider** shall:

5.3.1. throughout the **Trial Period** notify **UKPN** (through the **DERMS Interface**) of its expected output levels in MW for each **Notified Settlement Period** by not later than [16.00] for the next **Trading Day**;

5.3.2. during **Wave 2** and **Wave 3**, and provided that a **Power Potential Auction** has been initiated for the following day, notify **UKPN** (through the **DERMS Interface**) by not later than [16.00] on each day for each **Service Window** of notified prices for **Reactive Power Availability** and **Reactive Power Utilisation** for each **DER Unit,** in accordance with the **Market Procedures**.

5.4. **UKPN** shall:

5.4.1. during **Wave 2** and **Wave 3**, notify the **Provider** each day (through **DERMS**) for each **Service Window** on the next **Trading Day** by not later than [17.00] of its accepted **Reactive Availability Windows** in accordance with the **Market Procedures** (the '**Production Schedule**').

5.5. **UKPN** shall be entitled to modify requests for **Reactive Power Availability** (through the **DERMS Interface**) at any time before the **Trading Day** commences. The **Production Schedule** for a **Trading Day** will become fixed at commencement of that **Trading Day** or at such earlier time as **UKPN** may notify to the **Provider**.

5.6. **UKPN** may issue an instruction ("**Reactive Power Arming Instruction**") (through the **DERMS Interface**) to the **Provider** to deliver **Reactive Power Response** if the **DER Unit** has been specified in the **Production Schedule** for a **Trading Day** by not later than [2] minutes before the relevant **Service Window** opens.

5.7. Following receipt of a **Reactive Power Instruction** from **UKPN** under clause 5.6, the **Provider** shall deliver the **Reactive Power Response** according to that **Instruction** from the **DER Unit** in accordance with the **Service Parameters**:

5.7.1. in respect of a non-synchronous **DER Unit**, operating in voltage droop control mode; or

5.7.2. in respect of a synchronous **DER Unit**, operating in voltage control mode.

5.8. The quantity of **Reactive Power Response** that a **DER Unit** has delivered pursuant to an **Instruction** shall be determined in accordance with Part [ ] of Schedule 2.

6. **ACTIVE POWER SERVICE**

6.1. The Provider will complete **Mandatory Technical Trials** before it can offer the **Active Power Reserve Service**;

6.2. During **Wave 1 UKPN** shall notify the **Provider of** any changes to the timings of the **Mandatory Technical Trial Windows** that it subsequently requires on not less than [ ] days' notice prior to the **Trading Day** on and from which such changes are to take effect;

6.3. The **Provider** shall, notify **UKPN** (through the **DERMS Interface**) by not later than [16.00] on each day for each **Notified Settlement Period** on the next **Trading Day** of its expected operating levels from the **DER Unit**, and the prices for **Active Power Utilisation**.

6.4. **UKPN** may (through the **DERMS Interface**), by not later than [2] minutes before the required start time, issue an instruction ("**Active Power Instruction**") for delivery of **Active Power Response** from the **DER Unit** if specified in the **Production Schedule**.

6.5. Following receipt of an **Active Power Instruction** from **UKPN** under clause 6.2, the **Provider** shall deliver the **Active Power Response** from the **DER Unit** by operating the **DER Unit** at the set point specified in that **Instruction** and in accordance with the **Service Parameters**.

6.6. The quantity of **Active Power Response** that a **DER Unit** has delivered pursuant to an **Instruction** shall be determined in accordance with Part [ ] of Schedule 2.

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7. **INFRASTRUCTURE**

7.1. **UKPN** shall, throughout the term of this **Agreement**, use reasonable endeavours to operate and maintain the **DERMS** and the **DERMS Interface** in full working order in accordance with **Good Industry Practice**.

7.2. The **DER Provider** shall, throughout the term of this **Agreement**, operate and maintain its interface with **DERMS** at all relevant times in full working order in accordance with **Good Industry Practice**.

8. **PROVIDER FEES**

8.1. In consideration of the **Provider** making the **DER Unit** available for participation in **Wave 1** in accordance with this Agreement, **UKPN** shall pay, in accordance with clause 9, an amount calculated in accordance with Part [X] of Schedule [2] ("**Participation Payment**").

8.2. In consideration of the **Provider** making the **DER Unit** available for the delivery of **Reactive Response Capability** for any **Notified Settlement Period** during the **Wave 2** o**r Wave 3** in accordance with this **Agreement**, **UKPN** shall pay, in accordance with clause [9], an amount calculated in accordance with Part [1] of Schedule [2] ("**Availability Payment**").

8.3. In consideration of the **Provider** delivering **Reactive Power Response** at the **DER Connection Point** during a **Notified Settlement Period** during **Wave 2** or **Wave 3** in accordance with an **Instruction**, **UKPN** shall pay, in accordance with clause 9, an amount ("**Reactive Utilisation Payment**") calculated in accordance with Part [2] of Schedule 2.

8.4. In consideration of the **Provider** delivering **Active Power Response** at the **DER Connection Point** during a **Notified Settlement Period** in accordance with an **Instruction**, **UKPN** shall pay, in accordance with clause 9, an amount ("**Active Utilisation Payment**") calculated in accordance with Part [2] of Schedule 2.

9. **PAYMENT**

9.1. **UKPN** shall not later than [five (5)] **Business Days** following the end of each month (for the purposes of this clause 9, the "**Relevant Month**") during the term of this **Agreement**, send to the **Provider** a statement (for the purposes of this clause 9, "**Monthly Statement**") setting out, in respect of the **DER Unit** and for each **Notified Settlement Period** and for each **Trading Day** in the **Relevant Month**:

9.1.1. the quantity of **Active Power Response** and/or **Reactive Power Response** specified by **UKPN** in its **Instruction** and the actual metered output;

9.1.2. in respect of **Wave 2** and **Wave** 3, the amount payable by **UKPN** calculated in accordance with Schedule 2 in respect of **Availability Payments**;

9.1.3. in respect of **Instructions** for **Reactive Power Response** during **Wave 2** and **Wave 3**, the amount payable in accordance with Part 2 of Schedule 2 in respect of **Utilisation Payments**; and

9.1.4. in respect of **Instructions** for **Active Power Response**, the amount payable by **UKPN**, calculated in accordance with Part 3 of Schedule 2, in respect of **Utilisation Payments**.

9.2. If the **Provider** disagrees with the content of any **Monthly Statement** it may notify **UKPN** in writing, with the evidence upon which it relies in support of such disagreement, no later than [five (5)] **Business Days** after the date of receipt of that **Monthly Statement**, but in the absence of any such notification by such date, the **Monthly Statement** shall be final and binding on the **Parties**.

9.3. Where a disagreement is notified by the **Provider** pursuant to clause 9.2, the **Parties** shall discuss and endeavour to resolve the same in good faith, and any revisions to a **Monthly Statement** agreed as a result thereof shall be reflected in the **Monthly Statement** next following the date of resolution of the dispute. Disputes that cannot be resolved in this way shall, subject to clause 14.1, be referred to an **Expert.**

9.4. The **Provider** shall issue an invoice for the amount shown in the **Monthly Statement** by not later than the [eighteenth (18th)] day of the month following the **Relevant Month**.

