

Dated

2010

EIRGRID PLC

(1)

and

SERVICE PROVIDER

(2)

**ANCILLARY SERVICES AGREEMENT
(HARMONISED VERSION)**

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THIS AGREEMENT is made the day of 2010

BETWEEN:

- (1) **EIRGRID PLC**, a limited liability company incorporated under the laws of Ireland with registered number 338522 and having its registered office at The Oval, 160, Shelbourne Road, Dublin, Dublin 2 (hereinafter called the “**Company**”); and
- (2) **Name and registered address of the Service Provider** (hereinafter called the “**Service Provider**”)

WHEREAS:

- (A) The Company has responsibility amongst other duties for the operation of the Transmission System under the TSO Licence.
- (B) The Company’s duties include the procurement of Ancillary Services.
- (C) The Company and the Service Provider are party to an Ancillary Services Agreement which terminates automatically immediately prior to HAS Go-Live.
- (D) The Service Provider is now entering into this Agreement in order to provide the Company with Ancillary Services from the Generating Units on an all-island harmonisation basis with effect from the date of HAS Go-Live.

IT IS HEREBY AGREED as follows:

1 Definitions and Interpretation

- 1.1 In this Agreement (including the recitals hereto) except where the context otherwise requires the words and expressions set out in Schedule 1 shall have the meanings ascribed to them therein.
- 1.2 In this Agreement, unless the context requires otherwise, any reference to:
 - 1.2.1 the singular shall include the plural and vice versa;
 - 1.2.2 any gender reference shall be deemed to include references to the masculine, feminine and neuter genders;
 - 1.2.3 this “Agreement” shall mean this Agreement and its Schedules and Appendices;

- 1.2.4 “writing” or “written” shall include all methods of reproducing words in a legible and non-transitory form;
- 1.2.5 any words importing persons or parties shall include individuals, firms and corporations, joint ventures, trusts, unincorporated associations and organisations, partnerships and any other entity, in each case whether or not having a separate legal personality and any references to persons shall include their legal successors and permitted assignees;
- 1.2.6 legislation, regulations, Directives, orders, instruments, codes or other enactments shall include any amendments, modifications extensions, replacements or re-enactments thereof then in force;
- 1.3 Unless otherwise specified:
- 1.3.1 any reference in this Agreement to a “Clause“ is a reference to a Clause contained in this Agreement;
- 1.3.2 any reference to a “Schedule“ is a reference to a Schedule to this Agreement;
- 1.3.3 any reference to a “Section” is a reference to a Section to a Schedule to this Agreement;
- 1.3.4 any reference to an “Appendix” is a reference to an Appendix to the Agreement;
- 1.3.5 any reference to another agreement or document, or any deed or other instrument (including but not limited to Statute, Statutory Instrument, the Grid Code, the Metering Code or the Trading and Settlement Code) shall be construed as a reference to that other agreement, or document, deed or other instrument as the same may have been, or may from time to time be, amended, varied, supplemented, substituted or novated;
- 1.3.6 any reference to a month or year shall be construed as reference to a calendar month or year, as the case may be;
- 1.3.7 the table of contents and Clause headings are inserted for ease of reference only and shall be ignored for the purpose of the construction of this Agreement;

1.3.8 all terms which have been defined in this Agreement shall have their initial letters in capital typescript whenever and wherever they appear in this Agreement; and

1.3.9 any reference to “including” shall be construed without limitation.

1.4 In the event of inconsistency between the provisions of this Agreement and the Grid Code or the Metering Code (as the case may be), the provisions of the Grid Code or the Metering Code (as the case may be) shall prevail to the extent of such inconsistency unless the contrary intention is explicit.

1.5 If either Party reasonably believes that a conflict exists between any provision of this Agreement and the provisions of the Trading and Settlement Code, it shall notify the other Party of that belief and the Parties shall meet and discuss in good faith whether such a conflict exists, and if so whether amendments should be made to this Agreement to resolve the conflict (and if appropriate the nature of those amendments). If the Parties are in dispute as to whether a conflict exists, whether amendments should be made to this Agreement to resolve the conflict and/or the nature of those amendments, either Party shall be entitled to refer the dispute to the Regulatory Authority for determination (which determination shall be binding on the Parties). For the avoidance of doubt the Parties agree that any amendment to this Agreement to resolve a conflict with the Trading and Settlement Code shall require the prior written approval of the Regulatory Authority.

2 Commencement and Duration of Agreement

2.1 Term of Agreement

2.1.1 Subject to Clause 2.3.1, this Agreement shall commence on the date of HAS Go-Live and continue in full force and effect until terminated in accordance with Clause 8 (*Termination*).

2.2 Survival of Rights on Termination

2.2.1 Termination of this Agreement shall not affect:

- (i) rights or obligations which may have accrued prior to such termination; or
- (ii) continuing obligations of each of the Parties under this Agreement which are expressed to continue after termination of this Agreement.

2.3 Conditions Precedent

- 2.3.1 The Parties' rights and obligations under this Agreement (save for those set out in Clauses 2.3.2 and 2.3.3 and 2.3.4) shall in all respects be conditional on the fulfilment by the Service Provider of its obligations under Clauses 2.3.2 and 2.3.3 and 2.3.4 by not later than the date falling thirty (30) days after the date of this Agreement.
- 2.3.2 The Service Provider shall be a party to the TSC and the Service Provider shall be registered as the Participant (as defined in the TSC) for each Generating Unit under the TSC.
- 2.3.3 The Service Provider shall be a party to a Connection Agreement for each Generating Unit.
- 2.3.4 The Service Provider shall be a party to a Use of System Agreement with the Company for each Generating Unit.

3 Provision and Purchase of Ancillary Services

3.1 Duty to provide Ancillary Services in accordance with the applicable Operating Parameters

- 3.1.1 In consideration of the Company's agreement to pay the Ancillary Services Payments to the Service Provider on the terms and subject to the conditions of this Agreement, the Service Provider shall at all times during the term of, and subject to, this Agreement maintain, repair, fuel and operate the Generating Units as required by Good Industry Practice and any legal requirements in order to provide the Ancillary Services in accordance with the applicable Operating Parameters.
- 3.1.2 The Service Provider shall reasonably endeavour not to issue or allow to remain outstanding an Availability Notice, a Technical Parameters Notice or an Additional Grid Code Characteristics Notice which declares the Availability, applicable Technical Parameters or additional technical data (respectively) of a Generating Unit at levels or values inferior to those that the Generating Unit could achieve at that time except:
- (i) during periods of Scheduled Outage or forced outage or otherwise with the consent of the Company;

- (ii) where necessary to avoid an imminent risk of injury to persons or material damage to property (including any of the Generating Units);
- (iii) where it is not lawful for the Service Provider to operate the Generating Unit;
- (iv) to the extent that the Service Provider is affected by Force Majeure; or
- (v) in the event of a test of the Generating Unit under OC10 of the Grid Code or an Operational Test under OC8 of the Grid Code,

provided that this Clause 3.1.2 shall not require the Service Provider to declare levels or values better than those specified in Schedule 9.

3.2 Compliance with the Grid Code

- 3.2.1 The Service Provider shall, during the term of this Agreement, comply with the Grid Code as it relates to the provision of the Ancillary Services, (including declaring to the Company any inability to comply with the applicable Operating Parameters), subject to any derogations granted to the Service Provider by the Regulatory Authority.

3.3 Dispatch Instructions

- 3.3.1 The Service Provider shall, subject to Clause 3.4, comply with the terms of all Dispatch Instructions relating to the Ancillary Services.

3.4 TSC

- 3.4.1 Nothing in this Agreement shall prevent the Service Provider from operating the Generating Units in such a manner so as to comply with its obligations under the TSC.

3.5 Planned Maintenance

- 3.5.1 The Service Provider shall, without limitation to its obligations under Clause 3.2, plan its maintenance requirements including outage plans for the Generating Units in accordance with Good Industry Practice.