9.5. **UKPN** shall pay to the **Provider** the amount shown as due in an invoice issued in accordance with clause 9.4, together with any Value Added Tax properly chargeable in respect of the provision of the **Power Potential Service** within [five (5)][1] **Business Days** after the date on which that **Monthly Statement** is issued**.**

9.6. All payments to be made under this **Agreement** will be made to the account specified for the payee **Party** in Schedule 4 or to such other account at a UK clearing bank as the payee **Party** may from time to time notify to the other.

9.7. All amounts specified in this **Agreement** shall be exclusive of any value added tax or other similar tax.

9.8. Interest shall be payable on late payments at the **Default Rate** from the date on which payment became due until (but excluding) the date of actual payment. Interest shall accrue on a daily basis.

9.9. If, following a disagreement being notified by the **Provider** under clause 9.2, it is agreed or determined that any further sum is payable by **UKPN**, the **Provider** shall be entitled to interest at the **Base Rate** from the date on which payment was originally due until (but excluding) the date of actual payment. Interest shall accrue on a daily basis.

9.10. Sums payable by one **Party** to the other pursuant to this **Agreement** whether by way of charges, interest or otherwise, shall (except to the extent permitted in this Clause 9 or as otherwise required by law) be paid in full, free and clear of and without deduction, set-off or deferment in respect of any disputes or claims provided that either **Party** shall be entitled to set off any payment due and payable by the other **Party** under this **Agreement** against any payment it makes to that **Party** under this **Agreement**).

[1] NB This is intended to allow time for UKPN to receive payment from NGET before making payment to the Provider, thereby avoiding funding/credit issues.

9.11. The provisions of this clause 9 shall survive the termination or expiry of this **Agreement**.

10. **MONITORING, METERING AND TESTING**

10.1. The delivery of **Active Power Response** and **Reactive Power Response** by the **DER Unit** shall at all times during the **Trial Period** be metered and monitored by **UKPN** in accordance with **the DER Technical Requirement**s document[2].

10.2. **UKPN** shall be entitled at any time during the **Trial Period** to carry out a **Reproving Test** of the **DER Unit** provided that not more than one **Reproving Test** is carried out in any period of [twelve (12)] consecutive months.

10.3. At any time during the **Trial Period UKPN** shall be entitled to conduct investigations of the **DER Unit** in order to verify compliance by the **Provider** with its obligations under this **Agreement**[3].

11. **RECORDS**

11.1. **UKPN** shall maintain full record of all availability data, monitoring data and **Instructions** relating to the **Power Potential Services** for seven years.

12. **SUSPENSION AND TERMINATION**

12.1. **UKPN** may by notice in writing to the **Provider** suspend the **Power Potential Service** at any time if:

12.1.1. by reason of an outage on the **National Electricity Transmission System, UKPN** has been informed by the **System Operator** that the **Power Potential Service** cannot be utilised; or

12.1.2. by reason of **DERMS** or the **DERMS Interface** being unavailable, **UKPN** is unable to conduct the **Power Potential Auction**, provided that **UKPN** may extend the **Trial Period** by notice in writing to the **Provider** to the extent that the **Power Potential Inter-Operator Agreement** has been extended in such circumstances with the approval of the **Authority**.

12.2. This **Agreement** shall terminate automatically if at any time the **Power Potential Agreement** terminates.

12.3. Either **Party** (the "**Non-Defaulting Party**") shall have the right to terminate this **Agreement:**

[2] This can be found at: https://www.nationalgrid.com/sites/default/files/documents/DER%20Technical%20Requirements%20Document%20v2.2_issued_0.pdf

[3] Providers can be expected to seek some limitation on the frequency of exercising this right.

12.4. forthwith on notice in writing to the other **Party** (the "**Defaulting Party**") following the material breach of the **Defaulting Party** and which, in the case of a breach capable of remedy, has not been remedied within thirty (30) days following such notice from the **Non-Defaulting Party**; or

12.5. forthwith on notice in writing to the other **Party** following the occurrence of an **Insolvency Event** in relation to the other **Party**.

13. **LIABILITY**

13.1. Subject to clause 13.2 and save where any provision of this **Agreement** provides for an indemnity or the payment of liquidated damages, the **Parties** agree and acknowledge that neither **Party** (for the purposes of this clause 11, the "**Party Liable**") nor any of its officers, employees or agents shall be liable to the other **Party** for loss arising from any breach of this **Agreement** other than for loss directly resulting from such breach and which at the date hereof was reasonably foreseeable as not unlikely to occur in the ordinary course of events from such breach in respect of:

13.1.1. physical damage to the property of the other **Party**, its officers, employees or agents; and/or

13.1.2. the liability of such other **Party** to any other person for loss in respect of physical damage to the property of any person, subject, for the avoidance of doubt, to the requirement that the amount of such liability claimed by such other **Party** should be mitigated in accordance with general law,

provided further that the liability of either **Party** in respect of all claims for such loss shall not exceed £5 million per incident or series of related incidents.

13.2. Nothing in this **Agreement** shall exclude or limit the liability of the **Party Liable** for death or personal injury resulting from the negligence of the **Party Liable** or any of its officers, employees or agents and the **Party Liable** shall indemnify and keep indemnified the other **Party**, its officers, employees or agents, from and against all such and any loss or liability which such other **Party** may suffer or incur by reason of any claim on account of death or personal injury resulting from the negligence of the **Party Liable** or any of its officers, employees or agents.

13.3. Subject to clause 13.2 and save where any provision of this **Agreement** provides for an indemnity or the payment of liquidated damages, neither the **Party** liable nor any of its

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officers, employees or agents shall in any circumstances whatsoever be liable to the other **Party** for:-

13.3.1. any loss of profit, loss of revenue, loss of use, loss of contract or loss of goodwill; or

13.3.2. any indirect or consequential loss; or

13.3.3. loss resulting from the liability of the other **Party** to any other person howsoever and whensoever arising save as provided in clause 13.1.2 and clause 13.2.

13.4. Each **Party** acknowledges and agrees that the other **Party** holds the benefit of clauses 13.1.1, 13.1.2 and 13.3 for itself and as trustee and agent for its officers, employees and agents.

13.5. The rights and remedies provided by this **Agreement** to the **Parties** are exclusive and not cumulative and exclude and are in place of all substantive (but not procedural) rights or remedies express or implied and provided by common law or statute in respect of the subject matter of this **Agreement**, including (without limitation) any rights either **Party** may possess in tort which shall include actions brought in negligence and/or nuisance. Accordingly, each of the **Parties** hereby waives to the fullest extent possible such rights and remedies provided by common law or statute and releases the other **Party**, its officers, employees and agents to the same extent from all duties, liabilities, responsibilities or obligations provided by common law or statute in respect of the matters dealt with in this **Agreement** and undertakes not to enforce any of the same except as expressly provided herein.

13.6. For the avoidance of doubt, the **Parties** acknowledge and agree that nothing in this **Agreement** shall exclude or restrict or otherwise prejudice or affect any of the rights, powers, privileges, remedies, duties and obligations of the **Secretary of State** or the **Authority** under the **Act**, any **Licence** or otherwise howsoever.

13.7. Each of clauses 13.1, 13.2, 13.3 and 13.4 shall:-

13.7.1. be construed as a separate and severable contract term, and if one or more of such sub-paragraphs is held to be invalid, unlawful or otherwise unenforceable the other or

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others of such sub-paragraphs shall remain in full force and effect and shall continue to bind the **Parties**; and

13.7.2. survive termination of this A**greement**.

13.8. For the avoidance of doubt, nothing in this clause 13 shall prevent or restrict either **Party** enforcing any obligation (including suing for a debt) owed to it under or pursuant to this **Agreement**.

13.9. Each **Party** acknowledges and agrees that the provisions of this clause 13 have been the subject of discussion and negotiation and are fair and reasonable having regard to the circumstances as at the date hereof.

14. DISPUTE RESOLUTION

14.1. Any dispute or difference of whatever nature howsoever arising under, out of or in connection with this **Agreement** (for the purposes of this clause 14, a **"Dispute"**), may in the first instance be referred to [senior management representatives of the **Parties**] by written notice from either **Party** to the other.

14.2. If a **Dispute** cannot be resolved by [the **Parties**' senior management representatives] within [thirty (30) days] after its referral in accordance with clause 14.1, either **Party** may by written notice to the other:

14.2.1. if it is a **Dispute** expressly reserved for an **Expert**, refer it for final determination by an **Expert** in accordance with clause 15; or

14.2.2. otherwise, refer the **Dispute** to mediation in accordance with CEDR's Model Mediation Procedure.

14.3. If a **Dispute** referred to mediation in accordance with clause 14.2.2 cannot be resolved, it may be referred by either Party to the English High Court.

15. EXPERT DETERMINATION

15.1. Where a provision of this **Agreement** expressly provides for the referral by a **Party** of any matter in dispute to an **Expert**, the following provisions shall apply:

15.1.1. the **Expert** shall act as an expert and not as an arbitrator and shall decide those matters referred to him using his skill, experience and knowledge, and with regard to all such other matters as he in his sole discretion considers appropriate;

15.1.2. if the **Parties** cannot agree upon the selection of an **Expert**, the **Expert** shall be determined by the President for the time being of the Law Society of England and Wales;

15.1.3. all references to the **Expert** shall be made in writing by either **Party** with notice to the other being given contemporaneously, and the **Parties** shall promptly supply the **Expert** with such documents and information as he may request when considering any referral;

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15.1.4. the **Expert** shall be requested to use his best endeavours to give his decision upon the question before him as soon as possible in writing following its referral to him, his decision shall, in the absence of fraud or manifest error, be final and binding upon the **Parties**;

15.1.5. if the **Expert** wishes to obtain independent professional and/or technical advice in connection with the question before him, he shall first provide the **Parties** with details of the name, organisation and estimated fees of the professional or technical adviser and he may then engage such advisers with the consent of the **Parties** (which consent shall not be unreasonably withheld or delayed) for the purposes of obtaining such professional and/or technical advice as he may reasonably require;

15.1.6. the **Expert** shall not be held liable for any act or omission, and his written decision will be given without any liability on the **Expert's** part to either **Party**, unless it shall be shown that he acted fraudulently or in bad faith;

15.1.7. save to the extent otherwise expressly provided herein, pending the determination by the **Expert**, the **Parties** shall continue to the extent possible to perform their obligations; and

15.1.8. the **Expert** shall at his discretion be entitled to order that the costs of the reference of a dispute to him shall be paid by the **Parties** in whatever proportions he thinks fit.

16. **WARRANTIES**

16.1. Each **Party** warrants and represents that it has full capacity and authority to enter into and perform this **Agreement** and that those signing this **Agreement** are duly authorised to bind the **Party** for whom they sign.

16.2. The **Provider** hereby warrants to **UKPN** that to the best of its knowledge and belief the entering into of this **Agreement** and the provision by it of **Power Potential Services** does not and will not cause the **Provider**:-

16.2.1. to be in breach of its duties (if any) under Section 9 of the Act;

16.2.2. to be in breach of the Electricity Safety, Quality and Continuity Regulations 2002 (as amended from time to time) or of any regulations made under Section 29 of the Act or of any other enactment relating to safety or standards applicable in respect of the business of the **Provider** or any operator of the **DER Unit**;

16.2.3. to be in breach of any restrictions and conditions attaching to relevant authorisations of the Environment Agency; or

16.2.4. to be in material breach of any other agreement or arrangement of whatever nature with any other person which could or may affect the performance of its obligations under this **Agreement** and any **Power Potential Tender**.

17. **CONFIDENTIALITY**

17.1. Subject to clause 17.2, and to the extent otherwise expressly permitted by this **Agreement**, neither **Party** shall, at any time, whether before or after the expiry or earlier

termination of this **Agreement**, without the prior written consent of the other **Party**, divulge or permit its officers, employees, agents or contractors to divulge to any person or permit use by any person (other than disclosure to or use by officers or employees to the extent that reasonably required to enable such persons to carry out their duties in connection with this **Agreement**) of:

17.1.1. any of the contents of this **Agreement**; or

17.1.2. any commercially confidential information concerning the operations, contracts, commercial or financial arrangements or affairs of the other **Party** received in relation to this **Agreement**.

17.2. Each **Party** undertakes to use information referred to in clause 17.1 and disclosed to it by the other **Party** solely for the purposes of this **Agreement** and shall not use it for any other purpose.

17.3. The restrictions imposed by clause 17.1 shall not apply to the disclosure of any information:

17.3.1. which is in or becomes part of the public domain otherwise than as a result of a breach of clause 17.1, or which either **Party** can show was in its written records prior to the date of disclosure of the same by the other **Party**, or which it received from a third party independently entitled to disclose it;

17.3.2. which is required by law or regulatory authority to be disclosed;

17.3.3. which is disclosed to a **Permitted Third Party**;

17.3.4. to a court, arbitrator or administrative tribunal in the course of proceedings before it to which the disclosing **Party** is a party;

17.3.5. pursuant to any licence of the **Party** concerned;

17.3.6. to any parent, subsidiary or fellow subsidiary undertaking on a "need to know" basis only (having the meanings provided in sections 1159, 1161 and 1162 of the Companies Act 2006);

17.3.7. required or expressly permitted to be disclosed under the terms of this **Agreement** or any other agreement or arrangement to which the **Parties** have agreed to be bound.

17.4. Subject to clause 17.5 and clause 17.6, neither **Party** shall make or cause to be made any public announcement or statement regarding the award, signature, performance or termination of this **Agreement** unless, before it is made, the other **Party** has been furnished with a copy of the announcement or statement and has approved it (such approval not to be unreasonably withheld or delayed).

17.5. Neither **Party** shall be prohibited from issuing or making any such public announcement or statement to the extent expressly permitted or otherwise contemplated by this **Agreement** or if it is necessary to do so in order to comply with any applicable law or the regulations of any recognised stock exchange upon which the share capital of such **Party** is from time to time listed or dealt in.