4 Payment

4.1 Payments and Charges for Ancillary Services

4.1.1 The rates for calculating Ancillary Services Payments and Ancillary Services Charges are as set out in the Charging Statement.

4.2 Payments

4.2.1 In consideration of the provision of the Ancillary Service(s) pursuant to this Agreement the Company shall pay the Service Provider the payments ("**Ancillary Service Payments**") and the Service Provider shall pay the Company the charges ("**Ancillary Services Charges**") in each case as calculated in accordance with the Schedule(s) relating to the Ancillary Service(s).

4.2.2 All amounts payable by the Company under this Agreement are exclusive of any applicable Value Added Tax, sales tax or other lawful taxes or levies applicable by reason of the performance of the Agreement and the Parties agree that an amount equal to any applicable Value Added Tax, sales tax or other lawful taxes or levies lawfully chargeable in respect of the performance of the Agreement shall be payable or repayable, as the case may be, in addition to, at the same time and in the same manner as the amounts to which it relates.

4.2.3 The Company shall have the right to settle amounts due to the Service Provider under this Agreement net of amounts due to the Company by the Service Provider under this Agreement. The Company shall have no right to settle amounts due to the Service Provider under this Agreement net of amounts due to the Company by the Service Provider under other agreements.

4.3 Billing and Payment Plan

4.3.1 The provisions of Schedule 5 shall apply in relation to the billing and payment of Ancillary Services Payments and Ancillary Services Charges.

5 Monitoring and Metering

- 5.1 In order to comply with its obligations contained in the Grid Code the Company may use Metering Equipment to ensure that the Service Provider is complying with its obligations to provide the relevant Ancillary Services from each Generating Unit both in accordance with the Grid Code and in accordance with the terms of this Agreement.
- 5.2 The relationship between the Parties with respect to Metering Equipment shall be regulated in accordance with the Metering Code.
- 5.3 Without purporting to exhaustively specify the circumstances in which no payments will be made under this Agreement, no payments will be made under this Agreement in respect of an Ancillary Service to be provided from a Generating Unit in relation to any period when the Generating Unit or the Service Provider's Installation at any Connection Site used by that Generating Unit, is prevented from providing that Ancillary Service by reason of a circumstance of a Force Majeure or, the Generating Unit being De-energised, Decommissioned or Disconnected for any reason pursuant to the relevant Connection Agreement or Use of System Agreement or in accordance with the provisions set out in Schedules 2, 3 or 4.
- 5.4 Where the Service Provider serves notice to Decommission or Disconnect the Service Provider's Installation at a Connection Site under the Connection Agreement, the Parties shall discuss the possibility of terms being offered for the continued provision following the date when Decommissioning or Disconnection would otherwise have occurred of any Ancillary Service which was being provided by the Service Provider at that Connection Site immediately before service of the notice to Decommission or Disconnect and for which the Company is unable to find a reasonable alternative.
- 5.5 The Service Provider will accept the data provided by the Metering Equipment applicable to the Generating Unit and the Company's monitoring system including meters and SCADA or State Estimators unless it has reasonable grounds for believing that such Metering Equipment or monitoring system is defective, in which case the Service Provider shall notify the Company and the Parties will make every effort to resolve the issue and reconcile the payments and/or charges. Any dispute under this Clause 5.5 shall be referable to the Expert.

6 Assignment

- 6.1 The Service Provider shall not assign, novate or otherwise transfer nor purport to assign novate or otherwise transfer the benefit or burden of this Agreement save in the following circumstances:-
- (a) the Service Provider may assign or charge its benefit under this Agreement in whole or in part by way of security;
 - (b) the Service Provider may transfer its rights and obligations under this Agreement, upon the disposal of the whole of the Service Provider's business or undertaking, to the purchaser thereof, provided that the Company or the Distribution System Operator (as the case may be) has consented to the transfer of the Service Provider's rights and obligations under the Connection Agreement; or
 - (c) upon disposal of part of the Service Provider's business or undertaking comprising the Service Provider's Installation at one or more Connection Sites the Service Provider may transfer such of its rights and obligations under this Agreement as relate to the Generating Unit or Generating Units and Ancillary Services concerned to the purchaser thereof, provided that the Company or the Distribution System Operator (as the case may be) has consented to the transfer of the Service Provider's rights and obligations under the Connection Agreement relevant to the part of the business or undertaking to be transferred.
- 6.2 The Company may at any time assign, novate or otherwise transfer all of its rights and obligations under this Agreement to an Affiliate or to another person who by statute becomes legal successor to the Company or, in the event that the Company ceases to be the transmission system operator in Ireland, to its successor transmission system operator in Ireland.
- 6.3 No assignment, novation or other transfer pursuant to Clause 6.1 or 6.2 shall be effective unless and until the assignor has procured the proposed assignee to covenant directly with the other Party to observe and perform all the terms and conditions of this Agreement (so far as they apply to the assignee), has provided to the other Party a certified copy of the assignment (omitting the consideration and any other commercial terms) and has procured that any guarantee in respect of the assignor's obligations is extended to the proposed assignee or replaced by another providing the other Party with equivalent security.

7 Variations

- 7.1 This Agreement may not be varied without the prior written approval of the Regulatory Authority provided that the approval of the Regulatory Authority shall not be required in relation to variation of the Operating Parameters set out in Schedule 9. Subject to Regulatory Authority approval being obtained, this Agreement may be varied if made in writing and signed by both Parties (but not otherwise).
- 7.2 Either Party may at any time give written notice to the other proposing that this Agreement be varied.
- 7.3 If, after execution of this Agreement, there shall be enacted and brought into force legislation and/or any Directive, rule, regulation, direction, statutory instrument or order of any Competent Authority arising there from, or change in the Grid Code, Metering Code or Trading and Settlement Code providing for:
- 7.3.1 the further reorganisation of all or part the electricity industry in either Northern Ireland or Ireland, or
 - 7.3.2 the facilitation of the introduction of third party interests to the affairs of such electricity industry or any part of it, or
 - 7.3.3 the amendment or variation of any policy of the Company or the manner in which the Transmission System or Distribution System and any agreements or codes related thereto are organised, or
 - 7.3.4 the imposition of a public service obligation or the introduction of a levy under Section 39 and/or Section 40 of the Act;

which necessitates a variation to this Agreement, the Parties shall, subject always to Clause 7.1, effect such changes to this Agreement as are reasonably necessary so as to ensure that the operations contemplated by this Agreement shall be conducted in a manner which is consistent with the effect of the new legislation, Directive, rule, regulation, direction, statutory instrument or order, or change in the Grid Code, Metering Code or Trading and Settlement Code and most closely reflect the intentions of the same with effect from the date thereof provided that any such amendment: (i) will be of no greater extent than is required by reason of the new legislation, Directive, rule, regulation, direction, statutory instrument or order, or change in the Grid Code, Metering Code or

Trading and Settlement Code; but (ii) shall not deal with the cost implications under this Agreement of any such new legislation, Directive, rule, regulation, direction, statutory instrument or order, or change in the Grid Code, Metering Code or Trading and Settlement Code, which, if any, shall fall to be considered in accordance with the provisions of clause 13 of this Agreement.

7.4 The Parties agree to effect any change to the Agreement required by any direction given by the Regulatory Authority under Sections 34 or 35 of the Act relating to an Ancillary Services Agreement of this type.

7.5 If any variation proposed under Clauses 7.2, 7.3 or 7.4 has not been agreed by the Parties within one (1) month of its being proposed, then either Party may refer to the Regulatory Authority for determination and the Parties agree to abide by and to effect the Regulatory Authority's determination, if necessary by entering into an agreement supplemental to this Agreement.

8 Termination

8.1 The Company shall be entitled:

8.1.1 without prejudice to the remaining rights and obligations of the Parties under this Agreement, by twelve (12) months' notice in writing to the Service Provider to terminate the Parties' respective obligations relating to the provision of any one or more Ancillary Services and/or relating to any one or more of the Generating Units; or

8.1.2 by three (3) months' notice in writing to the Service Provider, to terminate this Agreement.