17.6. Without limiting clause 17.5, and for the purposes of any or all of the statements published from time to time pursuant to Standard Condition C16 of the **Transmission Licence**, the **Provider** acknowledges and agrees that the **System Operator** may publish in such manner or form as it thinks fit details of this **Agreement**, **Utilisation Requests** and payments made to **UKPN** from time to time under this **Agreement**.

18. **FORCE MAJEURE**

18.1. In so far as either **Party** (for the purposes of this clause 18, the "**Affected Party**") is prevented from performing any of its obligations under this **Agreement** due to an event or circumstance of **Force Majeure**, then, subject to compliance in full with the requirements of this clause 16, the **Affected Party** shall be relieved from such obligations for so long as and to the extent that the event or circumstance of **Force Majeure** continues to prevent such performance. For the avoidance of doubt, **UKPN** shall be treated as being prevented from performing its obligations under this **Agreement** by reason of **Force Majeure** where lightning strikes are expected in the geographical area of the **UKPN Network** and it is reasonably necessary for **UKPN** to suspend the **Power Potential Service** acting in accordance with **Good Industry Practice**.

18.2. The **Affected Party** shall notify the other **Party** in writing immediately upon becoming aware of an event or circumstance of **Force Majeure**, describing the **Force Majeure** (including, without limitation, the nature of the occurrence and its expected duration) and the obligations which it is prevented from performing and shall continue to furnish regular reports with respect thereto to the other **Party** during the period of **Force Majeure**.

18.3. The **Affected Party** shall take, at its own cost, all steps reasonably required to remedy the effects of the **Force Majeure** and restore its performance of its obligations in full.

18.4. For the avoidance of doubt the non-performance of either **Party's** obligations pursuant to this **Agreement** arising prior to the event or circumstance of **Force Majeure**, shall not be excused as a result of the event or circumstance of **Force Majeure**.

18.5. Either **Party** shall have a right to terminate this **Agreement** if the **Affected Party** has been prevented from performing its obligations due to an event or circumstance of **Force Majeure** for a continuous period of three (3) months or more.

19. **OTHER SERVICES**

19.1. The **Provider** hereby warrants to **UKPN** in relation to the **DER Unit** that:

19.1.1. on the date of entering into this **Agreement**; and

19.1.2. on the date of any **Instruction**,

it is not party to any agreement or arrangement to provide or procure the provision of any service from the **DER Unit** the provision of which may impair the **Provider's** ability to provide **Power Potential Services** save to the extent that the **Provider** has contracted to provide other services to **UKPN** or the **System Operator** requiring the provision of active power

outside any **Notified Settlement Period** in which **Active Power Response** is made available [but provided always that the provision of **Reactive Power Response** under this **Agreement** does not impair the **Provider's** ability to provide those other services.

19.2. The **Provider** will indemnify **UKPN** and the **System Operator** against any losses, liabilities, claims, expenses and demands which **UKPN** or the **System Operator** suffers as a direct result of a breach by the **Provider** of the provisions of clause 19.1.

19.3. If the **Provider** at any time during the **Trial Period** intends to enter into any agreement or arrangement whereby it may breach the warranty set out in clause 19.1, the **Provider** shall notify **UKPN** as soon as reasonably practicable before entering into such agreement or arrangement and **UKPN** shall be entitled to terminate this **Agreement** forthwith by notice in writing to the **Provider**.

20. MISCELLANEOUS

20.1. **Variations**

No variation to this **Agreement** shall be effective unless made in writing and signed by or on behalf of both **Parties**.

20.2. **Waiver**

No failure or delay by either **Party** to exercise any right, power or remedy under this **Agreement** (including a partial exercise) will operate as a waiver of it nor will any partial exercise preclude any further exercise of the same, or of some other right, power or remedy.

20.3. **Third Party Contract Rights**

The **Parties** acknowledge and agree for the purposes of the Contracts (Rights of Third Parties) Act 1999 that no rights, powers or benefits are or shall be conferred on any person pursuant to this **Agreement** save that:

20.3.1. the **System Operator** shall be entitled to enforce the provisions of clause 15.6 and clause 17.11 of this **Agreement;** and

20.3.2. **SEPN** shall be entitled to enforce the any of the provisions of this **Agreement** as if it were a party to it.

20.4. **Severance of Terms**

If any provision of this **Agreement** is or becomes or is declared invalid, unenforceable or illegal by the courts of any jurisdiction to which it is subject or by order of the Commission of the European Communities or by order of the **Secretary of State**, such invalidity, unenforceability or illegality shall not prejudice or affect the remaining provisions of this **Agreement**, which shall continue in full force and effect notwithstanding such invalidity, unenforceability or illegality.

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20.5. **Entire agreement**

This **Agreement** contains or expressly refer to the entire agreement between the **Parties** with respect to the subject matter hereof and expressly excludes any warranty, condition or other undertaking implied at law or by custom. Each of the **Parties** acknowledges and confirms that it has not, in entering into this **Agreement**, relied on any representation, warranty or other undertaking not fully reflected in the terms of this **Agreement**.

20.6. **No partnership/no agency**

20.6.1. Nothing in this **Agreement** is intended to, or shall be deemed to, establish any partnership or joint venture between the **Parties**, constitute either **Party** the agent of the other **Party**, or authorise either **Party** to make or enter into any commitments for or on behalf of the other **Party**.

20.6.2. Each **Party** confirms it is acting on its own behalf and not for the benefit of any other person.

20.7. **Assignment**

20.7.1. Subject to clause 17.7.2, this **Agreement** is personal to the **Parties** and neither **Party** shall assign, transfer, mortgage, charge, subcontract, or deal in any other manner with any or all of its rights and obligations under this **Agreement** without the prior written consent of the other **Party** (such consent not to be unreasonably withheld or delayed).

20.8. **Notices**

20.8.1. For the purposes of this **Agreement**, and subject to clause 17.8.2, unless and until otherwise notified by the relevant **Party** to the any notice or other communication to be given by **UKPN** or the **Provider** to the other under, or in connection with matters contemplated by, this **Agreement** shall be delivered by hand or sent by first class pre-paid post to the following postal address and/or facsimile number and/or email address and marked for the attention of the person named below:

UKPN:

[ ]

Facsimile number: [ ]

For the attention of: [ ]

Copy to: [ ]

Facsimile number: [ ]

Email: [ ]

Provider:

[ ]

Facsimile number: [FACSIMILE NUMBER]

For the attention of: [NAME OF INDIVIDUAL]

Email: [ ]

20.8.2. For the purposes of clause 17.8.1, a notice shall be deemed to have been received:

20.8.2.1. in the case if delivery by hand, when delivered;

20.8.2.2. in the case of delivery by first class pre-paid post, on the second Business Day following the day of posting;

20.8.2.3. in the case of delivery by facsimile, on acknowledgement by the recipient's facsimile receiving equipment (where such acknowledgement occurs before 1700 hours on the day of acknowledgement) and in any other case on the day following the day of acknowledgement; or

20.8.2.4. in the case of email, at the time of transmission (where transmission occurs before 1700 hours on the day of transmission) and in any other case on the day following the day of transmission.

20.9. **Counterparts**

This **Agreement** may be executed in counterparts, each of which shall be an original, and which together shall constitute one and the same agreement.

20.10. **Anti-Bribery**

20.10.1. Each **Party** shall:

20.10.1.1. comply with all **Anti-Bribery Laws**;

20.10.1.2. not engage in any activity, practice or conduct which would constitute an offence under sections 1, 2 or 6 of the Bribery Act 2010 if such activity, practice or conduct had been carried out in the United Kingdom;

20.10.1.3. have and shall maintain in place, throughout the **Trial Period**, its own policies and procedures, including **Adequate Procedures**, to ensure compliance with the **Anti-Bribery Laws** and this clause 18.10, and will enforce them where appropriate; and

20.10.1.4. procure and ensure that all of its **Associated Persons** and/or other persons who are performing services in connection with this Agreement comply with this clause 17.10.

20.10.2. If either **Party** breaches this clause 17.10 then, without prejudice to any other rights or remedies, the other **Party** may immediately terminate this **Agreement** on written notice to the **Party** in breach.

20.11. **EMR**

20.11.1. Notwithstanding any confidentiality obligations and any restriction on the use or disclosure of information set out in this **Agreement**, the **Provider** consents to the **System Operator** and each of its subsidiaries using all and any information or data supplied to or acquired by it in any year under or in connection with this Agreement for the purposes of carrying out its **EMR Functions**.

20.11.2. The provisions relating to the resolution of disputes set out in this **Agreement** (if any) are subject to any contrary provision of an **EMR Document**.

20.11.3. Where for the purposes of this provision only:-

"**AF Rules**" has the meaning given to "allocation framework" in section 13(2) of the Energy Act 2013;

"**Capacity Market Rules**" means the rules made under section 34 of the Energy Act 2013 as modified from time to time in accordance with that section and The Electricity Capacity Regulations 2014;

"**EMR Document**" means The Energy Act 2013, The Electricity Capacity Regulations 2014, the Capacity Market Rules, The Contracts for Difference (Allocation) Regulations 2014, The Contracts for Difference (Definition of Eligible Generator) Regulations 2014, The Contracts for Difference (Electricity Supplier Obligations) Regulations 2014, The Electricity Market Reform (General) Regulations 2014, the AF Rules and any other regulations or instruments made under Chapter 2 (capacity market) or Chapter 4 (investment contracts) of Part 2 of the Energy Act 2013 which are in force from time to time; and

"EMR Functions" has the meaning given to "EMR functions" in Chapter 5 of Part 2 of the Energy Act 2013.

21. **GOVERNING LAW/JURISDICTION**

21.1. This Agreement shall be governed by and construed in all respects in accordance with English law.

21.2. The **Parties** irrevocably agree that the courts of England shall have exclusive jurisdiction to settle any dispute or claim that arises out of or in connection with this **Agreement** (including non-contractual disputes or claims) and the **Parties** waive any objection to proceedings in such courts on the grounds of venue or on the grounds that proceedings have been brought in an inappropriate form.

IN WITNESS WHEREOF the hands of the duly authorised representatives of the Parties hereto at the date first above written

SIGNED BY:	
for and on behalf of	

UK POWER NETWORKS **(OPERATIONS) LIMITED**	
SIGNED BY:	
for and on behalf of [PROVIDER]	

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1 SCHEDULE 1

Definitions

"Act"	means the Electricity Act 1989;
"Active Power Instruction"	means an instruction issued by UKPN for delivery of Active Power Response in accordance with clause 6;
"Active Power Response"	means, in relation to the DER Unit and in relation to a Notified Settlement Period, the increase or decrease of active power output (expressed in MW) of the DER Unit by reference to the Baseline;
"Active Utilisation Payment"	means a payment due from **UKPN** to the **Provider** for the delivery of **Active Power Response** in accordance with an **Active Power Instruction;**
"Actual Reactive Power Delivery"	means the delivery of **Reactive Power Response** (expressed in MVarh) actually achieved by a **DER Unit** when operating in voltage control/voltage droop control mode
"Actual Trial Commencement Date"	the later of: (i) the **Scheduled Trial Commencement Date;** or (ii) the date falling [ ] days after the date on which the requirements of clause 2.1 are satisfied;
"Adequate Procedures"	shall be determined in accordance with section 7(2) of the Bribery Act 2010 (and any guidance issued under section 9 of that Act);
"Anti-Bribery Laws"	means all applicable laws, statutes, regulations, and codes of mandatory application relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010;
"Associated Persons"	has the meaning ascribed to it in section 8 of the Bribery Act 2010 and shall include but is not limited to any employees, agents and/or subcontractors of UKPN or the Provider as applicable in relation to the provision of the Power Potential Services;
"Authority"	means the Gas and Electricity Markets Authority established by section 1 of the Utilities Act 2000;
"Availability Payment"	has the meaning given to that term in clause [8.2]
"Availability Price"	means, in relation to the **DER Unit**, the price (expressed in £/MVAr/h) for making **Reactive Power Response** available from the **DER Unit** as , being, in relation to **Wave 2** or **Wave 3**, the price tendered by the by the **Provider** and accepted by **UKPN** subject to and in accordance with the **Market**

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	Procedures in a **Power Potential Auction**;**Provider** and accepted by **UKPN** subject to and in accordance with the **Market Procedures** in a **Power Potential Auction**;
"Availability Threshold"	A measure of availability during the Optional Technical Trials which is used to determine Participation Payments.
"Balancing Services Activity"	has the meaning given to it in the Transmission Licence;
"Base Rate"	in respect of any day, means the rate per annum which is equal to the base lending rate of [Bank plc] as at close of business on the immediately preceding **Business Day**;
"Baseline"	has the meaning given to it in Schedule 2
"Business Day"	means a week-day other than a Saturday on which banks are open for domestic business in the City of London;
"Commissioning Test"	means, in relation to a **DER Unit**, a test to be carried out in accordance with the procedure in the **DER Commissioning Test Specification** document
"Conditions Precedent"	means the conditions precedent set out in clause 2.1;
"Default Rate"	in respect of any day, means the rate per annum which is 3 per cent above the base lending rate of [Bank plc] as at the close of business on the immediately preceding **Business Day**;
"DER Commissioning Test Procedure"	the detailed test procedure followed by UK Power Networks' engineers to confirm a DER may participate in the Trial
"DER Commissioning Test Specification"	detailed approach to testing against the requirements in the **DER Technical Requirements Document**
"DER Connection Point"	means the point at which the DER Unit connects to the **SPEN** Network;
"DER Technical Requirements Document"	provides the standard technical requirements for the connection of Distributed Energy Resources (DER) in order to dispatch active and reactive power services to National Grid as part of the Power Potential project trial. It covers functional and non-functional requirements.
"DER Unit"	means the generating facility or storage facility described in Schedule 5;