8.2 The Company may in respect of any of the events of default set out in sub-clauses 8.2 (i) to (ix) by notice in writing to the Service Provider terminate this Agreement in its entirety or, solely in relation to the Ancillary Service or Ancillary Services and the Generating Unit or Generating Units to which the notice of the event of default relates, forthwith upon:

(i) the Service Provider ceasing to be a signatory to the Trading and Settlement Code otherwise than due to the Trading and Settlement Code being terminated; or

(ii) termination of the Trading and Settlement Code save where the same is replaced with alternative electricity trading arrangements; or

- (iii) the Connection Agreement being properly terminated in accordance with its terms provided always that, where this Agreement relates to the provision of Ancillary Services from more than one of the Service Provider's Installations the right for the Company to terminate this Agreement shall be limited to termination of the Parties' respective obligations relating to the Ancillary Services to be provided from the Service Provider's Installation for which the relevant Connection Agreement has terminated; or
- (iv) the Use of System Agreement being properly terminated in accordance with its terms; or
- (v) revocation or withdrawal of the TSO Licence or any replacement thereof granted to the Company by a Competent Authority; or
- (vi) revocation or withdrawal of the Generation Licence or any replacement thereof granted to the Service Provider by a Competent Authority; or
- (vii) the Service Provider failing to comply with or failing to operate in conformity with any provisions of this Agreement or the Grid Code where such failure is a material breach of this Agreement or the Grid Code, as the case may be (being one which materially affects the Service Provider's ability to perform its obligations under the Agreement) and, if such failure is capable of remedy but remains unremedied for a reasonable period provided for in this Agreement or, if none is provided for, then twenty (20) Business Days following the date on which the Service Provider is given notice of the default by the Company; or
- (viii) in relation to the Service Provider:
 - (a) an order of the High Court being made or an effective resolution passed for its insolvent winding up or dissolution; or
 - (b) a receiver (which expression shall if applicable include an examiner within the meaning of Section 1 of the Companies Amendment Act, 1990) of the whole or any material part of its assets or undertaking being appointed; or
 - (c) any scheme of arrangement being entered into (other than for the purpose of a solvent reconstruction or amalgamation upon terms and within such period as may previously have been approved in writing by the Company); or

- (d) inability to pay its debts within the meaning of the Relevant Legislation; or
- (ix) the Service Provider failing to pay (other than by inadvertent error in transfer of funds which is discovered by the Company, notified to the Service Provider and corrected within two (2) Business Days thereafter) any amount properly due or owing from it pursuant to this Agreement according to its terms and such failure to pay continues unremedied (and not disputed in good faith and upon reasonable grounds) at the expiry of fifteen (15) Business Days following receipt of written notice from the Company of such failure,

and in any such case in Clause 8.2(viii) within twenty-eight (28) days of appointment of the liquidator, receiver, administrative receiver, administrator nominee or other similar officer, such person has not provided to the Company a guarantee of future performance by the Service Provider of the Agreement in such form and amount as the Company may reasonably require.

8.3 The Service Provider may by notice in writing to the Company terminate this Agreement forthwith upon:

- (i) the Company failing to pay (other than by inadvertent error in funds transmission which is discovered by the Service Provider, notified to the Company and corrected within two (2) Business Days thereafter) any material amount properly due or owing from it pursuant to this Agreement according to its terms and such failure to pay continues unremedied (and not disputed in good faith and upon reasonable grounds) at the expiry of fifteen (15) Business Days following receipt of written notice from the Service Provider of such failure; or
- (ii) the revocation or withdrawal of the TSO Licence or any replacement thereof granted to the Company by a Competent Authority.

8.4 Without prejudice to any other remedy to which either Party may be entitled for breach of this Agreement, this Clause 8 states the only circumstances in which either Party may unilaterally terminate this Agreement.

9 Effect of Termination

- 9.1 The relevant provisions of this Agreement shall survive expiry or termination of this Agreement to the extent necessary to provide for final billings, adjustments and payments of any payments, charges or other monies due and owing pursuant to this Agreement.
- 9.2 Termination of this Agreement as a whole or in relation to any Generating Unit and/or any individual Ancillary Service or Ancillary Services under Clause 8 (*Termination*) shall not affect any rights or obligations of the Parties which have accrued at the time of such termination or, where applicable, the continuing obligations of the Parties under this Agreement.

10. Force Majeure

- 10.1 If during any Trading Period, a Generating Unit has a capability of less than its Minimum Load (as specified in Schedule 9 or as redeclared) owing to Force Majeure the Service Provider shall not be entitled to Ancillary Services Payments in respect of that Generating Unit and that Trading Period and no Ancillary Services Charges may be claimed or imposed by the Company where the circumstances otherwise giving rise to such Ancillary Services Charges result from Force Majeure.
- 10.2 As soon as reasonably practicable following the occurrence of Force Majeure:
- (a) either Party (the "Notifying Party") shall notify the other Party of the Force Majeure, identifying the nature of the event and the duration of its effect which the Notifying Party believes to be reasonably likely;
 - (b) the Notifying Party shall afford the other Party reasonable facilities for obtaining further information about the event including facilities for site inspection; and
 - (c) the Notifying Party shall take, at its own cost, all steps reasonably required to remedy the effects of the Force Majeure.
- 10.3 Subject to the other provisions of this Clause 10, the Notifying Party shall not be in breach of its obligations under this Agreement for so long as and to the extent that the performance of such obligations continues to be prevented by the relevant event of Force Majeure.

11 Limitation of Liability

11.1 Neither Party nor any of their respective officers, employees or agents shall be liable to the other Party for any losses, damages, claims, liabilities, costs or expenses arising from any breach of this Agreement other than for losses, damages, claims, liabilities, costs or expenses directly resulting from a breach which at the date of this Agreement was reasonably foreseeable as likely to occur in the ordinary course of events from such breach in respect of:

- (a) physical damage being occasioned to the property of the other Party, its officers, employees or agents; or
- (b) the liability of the other Party to any other person for loss in respect of physical damage caused directly to the property of such other person as a result of such breach (a claim by a third party in respect of that liability hereafter in Clause 11.5 being referred to as a "legal claim"); or
- (c) (in the case of breach by the Service Provider) purchasing or obtaining services where reasonably and necessarily required to replace the Ancillary Services which, at the date of this Agreement, the Parties agree and acknowledge is reasonably foreseeable as likely to occur in the ordinary course of events from such breaches,

provided that the liability of either Party in respect of all such losses, damages, claims, liabilities, costs or expenses shall not exceed the Liability Cap.

11.2 Subject to Clause 11.3 and any provision of this Agreement which provides for payment obligations or an indemnity, neither Party nor any of their respective officers, directors, employees or agents shall in any circumstances whatsoever be liable to the other Party for:

- (a) loss of profit, loss of revenue, loss of use, loss of contract (other than this Agreement) or loss of goodwill; or
- (b) indirect or consequential loss, incidental or special damages (including punitive damages); or
- (c) loss resulting from the liability of the other Party to any other person howsoever and whensoever arising save as provided in Clauses 11.1 and 11.3.

- 11.3 Nothing in this Agreement shall exclude or limit the liability of one Party “the Party Liable” for death or personal injury to an officer, employee or agent of the other Party, “the Party Not Liable”, resulting directly from the negligence of the Party Liable or any of its officers, employees and agents and, the Party Liable shall indemnify and keep indemnified the Party Not Liable, its officers, employees and agents from and against any losses, damages, claims, liabilities, costs or expenses which the Party Not Liable 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 the negligence of any of its officers, employees or agents (such claim hereafter in Clause 11.6 being referred to as an “injury claim”).
- 11.4 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 expressed 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 without limitation actions brought in negligence and/or nuisance. Accordingly, each of the Parties hereby waives to the fullest extent possible all 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.
- 11.5 In the event of any legal claim being made by a third party against the Party Not Liable, the Party Liable shall be promptly notified by the Party Not Liable of the legal claim and, the Party Liable may, at its own expense, conduct all negotiations for the settlement of the claim and any litigation that may arise from the claim. The Party Not Liable shall not, unless and until the Party Liable has failed to unconditionally agree in writing to take over the conduct of the negotiations or litigation in respect of the legal claim within ten (10) Business Days of receiving notice from the Party Not Liable requesting it to do so, make any admission which might be prejudicial to the claim. The conduct by the Party Liable of such negotiations or litigation shall be conditional upon the Party Liable having first given to the Party Not Liable such reasonable security as the Party Not Liable shall from time to time notify the Party Liable that it requires to cover the amount ascertained or agreed or estimated, as the case may be, of any losses, damages, claims, liabilities or costs for which the Party Not Liable may become liable in respect of the legal claim. The Party Not Liable shall, at the request of the Party Liable, afford all available assistance for the purpose of contesting the legal claim and shall be paid by the Party Liable (within ten (10) Business Days of the date of its invoice therefor) all reasonable expenses incurred in so doing.