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"DERMS"	means the distributed energy resource management system procured by **UKPN** for the purposes of the Power Potential Project;
"DERMS Interface"	means the web interface developed by **UKPN** associated with **DERMS**;
"Expiry Date"	means the date on which the **Trial Period** ends;
"Force Majeure"	for the purposes of clause 18 means, in relation to either Party, any event or circumstance which is beyond the reasonable control of such Party (not being, without limitation an event or circumstance caused by the negligence or lack of care and attention of that Party or its officers or employees) but subject thereto including act of God, strike lockout or other industrial disturbance, act of the public enemy, war declared or undeclared, threat of war, terrorist act, blockade, revolution, riot, insurrection, civil commotion, public demonstration, sabotage, act of vandalism, lightning, fire, storm, flood, earthquake, accumulation of snow or ice, lack of water arising from weather or environmental problems, explosion, government restraint, Act of Parliament, other legislation, bye law and Directive (not being any order, regulation or direction under Section 32, 33, 34 and 35 of the Act);
"Good Industry Practice"	means, in relation to a Party, the exercise of that degree of skill, care, prudence, foresight and operating practice which would ordinarily and reasonably be expected from time to time of a skilled and experienced operator (engaged in the same type of undertaking as that of that Party);
"Grid Code"	means the Grid Code drawn up pursuant to the Transmission Licence as from time to time revised in accordance with the Transmission Licence;
"Insolvency Event"	in relation to a Party, any of the following events occurring in relation to that Party: a) an order of the High Court is made or an effective resolution passed for its insolvent winding-up or dissolution; or b) a receiver (which expression shall include an administrative receiver within the meaning of section 29 of the Insolvency Act 1986) of the whole or any material part of its assets or undertaking is appointed; or c) an administration order under section 8 of the Insolvency Act 1986 is made or any other steps are taken to appoint an administrator or if a voluntary arrangement is proposed under section 1 of that Act; or

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	d) it enters into any scheme of arrangement (other than for the purpose of reconstruction or amalgamation upon terms and within such period as may previously have been approved in writing by the Authority); e) it is unable to pay its debts (within the meaning of section 123(1) or (2) of the Insolvency Act 1986 save that such section shall have effect as if for £750.00 there was inserted £250,000 (and a **Party** shall not be deemed to be unable to pay its debts if any demand for payment is being contested in good faith by it with recourse to all appropriate measures and procedures);
"Instructed Delivery"	means the delivery of **Reactive Power Response** (expressed in Mvar) required from a **DER Unit** following a **Reactive Power Instruction;**
"Instruction"	means an **Active Power Instruction** or **Reactive Power Instruction** as the case may be;
"Inter-operator Agreement"	means the agreement dated [ ] and made between the **System Operator** and **UKPN** in connection with the **Trial**;
"Licence"	means a licence granted under section 6(1) of the Act;
"Longstop Date"	means the end date in the R&D collaboration agreement between NG and UKPN for the Project.
"Mandatory Technical Trial"	has the meaning given to it in schedule 2
"Market Procedures"	The process detailing how the Power Potential trial and market auctions will run
"Monthly Statement"	has the meaning given to it in clause [
"National Electricity Transmission System"	has the meaning given to that term in the Grid Code;
"Non-synchronous DER"	A **DER Unit** that is not a **Synchronous DER Unit.**
"Notified Settlement Period"	means:

	(i) in relation to **Wave 1**, any **Settlement Period** in which the **DER Unit** is made available for the **Power Potential Services**; and (ii) in relation to **Wave 2** or **Wave 3**, each **Settlement Period** in a **Service Window** in which the **DER Unit** is made available for the **Power Potential Services**;
"Optional Technical Trial"	has the meaning given to it in schedule 2
"Participation Payments"	has the meaning given to that term in clause 8.1
"Performance Factor"	has the meaning given to that term in Schedule 2
"Power Potential Auction"	means the daily auction process to be conducted by **UKPN** during **Wave 2** and **Wave 3** for the provision of **Power Potential Services**;
"Power Potential Inter-Operator Agreement"	means the agreement dated [ ] and made between the **System Operator** and **UKPN** in connection with the **Trial**;
"Power Potential Project"	means the project described in the submission by UKPN and the System Operator for Ofgem's Network Innovation Competition under the title "Transmission & Distribution Interface 2.0 (TDI 2.0)";
"Power Potential Services"	means the services of **Reactive Power Response** and **Active Power Response** provided by the **Provider** in accordance with the provisions of this **Agreement**;
"Power Potential Tender"	in relation to **Wave 2** or **Wave 3**, means a tender for the provision of **Reactive Power Response** made by the **Provider** pursuant to the terms of the **Market Procedure**;
"Power Potential Trial Specification"	Means a document which will contain further detail about the Power Potential Trials, to be published by UKPN before
"Production Schedule"	has the meaning given to that term in clause 5.4.2;
"Reactive Power Arming Instruction"	the instruction to the DER to change from power factor operating mode to voltage droop control mode (non-synchronous DER) or to voltage control mode (synchronous DER).

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"**Reactive Power Availability**"	in Wave 2 and 3, the product that is sold by DER in the day-ahead DERMS auction in accordance with **Market Procedure**
"Reactive Power Instruction"	is the instruction to change the voltage set-point when the DER is operating in voltage control/voltage droop control mode
"Reactive Power Response"	means, in relation to the **DER Unit** and in relation to a **Service Window**, the delivery of reactive power output (expressed in MVArh) from the **DER Unit**;
"Reactive Utilisation Payment"	means a payment due from **UKPN** to the Provider for the delivery of **Reactive Power Response** in accordance with an Instruction;
"Relevant Month"	Means, in relation to Monthly Statements, the month of Trading Days that the Monthly Statement refers to
"Relevant Proportion"	means, for the purposes of schedule 2 and a relevant month, a fraction, the numerator of which is the aggregate **Actual Reactive Power Delivery** (expressed in Mvarh) of **Reactive Power Response** and the denominator of which is the aggregate **Instructed Delivery** (expressed in Mvarh) of **Reactive Power Response**;
"Reproving Test"	means, in relation to a **DER Unit**, a test to be carried out in accordance with the procedure in the Power Potential Trial specification
"Scaling Factor"	The scaling factor is calculated by dividing the average output over the period [1 hour] prior to the utilisation instruction being initiated (or the last full [1 hour] period when the DER was not under an **Active Power Instruction**) by the expected operating level submitted for the same period.
"Scheduled Trial Commencement Date"	means the date that the Power Potential trial is scheduled to begin on the date of signing this contract
"Secretary of State"	has the meaning given to that term in the Act;
"Service Parameters"	the parameters set out in Schedule 4;
"Service Window"	means those periods on a **Trading Day** in which the **Power Potential Service** operates, as notified by **UKPN** to the Provider in accordance with clause 5;
"SEPN"	means South Eastern Power Networks Plc a company registered in England with company number 03043097 and having its registered office at Newington House, 237 Southwark Bridge Road, London, SE1 6NP