11.6 In the event of any injury claim being made by a third party against the Party Not Liable, the Party Liable shall be promptly notified by the Party Not Liable of the injury claim and, the Party Liable may at its own expense, conduct all negotiations for the settlement of the claim and any litigation that may arise from the claim. The Party Not Liable shall not, unless and until the Party Liable has failed to unconditionally agree in writing to take over the conduct of the negotiations or litigation in respect of the injury claim within ten (10) Business Days of receiving notice from the Party Not Liable requesting it to do so, make any admission which might be prejudicial to the claim. The conduct by the Party Liable of such negotiations or litigation shall be conditional upon the Party Liable having first given to the Party Not Liable such reasonable security as the Party Not Liable shall from time to time notify the Party Liable that it requires to cover the amount ascertained or agreed or estimated, as the case may be of any losses, damages, claims, liabilities, costs or expenses for which the Party Not Liable may become liable in respect of the injury claim. The Party Not Liable shall, at the request of the Party Liable, afford all available assistance for the purpose of contesting the injury claim and shall be paid by the Party Liable (within ten (10) Business Days of the date of its invoice therefor) all reasonable expenses incurred in so doing.

11.7 Each of the provisions of this Clause 11 shall:

11.7.1 be construed as a separate and severable contract term, and if one or more of such provisions is held to be invalid, unlawful or otherwise unenforceable the other or others of such provisions shall remain in full force and effect and shall continue to bind the Parties; and

11.7.2 survive termination of this Agreement.

11.8 Each of the Parties agrees that the other Party holds the benefit of Clauses 11.1, 11.2 and 11.3 for itself and as trustee and agent for its officers, directors, employees and agents.

11.9 For the avoidance of doubt nothing in this Clause 11 shall prevent or restrict either Party enforcing any obligation (including suing for a debt) owed to it under or pursuant to this Agreement.

11.10 Nothing in this Clause 11 shall exclude or restrict or otherwise prejudice or affect any:

- (a) rights and obligations of either Party which are conferred or created by the Act, the TSO Licence or the Service Provider's Generation Licence, or statutory regulations; or
- (b) rights, powers, duties and obligations of the Regulatory Authority or any other Competent Authority under the Act, any licence granted under the Act or otherwise howsoever.

11.11 Subject to Clause 11.10 and unless expressly provided otherwise in this Agreement, this Clause 11 insofar as it excludes or limits liability shall override any other provisions of this Agreement.

11.12 Each Party hereby acknowledges and agrees that the provisions of this Clause 11 are fair and reasonable having regard to the circumstances as at the date of this Agreement.

12 Confidentiality

12.1 Each Party shall treat any and all information and data disclosed to it by the other Party in connection with this Agreement in any form whatsoever, and this Agreement itself, (the "Confidential Information") as confidential and proprietary, shall preserve the secrecy of the Confidential Information and shall not use the Confidential Information for any purpose other than solely in connection with this Agreement.

12.2 For the purposes of this Clause 12, the term Confidential Information shall not include information which:

12.2.1 at the time of disclosure or at any time thereafter is in, or becomes part of, the public domain other than through a breach of the provisions of this Clause 12;

12.2.2 the Party receiving the information can prove that the information was already known to it or was independently acquired or developed by it without being in breach of its obligations under this Clause 12;

12.2.3 became available to the Party receiving the information from another source in a non-confidential manner otherwise than in breach of an obligation of confidentiality; or

12.2.4 is published by or the publication of which is required by a Competent Authority.

12.3 Notwithstanding the provisions of Clause 12.1, Confidential Information may be disclosed by a Party:

12.3.1 to those of the shareholders, owners, directors, officers, employees, agents, consultants, contractors, advisers, investors, proposed assignees, insurers, lenders or bona fide prospective purchasers of all or substantially all of the shares of such Party or its Affiliates who need to know the Confidential Information provided that:

(a) the recipient agrees to keep the Confidential Information confidential on terms no less onerous than contained in this Clause 12; and

(b) the disclosing Party shall be responsible for ensuring that the recipient observes and complies with such obligation to keep the Confidential Information confidential and shall accordingly be responsible for any failure of the recipient to do so;

12.3.2 as may be ordered or required by any applicable law or a Competent Authority;

12.3.3 as may be required by the regulations of any recognised stock exchange upon which the share capital of the Party (or any parent undertaking of the Party) is or is proposed to be from time to time listed or dealt in, and the Party making the disclosure shall, if reasonably practicable prior to making the disclosure, and in any event as soon as reasonably practicable thereafter, supply the other Party with a copy of such disclosure or statement and details of the persons to whom the Confidential Information is to be, or has been, disclosed. Where a copy of such disclosure or statement has been supplied prior to making the disclosure, the other Party may give comments on that disclosure or statement to the Party proposing to make it. The Party proposing to make the disclosure shall, if reasonably practicable in the time available, consult with the other Party as to any such comments and consider whether the disclosure is to be amended to take into account the comments;

12.3.4 as may be permitted by or required to comply with the requirements of the Grid Code, Metering Code or the Trading and Settlement Code;

12.3.5 by either Party as may be necessary to comply with any obligation under any licence (or any document referred to therein) granted to it under the Act;

12.3.6 (by the Company) to the Other TSO and otherwise as may be necessary to enable the Company to operate the Transmission System and carry out its

obligations in relation thereto in accordance with Good Industry Practice (including in relation to the application by any person for connection to the Transmission System), provided that:

- (a) only Confidential Information which is necessary for such purpose is disclosed by the Company; and
- (b) the Company notifies the recipient in advance of such disclosure that the information is confidential and should not be disclosed by the recipient to third parties;

12.3.7 as may be required by a Court, arbitrator or administrative tribunal or an expert in the course of proceedings before it to which the disclosing Party is a party; or

12.3.8 as may be agreed in writing by the Parties prior to disclosure by the Party disclosing such Confidential Information.

12.4 All information supplied by or on behalf of a Party shall remain the sole and exclusive property of such Party and this Agreement shall not operate to transfer ownership or any interest whatsoever therein, and the other Party shall, if requested by the Party disclosing the information following termination of this Agreement, promptly return to such Party all documents and any copies, extracts, notes or similar materials containing or based in whole on such information.

12.5 With effect from the date of this Agreement both Parties shall adopt procedures within their organisations for ensuring the confidentiality of all information which they are obliged to preserve as confidential under Clause 12.1. Those procedures shall be as follows:

12.5.1 the Confidential Information will be disseminated only to persons who need such information for the purpose of carrying out those functions which they are employed to carry out;

12.5.2 the Confidential Information shall not be used by either Party for the purpose of obtaining for itself or any of its Affiliates or for any other person any contract or arrangement for the supply of electricity to any person without the prior consent of the Party disclosing such Confidential Information;

12.5.3 employees, directors, Affiliates, agents, proposed assignees, bona fide prospective purchasers of all or substantially all of the shares of a Party, consultants and professional advisers of both Parties in receipt of Confidential

Information will be made fully aware of the Party's obligations of confidence in relation thereto and the Party will be responsible for any failure by such persons to comply with such obligations as if they were parties to this Agreement; and

12.5.4 any copies of the Confidential Information will, insofar as is reasonably practicable, whether in hard copy or computerised form, clearly identify the Confidential Information as confidential.