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"Settlement Period"	means a period of 30 minutes ending on the hour or half hour in each hour during a **Trading Day**;
"Synchronous DER"	A **DER Unit** in which, under all steady state conditions, the rotor rotates at a mechanical speed equal to the electrical frequency of the **National Electricity Transmission System** divided by the number of pole pairs of the **Generating Unit**.
"System Operator"	means National Grid Electricity Transmission Plc or any successor holding a Licence with responsibility for carrying out the Balancing Services Activity;
"Trading Day"	means the EFA trading day;
"Transmission Licence"	means the Licence granted to National Grid Electricity Transmission Plc under section 6(1)(b) of the Act;
"Trial Period"	means the period commencing on the **Actual Trial Commencement Date** and ending on the first anniversary of the **Actual Trial Commencement Date**, subject to extension in accordance with clause 3.2;
"Trial "	means the procurement and utilisation of Power Potential Services in accordance with this Agreement;
"SPEN Licence"	means the Licence granted to **UKPN** under section 6(1)(c) of the Act;
"SPEN Network"	means the electricity distribution system operated by **UKPN** in accordance with the **UKPN Licence**;
"Utilisation Payment"	means an **Active Utilisation Payment** or a **Reactive Utilisation Payment** (as the context requires);
"Utilisation Price"	means, in relation to the DER Unit, the applicable price for the utilisation of **Active Power Response** or **Reactive Power Response** (as the context requires) from that DER Unit;
"Wave 1 Summer Trial"	The wave 1 technical trial that will run from [ ] to [ ]
"Wave 1 Winter Trial"	The wave 1 technical trial that will run from [ ] to [ ]
"Wave 1"	The technical trial of the Power Potential Service taking place across the periods from [ ] to [ ] and from [ ] to [ ];

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"Wave 2"	The commercial trial of the Power Potential Service and Power Potential Tender taking place across the periods from [ ] to [ ] and from [ ] to [ ];
"Wave 3"	The commercial trial of the Power Potential Service and Power Potential tender the period from [ ] to the Expiry Date.

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2 SCHEDULE 2 – Payments

Reactive Power

Payments to DER for Reactive Power will differ depending on the Wave and the service. An overview of these can be seen in table [1].

Table 1 - Overview of Availability and Utilisation Prices

	Reactive Power Service		
Wave	**Availability prices**	**Utilisation prices**	**Participation Payments**
1	No payments	No payments	Linked to performance in **Optional Technical Trials**
2	Set by DER bid	Set by DER bid	No payments
3	Set by DER bid	Set by DER bid	No payments

Wave 1

DER Providers receive **Participation Payments** for participation in the Optional Technical Trial in Wave 1.

Subject to availability offered, each DER will be paid up to [£18,000-£20,000] in **Participation Payments** for participation in the **Wave 1 Optional Technical Trials**. The maximum available Participation Payments that participants would be eligible for will be confirmed by [xx 2018].

Participation Payments will be made on a per site basis, split across the two Wave 1 Optional Technical Trial periods (the Winter Trial and the Summer Trial) and linked to **Reactive Power Availability** during these periods.

Before a DER can participate in the **Optional Technical Trial** (which **Participation Payments** are linked to) it must complete a period of **Mandatory Technical Trials**. Mandatory technical trials will be carried out during the first two weeks of the Wave 1 trials, with trial windows [two] hours in length across two days; the timing of which will be agreed with DER[4].

Of the total available **Participation Payment** payable:

- [75%] will be payable for the **Optional Technical Trial** in the **Wave 1 Winter Trial Period**; and

[4] DER that cannot carry out Mandatory Technical Trials in the first two weeks of the trial will not be able to offer availability for Optional Technical Trials until they have completed their Mandatory Technical Trials. We will work with DER to schedule these as soon as possible to maximise a DER's chances of maximising their Participation Payments for Optional Technical Trial. Any DER who joins the project partway through the trial must complete their Mandatory Technical Trials (to be scheduled with the DER) before being eligible to recover Participation Payments for Wave 1 or Market Revenues for Wave 2 or Wave 3

- [25%] will be payable for the **Optional Technical Trial** in the **Wave 1 Summer Trial Period.**

The total amount that each DER will receive for each of the Trial Periods will be linked to availability during the Optional Technical trial periods, measured against **Availability Thresholds**.

Performance against **Availability Thresholds** will be determined by a DER's declared day-ahead availability, de-rated downwards proportionate to the number of hours that it fails to deliver reactive power when requested.

A DER will be deemed to be have delivered when available:

- If **non-synchronous** when it is online generating active or reactive power and operating, for a given active power output, in voltage droop control mode within its declared reactive capability range and within UKPN's network connection agreement limits.
- If **synchronous** when it is online generating active or reactive power and operating, for a given active power output, in voltage control mode within its declared reactive capability range and within UKPN's network connection agreement limits

Availability will be measured at the end of each of the Wave 1 Optional Trial Periods. If a site was available for 80% of the hours that it was required during one of the Trial Periods it will receive 100% of the maximum available Participation Payment to it.

2 - Availability thresholds

% recoverable	Availability thresholds
[0%]	[0%-24%]
[60%]	[25%-49%]
[70%]	[50%-59%]
[80%]	[60%-79%]
[100%]	[80%+]

Payments will be made following the end of each of the Wave 1 Trial Periods, not later than [ ] days after the end of trial period.

A summary of the **Participation Payments** calculation is as follows:

Participation Payments Winter Trial (£)	=	Total Participation Fee Payable (£)	x	[75]%	x	% recoverable in relation to Availability Thresholds
Participation Payments Summer Trial (£)	=	Total Participation Payable (£)	x	[25]%	x	% recoverable in relation to Availability Thresholds

If the Power Potential Trial does not go ahead, Providers will receive 80% of the total Participation Payment that they would have been eligible for, subject to successful commissioning.

Wave 2 and 3

DER providers will receive:

- **Availability Payments** for **Reactive Power Availability** accepted in the **Power Potential Auction** and
- **Utilisation Payments** for Reactive Power Response.

Availability Prices (£/MVar/hr) and **Utilisation Prices** (£/Mvarh**)** will the prices submitted by DER Providers as bids for Service Windows at the day-ahead stage, and will be paid on a pay-as-bid basis.

The total Availability Payments received will be adjusted for DER performance. This means that at the end of each month, the aggregate number of Settlements Periods in which the DER was accepted and deemed to have been available (as measured above) is compared to the total number of Settlement Periods that the DER service was accepted for, to calculate a **Relevant Proportion** of availability achieved. If a DER providers **Relevant Proportion** is less than [80%] in a month, then it will be assigned a **Performance Factor** equal to the **Relevant Proportion**, and total **Availability Payments** for the month will be scaled down by this ratio.

A summary of the **Relevant Proportion** calculation is as follows:

$$\textbf{Relevant Proportion (\%)} = \frac{\text{Total Settlement Periods accepted and available}}{\text{Total Settlement Periods accepted}}$$

The logic for the Performance factor is as follows:

If Relevant Proportion < 80%, **Relevant Proportion = Performance Factor**

A summary of the calculations for Utilisation and Availability Payments are as follows:

Total Availability Payments	=	Duration (hr)	X	Reactive Power Availability Volumes (MVar)	x	Reactive Power Availability Prices (£/MVar/hr)	x	Pe		

each month (£)				
Total Reactive Utilisation Payments (£)	=	Utilisation Volumes (Mvarh)	x	Utilisation Fee (£/Mvarh)

Active Power

Any DER wishing to participate in the Active Power service must complete the Mandatory Technical Trials, as described above.

During the Mandatory Technical Trial DER will receive an administered Utilisation Price set to [fixed fee to be determined].

Where Power Potential Trials have been initiated, DER Providers will receive Utilisation Prices for Active Power Response volumes accepted based on the prices submitted into the **Power Potential Auction**.

There is no availability payment for Active Power.

Baseline Logic

The baseline logic is described below for each of the Power Potential services.

Reactive power

At the start of the Service Window, DERMS will instruct the Provider to enter voltage control / voltage droop control mode with a target voltage equal to that on the local network. This should have the effect of taking the Provider's Reactive power output to 0 MVar. The Baseline output level will be set at 0 Mvar for the duration of the Service Window. Reactive power utilisation over a Service Window is therefore the absolute level of active power injection/absorption for each [half hour] summed over the [x] half hours of the Service Window.

Active power

Active power utilisation is measured in terms of the deviation from a baseline level of active power output. This baseline for any given [minute] is calculated by taking the active power expected operating level (in MW) submitted by the DER through the web interface and scaling it by a scaling factor. The scaling factor is calculated by dividing the average output over the period [1 hour] prior to the utilisation instruction being initiated (or the last full [1 hour] period when the DER was not under an Active Service utilisation instruction) by the forecast output for the same period. The DERMS will instruct DER for utilisation based on its own measurement of real-time availability, and will be entitled to use the full range of flexibility technically afforded to it. This may exceed the availability implied by the DER's own Active output forecast calculated at day ahead.

One additional constraint applies: the baseline must be within the maximum and minimum operating level of the plant (i.e. if the application of the scaling factor implies a baseline outside of the DER's capability, the capability limit becomes the baseline).

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3 Schedule 4 - Data Tables

Conditions for participation (to be verified as part of Commissioning)

The maximum and minimum time (in minutes) for which you will allow the service to be utilised in a single utilisation. Indicate any other restrictions to utilisation and reasons for those restrictions (e.g. environmental reasons, investors restrictions, etc.)	
Generation (MVA)	
Installed reactive power capacity (Mvar)	
Lead time from UKPN's instruction reception to DER instruction order[5]	
Lead time from DER instruction to voltage set-point change[6]	
Lead time to change from PF/Reactive power control to Voltage control[7]	

Price Quantity (PQ) Capability Charts

Please refer to the examples below when providing performance charts. PQ capability charts have to be defined for at the point of connection (POC) for non-synchronous DER and at the generator terminals for synchronous DER.

Lead and lag reactive power (Q) export at maximum active power output (P=100%)	
Lead and lag reactive power (Q) export at 95% active power output (P=95%)	
Lead and lag reactive power (Q) export at 90% active power output (P=90%)	
Lead and lag reactive power (Q) export at 85% active power output (P=85%)	

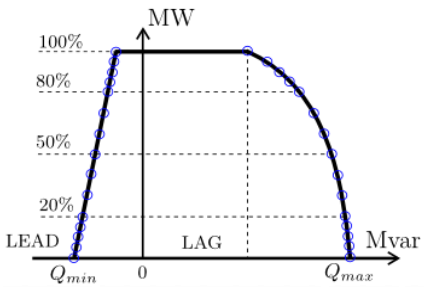
[5] As an indication of comms performance

[6] As an indication of comms performance

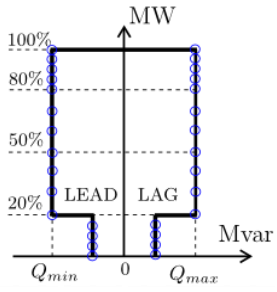
[7] As an indication of comms performance

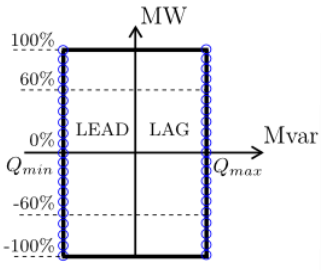
Lead and lag reactive power (Q) export at 80% active power output (P=80%)	
Lead and lag reactive power (Q) export at 70% active power output (P=70%)	
Lead and lag reactive power (Q) export at 60% active power output (P=60%)	
Lead and lag reactive power (Q) export at 50% active power output (P=50%)	
Lead and lag reactive power (Q) export at 40% active power output (P=40%)	
Lead and lag reactive power (Q) export at 30% active power output (P=30%)	
Lead and lag reactive power (Q) export at 20% active power output (P=20%)	
Lead and lag reactive power (Q) export at 10% active power output (P=15%)	
Lead and lag reactive power (Q) export at 10% active power output (P=10%)	
Lead and lag reactive power (Q) export at 5% active power output (P=5%)	
Lead and lag reactive power (Q) export at zero active power output (P=0%)	
Above capability plotted as a P/Q chart if available (Performance Chart)	

Synchronous DER



Non-synchronous DER





Reactive Power Service Specific Characteristics

Time taken by automatic voltage droop control to change reactive	

power from 0 to 90% of maximum export (s) given a sufficiently large change in system voltage	
Time taken by automatic voltage droop control to change reactive power from 0 to 90% of maximum import (s) given a sufficiently large change in system voltage	
Excitation system details[8]	Static/brushless exciter? Capable of constant terminal voltage control? Range of voltage set-point?
Generator step-up transformer[9]	Rated power (MVA), Rated voltage (kV), Positive sequence impedance (pu), Tap changer range (+%, -% on MVA), Tap change step size (% on MVA)
Installed active power capacity (MW)	
Lead time from UKPN's instruction reception to DER instruction order[10]	
Lead time from DER instruction to ramp-up/ramp/ramp-down start [11]	
Maximum response duration (utilisation time) for MW response (mins)	
Recovery time (from end of delivery to when next available to deliver) for Active Power service	

[8] Data needed in contract for modelling purposes

[9] Data needed in contract for modelling purposes

[10] As an indication of comms performance

[11] As an indication of comms performance

Maximum active power (P) export	
Maximum active power (P) import	
Minimum active power (P) export	
Minimum active power (P) import	
Ramp Up Rate (MW/s)	
Ramp Down Rate (MW/s)	
Range of continuous ramping (MW)	

Technology-specific DER characteristics[12]

If applicable - Storage Capacity (MWh)	
If Wind - Cut In Speed (mph)	
If Wind - Saturation Speed (mph)	
If Wind - Cutout Speed (mph)	
If PV Solar - Reference irradiation (W/m2)	
If PV Solar - Reference cell temperature (degC)	
If PV Solar - Other cell module data (no. of	

[12] Data needed in contract for modelling purposes, not as service parameters

modules and cells, module open circuit voltage, module short circuit current, module maximum power, ...)	

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4 SCHEDULE 5 – Definition of a DER Unit

[DER Units will be defined as per their Connection Agreement with UKPN]

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SCHEDULE 6

BANK ACCOUNT DETAILS

Provider's Bank Account Details

Bank*:* [ ]

Address: [ ]

Sort Code: [ ]

Account Number: [ ]

UKPN's Bank Account Details

Bank*:* [ ]

Address: [ ]

Sort Code: [ ]

Account Number: [ ]

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