12.6 The provisions of this Clause 12 shall continue to bind a Party after termination of this Agreement, in whole or in part, for five (5) years.

12.7 Subject to Clause 12.3, no public announcement or statement regarding the signature, performance or termination of, or otherwise in relation to, the Agreement shall be issued or made by a Party unless the other Party shall have first been furnished with a written copy of the proposed announcement or statement and shall have approved it (such approval not to be unreasonably withheld or delayed).

13 Additional Costs

13.1 Save where expressly provided for otherwise in this Agreement, if:-

(a) the Service Provider is of the opinion that in order to comply with any change in or amendment to the Grid Code (for the avoidance of doubt excluding the withdrawal of or reduction in the scope of a derogation) or any statutory or regulatory obligation coming into force after the date hereof the Service Provider is obliged to incur additional costs and expenses ("**Costs**") for the purpose of carrying out modifications to any Generating Unit or otherwise for the purposes of changing the manner of operation of a Generating Unit in relation to the provision of any Ancillary Service; or

(b) the Company is of the opinion that by reason of any change in or amendment to the Grid Code or any statutory or regulatory obligation coming into force after the date hereof the Service Provider is able to make savings in the cost and expense ("**Savings**") of providing any Ancillary Service from any Generating Unit,

then either the Service Provider or the Company (as the case may be) may, by notice in writing notify the other Party, require it to meet in order to discuss the Costs or Savings (as the case may be) and the Company shall give due consideration to those Costs and Savings in setting the Payment Rates in the next revision of the Charging Statement to be

approved by the Regulatory Authority and published in accordance with Sections 35 and 36 of the Act.

14 Dispute resolution

14.1 If any dispute or difference arises between the Parties in connection with this Agreement, it shall, subject to any express provision to the contrary, be resolved in accordance with the provisions set out in Schedule 6.

15 Miscellaneous

15.1 Counterparts

This Agreement may be executed in any number of counterparts and by each Party on a separate counterpart, each of which when executed and delivered shall be an original, but all the counterparts together shall constitute one and the same document.

15.2 Entire Agreement

This Agreement contains and expressly refers to the entire agreement between the Parties with respect to its subject matter and expressly excludes any warranty, condition or other undertaking implied at law or by custom and with effect from HAS Go-Live supersedes all previous agreements and understandings between the Parties (other than as provided for in this Agreement) with respect to its subject matter and each of the Parties acknowledges and confirms that it does not enter into this Agreement in reliance on any representation, warranty or other undertaking by the other Party not fully reflected in this Agreement

15.3 Severability

If any provision of this Agreement is or becomes invalid, unenforceable or illegal by a judgement or decision of any court of competent jurisdiction or any Competent Authority to which it is subject or by order of the relevant body of the European Union, the same shall be deemed severable and the remainder of this Agreement shall remain in full force and effect. In any such case, the Parties will negotiate in good faith with a view to agreeing one or more provisions which may be substituted for such invalid or unenforceable provision in order to give effect, so far as practicable, to the spirit of this Agreement.

15.4 Waivers

No delay or forbearance by either Party in exercising any right, power, privilege or remedy under this Agreement shall operate to impair or be construed as a waiver of the right, power, privilege or remedy. For the avoidance of doubt any waiver by either Party of the obligations of the other Party shall be evidenced by an agreement in writing signed by both Parties. A single or partial exercise of any such right, power, privilege or remedy shall not preclude any further exercise thereof or the exercise of any other right, power, privilege or remedy.

15.5 Notices

Except for notices to be given pursuant to the Grid Code (as to which, for the avoidance of doubt, the provisions of the Grid Code shall apply) or the Distribution Code (as to which, for the avoidance of doubt, the procedures provided for in the Distribution Code shall apply), any notice given by one Party to the other under this Agreement shall be in writing unless emergency conditions exist reasonably preventing such notice from being given and shall be sent or delivered to the address, and marked for the attention of the person specified in Schedule 7. Either Party may, by notice to the other, given in compliance with this Clause 15.5, change the address or the person to which such notices are to be sent or delivered.

All such written notices shall either be personally delivered or be sent by pre-paid registered post (airmail if overseas) or facsimile transfer. Communication by facsimile shall be confirmed by forwarding a copy of same by pre-paid registered post.

Any notice so delivered, posted or transferred shall be deemed to have been given:

- (a) in the case of personal delivery, when delivered;
- (b) in the case of pre-paid registered post, on the second day following the date of posting (or, if airmailed to or from overseas, on the fifth day following the date of posting); and
- (c) in the case of facsimile transfer on the date of dispatch provided:
 - (i) such date is a Business Day; and
 - (ii) time of dispatch is within the hours of 0900 hours and 1730 at the place of receipt,

otherwise on the next following Business Day.

15.6 Compliance with the Law

The Parties agree that, in performing their respective obligations pursuant to this Agreement, the Company and the Service Provider shall be required to comply with relevant statutes, statutory instruments and the general law. Neither Party shall be liable for any failure to perform its obligations in accordance with this Agreement where to do so would put it in breach of any such statute, statutory instrument or general provision of law.

15.7 Survival

The cancellation, expiry or termination of this Agreement shall not affect any right or obligations which may have accrued prior to such expiry or termination and shall not affect any continuing obligations of either of the Parties under this Agreement including obligations that, by their nature should survive such termination, cancellation or expiry or any other terms of this Agreement by which rights or obligations are expressed to continue after expiry or termination of this Agreement.

15.8 Independent Contractors

The relationship between the Company and the Service Provider shall be that of two independent contracting parties. Each Party shall be solely liable for the payment of all wages, taxes and other costs related to the employment by that Party of persons to meet its obligations under this Agreement.

15.9 No Partnership

This Agreement shall not be interpreted or construed to create an association, joint venture, or partnership between the Service Provider and the Company. Neither the Service Provider nor the Company shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or to be an agent or representative of, or to otherwise bind, the other Party.

15.10 No Third Party Beneficiaries

This Agreement is intended solely for the benefit of the Parties to it. Other than as specifically provided in this Agreement, nothing in this Agreement shall be construed to

create any duty to, or standard of care with reference to, or any liability to, any person or entity not a party to this Agreement.

15.11 Language

Each notification, notice, submission, demand, consent, request or other communication given by one Party to the other under this Agreement shall be in the English language.

16 Governing Law and Jurisdictions

16.1 This Agreement shall be interpreted, construed and governed by the laws of the Jurisdiction.

16.2. Subject to the terms of the Dispute Resolution Procedure, resolution of any dispute shall unless the Parties otherwise agree be subject to the non-exclusive jurisdiction of the Courts of the Jurisdiction.

16.3 Each Party further agrees that a lawful finding or conclusion of the Regulatory Authority under this Agreement shall be conclusive and binding upon such Party and may be enforced in the courts of any jurisdiction.

16.4 Each Party irrevocably waives any objection which it may have now or hereafter to the laying of the venue of any proceedings in any court as is referred to in this clause and any claim that any proceedings have been brought in an inconvenient forum and further irrevocably agrees that a judgment in any proceedings brought in the courts of the Jurisdiction shall be conclusive and binding upon each Party and may be enforced in the courts of any other jurisdiction.

IN WITNESS WHEREOF this Agreement has been executed on the day and year first above written.

Signed for and on behalf of:-

EirGrid PLC

Signed for and on behalf of:-

[Service Provider]

Schedule 1

DEFINITIONS

“Achieved” means, in relation to POR, SOR or TOR1 the level of POR, SOR or TOR1 provision achieved by the Generating Unit as calculated under paragraphs 3.5, 4.5 and 5.5 respectively of Schedule 2;

“Act” means the Electricity Regulation Act, 1999;

“Affiliate” means, in relation to either Party, any holding company or subsidiary or any subsidiary of a holding company of the relevant Party, in each case within the meaning of the Companies Acts, 1963 to 2001 inclusive;

“All Island Transmission Network” means the Transmission System together with the “transmission system” as defined in the licence granted to the Other TSO under Article 10(1)(b) of the Electricity (Northern Ireland) Order 1992;

“Ancillary Services” for the purposes of this Agreement means the following:

- the provision of POR, SOR, TOR1, TOR2, RR (Synchronised) and RR (De-synchronised) Capability;
- the provision of Reactive Power Capability (Leading) and Reactive Power Capability (Lagging); and
- the provision of Black Start Capability;

“Ancillary Services Charges” has the meaning set out in Clause 4.2.1;

“Ancillary Services Payments” has the meaning set out in Clause 4.2.1;

“Applicable Tolerance” means, in relation to POR, SOR, or TOR1 the applicable tolerance set out in the Charging Statement used for the purposes of calculating POR Charges, SOR Charges or TOR1 Charges in accordance with paragraphs 3.6, 4.6 or 5.6 respectively of Schedule 2;

“Automatic Voltage Regulator Status” or “AVR Status” means the status of the AVR of a Generating Unit, as further defined in paragraph 3.1.3 of Schedule 3;

“Availability” has the meaning set out in the Grid Code;

“Availability Notice” has the meaning set out in the Grid Code;

“AVR Factor” has the meaning given to it in paragraphs 3.2.1(c) and 3.2.2(c) of Schedule 3;

“Black Start” has the meaning set out in the Grid Code;

“Black Start Achievement Time” means, in relation to a Black Start Unit that has, following receipt of a Dispatch Instruction to Black Start, failed to Start Up and energise the Service Provider’s system up to the Connection Point by its Contracted Black Start Time, the time by which that Black Start Unit must achieve Start Up and energise the Service Provider’s system up to the Connection Point in order to be treated as having suffered a Partial Black Start Failure (as opposed to a Total Black Start Failure), as specified in Schedule 9, Part 2;

“Black Start Capability” has the meaning set out in the Grid Code;

“Black Start Plan” has the meaning set out in paragraph 3.4 of Schedule 4;

“Black Start Unit” has the meaning set out in paragraph 2.1 of Schedule 4;

“Black Start Service Provider Tests” has the meaning set out in paragraph 3.4 of Schedule 4;

“Black Start Station” has the meaning set out in the Grid Code;

“Black Start Test” means, in relation to a Black Start Unit, a test of that unit’s Black Start Capability undertaken in accordance with the Grid Code;

“Black Start Threshold MW Availability” has the meaning set out in paragraph 3.1.1 of Schedule 4;

“Business Day” means a weekday which is not a public holiday or bank holiday in the Jurisdiction;

“Capability” means, in relation to POR, SOR, TOR1, TOR2, RR (Synchronised) or RR (De-synchronised), the capability of the Generating Unit (expressed in MW at the Connection Point) to provide POR, SOR, TOR1, TOR2, RR (Synchronised) or RR (De-synchronised) to the power system as calculated under paragraphs 3.1, 4.1, 5.1, 6.1, 7.1.1 or 7.1.2 respectively of Schedule 2;

“CDGU” means a Centrally Dispatched Generating Unit as defined in the Grid Code;

“Charge” means: (i) in relation to POR, SOR or TOR1, a charge in respect of the non-provision of POR, SOR or TOR1 as calculated under paragraphs 3.6, 4.6 or 5.6 respectively of Schedule

2 and (ii) in relation to Black Start, a Total Black Start Failure Charge or a Partial Black Start Failure Charge;

“Charge Period” means: (i) in relation to POR, SOR or TOR1, a charge period specified in the Charging Statement for the calculation of POR Charges, SOR Charges and TOR1 Charges respectively and (ii) in relation to Black Start Capability, a charge period specified in the Charging Statement for the calculation of Total Black Start Failure Charges and Partial Black Start Failure Charges;

“Charging Period” means a period of one calendar month;

“Charging Statement” means the Company's Ancillary Services Statement of Payments and Charges published on the Company's website;

“Company” means EirGrid plc and any legal successors in title under any restructuring of EirGrid plc;

“Competent Authority” means the Regulatory Authority or any local, national or supra-national agency, authority, department, inspectorate, minister, official, Court, tribunal or public or statutory person (whether autonomous or not) of Ireland (or the government thereof) or the European Union which has jurisdiction over a Party on the subject matter of the Agreement;

“Confidential Information” has the meaning set out in Clause 12;

“Connection Agreement” means in relation to a Service Provider's Installation the agreement between the Company or the Distribution System Operator and the Service Provider which provides the right for that Service Provider's Installation to be and remain connected to the Transmission System or the Distribution System;

“Connection Point” has the meaning set out in the Grid Code;

“Connection Site” has the meaning set out in the Grid Code;

“Contracted” means, in relation to POR, SOR, TOR1, TOR2 and RR and in relation to a Trading Period, the maximum value for the response of the Generating Unit determined from the POR HAS Reserve Curve, SOR HAS Reserve Curve, TOR1 HAS Reserve Curve, TOR2 HAS Reserve Curve or RR HAS Reserve Curve respectively by reference to the MW Output of the Generating Unit for that Trading Period;

“Contracted Black Start Time” means, in relation to a Black Start Unit, the time by which that Black Start Unit must, following receipt of a Dispatch Instruction to Black Start, Start Up and energise the Service Provider's system up to the Connection Point, as specified in Schedule 9, Part 2;

“Contracted Maximum” means, in relation to POR, SOR, TOR1, TOR2 or RR the maximum value of the POR Capability, SOR Capability, TOR1 Capability, TOR2 Capability or RR capability of the Generating Unit taken from the POR HAS Reserve Curve, SOR HAS Reserve Curve, TOR1 HAS Reserve Curve, TOR2 HAS Reserve Curve or RR HAS Reserve Curve respectively;

“Contracted Reactive Power (Lagging)” means the Reactive Power (Lagging) deliverable at the maximum MW Output of the Generating Unit in accordance with the Reactive Power Characteristic Curve and the Operating Parameters of the Generating Unit;

“Contracted Reactive Power (Leading)” means the Reactive Power (Leading) deliverable at the maximum MW Output of the Generating Unit in accordance with the Reactive Power Characteristic Curve and the Operating Parameters of the Generating Unit;

“Declared” means, in relation to POR, SOR, TOR1, TOR2 and RR and in relation to a Trading Period, the lowest value for the capability of the Generating Unit to provide POR, SOR, TOR1, TOR2 and RR during that Trading Period as notified by the Service Provider in accordance with the Grid Code;

“Declared Automatic Voltage Regulator Status” means the AVR Status for the Trading Period as notified by the Service Provider under SDC1 of the Grid Code;

“Declared Maximum” means, in relation to POR, SOR, TOR1, TOR2 and RR, declared values for POR Capability, SOR Capability, TOR1 Capability, TOR2 Capability or RR Capability as notified under the Grid Code;

“Declared Reactive Power (Lagging)” means the capacity of a Generating Unit to provide Reactive Power (Lagging) in a Trading Period as notified by the Service Provider under SDC1 of the Grid Code;

“Declared Reactive Power (Leading)” means the capacity of a Generating Unit to provide Reactive Power (Leading) in a Trading Period as notified by the Service Provider under SDC1 of the Grid Code;

“Decommission” means cessation of use by the Service Provider of the Service Provider's Installation at any given Connection Site for a continuous period exceeding 12 months and **“Decommissioned”** shall be construed accordingly;

“De-Energise” has the meaning set out in the Grid Code;

“Directive” means any present or future legislation, statutory instrument, directive, requirement, instruction, order, direction or rule of any Competent Authority binding on either or both of the

Company and the Service Provider (but only, if not having the force of law, if compliance with the Directive is in accordance with the general practice of persons to whom the Directive is addressed) and includes any modification, extension or replacement thereof then in force;

“Disconnection” has the meaning set out in the Grid Code and **“Disconnected”** and **“Disconnect”** shall be construed accordingly;

“Dispatch Instruction” has the meaning set out in the Grid Code;

“Dispute Resolution Procedure” means the procedure set out in Schedule 6;

“Distribution Code” means the Distribution Code required to be prepared by the Company pursuant to section 33 of the Act, and approved by the Regulatory Authority, as from time to time revised, amended, supplemented or replaced with the approval of or at the instance of the Regulatory Authority;

“Distribution System” has the meaning set out in the Grid Code;

“Distribution System Operator” has the meaning set out in the Grid Code;

“Euro” or **“€”** means the single currency of participating Member States of the European Union;

“Event Frequency Threshold” has the value given to it in the Charging Statement;

“Event Recorders” means event recorders as specified in the Metering Code or where not so specified such other metering equipment as may be used to monitor the Frequency of the power system;

“Expected” means, in relation to POR, SOR or TOR1, the level of POR, SOR or TOR1 that a Generating Unit is expected to provide as calculated in accordance with paragraphs 3.4, 4.4 and 5.4 respectively of Schedule 2;

“Expert” means the person appointed to determine a dispute under this Agreement in accordance with the Dispute Resolution Procedure;

“Force Majeure” means any event or circumstance or number of events or circumstances or combination thereof which is beyond the reasonable control of a Party and which could not have been avoided through the use of Good Industry Practice and which results in or causes the failure of the Party to perform any of its obligations under the Agreement and is limited to the following events:

(a) acts of terrorists;

- (b) war (whether declared or undeclared), threat of war, act of public enemy, blockade, revolution, riot, insurrection, public demonstration, civil commotion, invasion or armed conflict;
- (c) sabotage or acts of vandalism, criminal damage or the threat of such acts;
- (d) extreme weather or environmental conditions including lightning, earthquake, flood, wind, drought, storm, fire, landslip, accumulation of snow or ice, natural disasters and phenomena including meteorites, the occurrence of pressure waves caused by aircraft or other aerial devices travelling at supersonic speeds, impact by aircraft, volcanic eruption, explosion including nuclear explosion, radioactive or chemical contamination or ionising radiation;
- (e) any change of legislation, governmental order, restraint or Directive without justifiable cause by any relevant governmental authority having the effect of shutting down or reducing the supply of electricity to the Service Provider's Installation or which prohibits (by rendering unlawful) the operation of the Service Provider's Installation and such operation cannot be made lawful by a modification to the Service Provider's Installation or a change in operating practice;
- (f) any strike which is part of a labour dispute of a national character occurring in Ireland or which is part of a national electrical industry strike within Ireland;
- (g) the inability at any time or from time to time of the Transmission System or Distribution System to be capable of lawfully and safely importing electricity from the Service Provider; or
- (h) failure or disruption of the systems for transferring funds between banks in Ireland;

"Frequency" has the meaning set out in the Grid Code;

"Frequency Event" means an occasion when the power system Frequency falls through the Event Frequency Threshold. The start of the Frequency Event is referred to as time zero (T=0 seconds) and is timed from the Frequency falling through 49.8 Hz. The Frequency Event ends when the Frequency rises back above the Event Frequency Threshold;

"Generating Units" means the generating units described in Part 1 of Schedule 9;

"Generating Unit Frequency / Capacity Function" the decrease in MW Output of a Generating Unit below its Registered Capacity during a period in which the system frequency is below 49.5 Hz, such decrease being no more than pro rata with any decrease below nominal frequency;

“Generating Unit Output Delta” has the meaning given to it in paragraph 3.4.1 of Schedule 2;

“Generation Licence” means a licence to generate electricity granted pursuant to the Act;

“Good Industry Practice” means the exercise of that degree of skill, diligence, prudence and foresight which would be reasonably and ordinarily expected from a skilled and experienced operator engaged in the same type of undertaking under the same or similar circumstances;

“Governor Droop” has the meaning given to it in the Grid Code;

“Governor Droop Demanded” means, in relation to POR, SOR or TOR1, the level of provision of POR, SOR or TOR1 expected to be achieved by a Generating Unit governor action calculated in accordance with paragraphs 3.4.3, 4.4.2 and 5.4.2 respectively of Schedule 2;

“Governor Droop Generating Unit Related Capacity” means the machine capacity relating to the operation of the Frequency control system of a Generating Unit;

“Grid Code” means the code prepared by the Company pursuant to section 33 of the Act, and approved by the Regulatory Authority, as from time to time revised, amended, supplemented or replaced with the approval of or at the instance of the Regulatory Authority;

“HAS Go-Live” means from 00:00 on 1st February 2010;

“HAS Reserve Curve” means in relation to POR, SOR, TOR1, TOR2 and RR, the diagrams set out in Schedule 9;

“Jurisdiction” means Ireland;

“kVA” means kilovoltamperes;

“kW” means kilowatts;

“Liability Cap” for the purposes of Clause 11.1, means €130,000 per occurrence and an overall annual cap of €1,300,000 in any period of twelve consecutive calendar months during the term of this Agreement;

“Metering Code” means the code of that name which specifies the minimum technical design and operational criteria to be complied with for metering and data collection equipment and associated procedures as required under the Trading and Settlement Code;

“Metering Equipment” has the meaning given to it in the Metering Code;

“Meters” has the meaning set out in the Metering Code;

“Minimum Load” has the meaning given to that term in the Grid Code;

“Minimum Number of Black Start Units” means, in relation to a Black Start Station, the minimum number of Black Start Units that must have Black Start Capability in order for the Black Start Station to have Black Start Capability, as specified in Schedule 9, Part 2;

“MW Output” has the meaning given to it in the Grid Code;

“Nadir Frequency” has the meaning given to it in paragraph 3.4.1 of Schedule 2;

“Nadir Frequency Delta” has the meaning given to it in paragraph 3.4.1 of Schedule 2;

“Nadir Time” has the meaning given to it in paragraph 3.4.1 of Schedule 2;

“Operating Parameters” means the performance and operating specifications of each Generating Unit (certain of which are referred to in the Grid Code as Technical Parameters) for which values are specified, as are more fully set out in Part 2 of Schedule 9 as may be amended from time to time in accordance with this Agreement;

“Other TSO” means SONI Limited in its role as the transmission system operator in Northern Ireland;

“Partial Black Start Failure” has the meaning set out in paragraph 3.3.1 of Schedule 4;

“Partial Black Start Failure Charge” has the meaning set out in paragraph 3.3.1 of Schedule 4;

“Partial Shutdown” has the meaning set out in the Grid Code;

“Party” means, as the context requires, the Company or the Service Provider; and the term “Parties” shall be construed accordingly;

“Payment Rate” means: (i) in relation to POR, SOR, TOR1, TOR2, RR (Synchronised) or RR (De-synchronised) the rate (expressed in €/MWh) for the calculation of payments for POR, SOR, TOR1, TOR2, RR (Synchronised) or RR (De-synchronised); (ii) in relation to Reactive Power Capability (Leading) and Reactive Power Capability (Lagging), the rate (expressed in €/MVArh) for the calculation of payments for Reactive Power Capability (Leading) and Reactive Power Capability (Lagging), in each case, as specified in the Charging Statement and (iii) in relation to Black Start Capability, the rate (expressed in €) for the calculation of payments for Black Start Capability for the relevant Black Start Station, as specified in the Charging Statement;

“Period” means, in relation to POR, SOR, TOR1 or TOR2, the period in which POR, SOR, TOR1 or TOR2 is required to be provided as further defined in paragraphs 3.3, 4.3, 5.3 and 6.3 respectively of Schedule 2;

“Per Unit” or “PU” means, in relation to any quantity, the ratio of the quantity to its base or reference value;

“POR Governor Droop Multiplier” means, in relation to POR, the multiplier calculated in accordance with paragraph 3.4.2 of Schedule 2;

“POR Governor Droop Multiplier Alpha” means, in relation to POR, the Operating Parameter set out in Schedule 9;

“POR Governor Droop Multiplier Beta” means, in relation to POR, the Operating Parameter set out in Schedule 9;

“Power Station” means the power station(s) named in Part 1 of Schedule 9 (including the Generating Units);

“Pre-Event Output” means, in relation to the assessment of POR, SOR and TOR1 performance by a Generating Unit, the average MW Output of that Generating Unit for the period 60 seconds to 30 seconds before the start of a Frequency Event;

“Pre-Event System Frequency” means the average Frequency of the power system for the period 60 seconds to 30 seconds before the start of a Frequency Event;

“Primary Operating Reserve” or “POR” has the meaning given to it in the Grid Code;

“Reactive Power” or “MVAR” means the product of voltage and current and the sine of the phase angle between them measured in units of volt-amperes reactive and standard multiples thereof;

“Reactive Power Capability (Lagging)” means the capacity of a Generating Unit (expressed in MVAR at the generator terminals) to provide Reactive Power (Lagging) to the power system as determined in accordance with paragraph 3.1.2 of Schedule 3;

“Reactive Power Capability (Leading)” means the capacity of a Generating Unit (expressed in MVAR at the generator terminals) to provide Reactive Power (Leading) to the power system as determined in accordance with paragraph 3.1.1 of Schedule 3;

“Reactive Power Capability (Lagging) Rate” has the meaning given to it in paragraph 3.2.2(b) of Schedule 3;

“Reactive Power Capability (Leading) Rate” has the meaning given to it in paragraph 3.2.1(b) of Schedule 3;

“Reactive Power Capability Payment (Lagging)” means the payment due to the Service Provider for the provision of Reactive Power (Lagging) in a Trading Period;

“Reactive Power Capability Payment (Leading)” means the payment due to the Service Provider for the provision of Reactive Power (Leading) in a Trading Period;

“Reactive Power Characteristic Curve” means the chart of the Reactive Power characteristics of a Generating Unit set out in Schedule 9;

“Reactive Power Device” a device for the production or absorption of Reactive Power installed at a Power Station;

“Reactive Power (Lagging)” means the production of Reactive Power by a Generating Unit;

“Reactive Power (Lagging) Scaling Factor” has the meaning given to it in paragraph 3.2.2(c) of Schedule 3;

“Reactive Power (Leading)” the absorption of Reactive Power by a Generating Unit;

“Reactive Power (Leading) Scaling Factor” has the meaning given to it in paragraph 3.2.1(c) of Schedule 3;

“Registered Capacity” has the meaning set out in the Grid Code;

“Regulatory Authority” means the Commission for Energy Regulation;

“Relevant Legislation” means Section 214 of the Companies Act 1963 (and the Service Provider shall not be deemed to be unable to pay its debts if any demand for payment is being contested in good faith by the Service Provider with recourse to all appropriate measures and procedures). For the purpose of this definition, Section 214 of the Companies Act, 1963 shall have effect as if for “€1,000” there was substituted “€50,000” or such higher figure as the Company may from time to time notify in writing to the Service Provider.

“Replacement Reserve” or “RR” has the meaning given to it in the Grid Code;

“RR (De-synchronised)” means Replacement Reserve provided by a Generating Unit whilst it is De-synchronised from the power system;

“RR (Synchronised)” means Replacement Reserve provided by a Generating Unit whilst it is Synchronised to the power system;

“SCADA” means Supervisory Control and Data Acquisition;

“Scaling Factor” means, in relation to POR, SOR, TOR1, TOR2 and RR, the scaling factor used in the calculation of payments for POR, SOR, TOR1, TOR2 and RR, described in paragraphs 3.2(c), 4.2(c), 5.2(c) , 6.2(c) , 7.2.1(c) and 7.2.2(c) respectively of Schedule 2;

“Scheduled Outage” has the meaning set out in the Grid Code;

“Secondary Operating Reserve” or “SOR” has the meaning given to it in the Grid Code;

“Service Provider's Installation” means any structures, equipment, lines, appliances or devices used or to be used by any Service Provider and connected or to be connected directly or indirectly to the Transmission System or to the Distribution System;

“Start Up” has the meaning set out in the Grid Code;

“State Estimator” means a system for estimating the value of a parameter;

“Synchronised” (and like terms) has the meaning set out in the Grid Code;

“Technical Parameters” shall have the meaning given to it in the Grid Code;

“Technical Parameters Notice” shall have the meaning given to it in the Grid Code;

“Tertiary Operating Reserve 1” or “TOR1” has the meaning given to it in the Grid Code;

“Tertiary Operating Reserve 2” or “TOR2” has the meaning given to it in the Grid Code;

“Time Weighted Average” means, in relation to a parameter (P) which has more than one value for a Trading Period, the time weighted average value of that parameter (“Parameter Value (Trading Period)”), calculated by the application of the following formula:

$$\text{Parameter Value (Trading Period)} = \sum_{Pv=1,N} \{(P_{v1} \times T_1)/TPD\}$$

Where:

$\sum_{Pv=1,N}$ is the summation for the N values of P during the Trading Period and where Pv=1 denotes the first value of P during the Trading Period;

T₁ is the period (expressed in minutes) for which the value of P was equal to P_{v1} during the Trading Period; and

TPD is the Trading Period Duration;

“Total Black Start Failure” has the meaning set out in paragraph 3.3.2 of Schedule 4;

“Total Black Start Failure Charge” has the meaning set out in paragraph 3.3.2 of Schedule 4;

“Total Shutdown” has the meaning set out in the Grid Code;

“Trading and Settlement Code” or “TSC” means the Single Electricity Market Trading and Settlement Code which sets out the rules for trading in electricity and settling energy imbalances and the responsibilities of parties to the code;

“Trading Period” has the meaning set out in the TSC;

“Trading Period Duration” means a period equal to the duration of a Trading Period under the Trading and Settlement Code (as at the date of this Agreement it is 0.5 hours);

“Trading Period Payment” means, in relation to POR, SOR, TOR1, TOR2 and RR and in relation to a Trading Period, the payment to which a Service Provider is entitled for providing the POR Capability, SOR Capability, TOR1 Capability, TOR2 Capability, RR (Synchronised) Capability or RR (De-synchronised) Capability of a Generating Unit in that Trading Period as calculated under paragraphs 3.2, 4.2, 5.2, 6.2, 7.2.1 and 7.2.2 of Schedule 2 respectively;

“Transmission System” has the meaning set out in the Grid Code;

“Transmission System Operator” has the meaning set out in the Grid Code;

“TSO Licence” means the licence to operate the Transmission System granted by the Regulatory Authority pursuant to Section 14(1)(e) of the Electricity Regulation Act;

“Unit Load Controller” means a device used to regulate the generation level of a Generating Unit (when it is operating so that its generation level is varied automatically to compensate for variations in the Frequency of the power system) to ensure as far as possible that it does not exceed or fall short of previously set limits;

“Use of System Agreement” means the agreement between the Company and the Service Provider which provides the right for the use of the All-Island Transmission Network;

“Value Added Tax” or “VAT” means the value added tax chargeable under the provisions of the Value Added Tax Act 1972 or any tax on the supply of goods and or services which may hereafter replace or supplement value added tax.

Schedule 2

Operating Reserve Capability

1 Definition of Service

The Service Provider agrees to provide reserve Capability from each of the Generating Units, in accordance with the provisions of the Grid Code and this Schedule 2. The categories of reserve Capability to be provided, each of which is covered in turn below, are: Primary Operating Reserve, Secondary Operating Reserve, Tertiary Operating Reserve 1, Tertiary Operating Reserve 2 and Replacement Reserve. References in this Schedule 2 to “the Generating Unit” shall mean each and every Generating Unit that is required to provide Reserve Capability.

2 Minimum Technical Requirements

The Service Provider must provide reserve in accordance with the technical requirements of the Grid Code and the relevant Operating Parameters for each Generating Unit.

Unless stated otherwise, all quantities used in reserve calculations are exported values and conversion factors will be used to convert values that are not so provided into exported values where necessary.

3 Primary Operating Reserve (POR) - Capability and Payment

The basis for payments for Primary Operating Reserve (POR) is the calculation of the POR Capability of the Generating Unit over a Trading Period. The MW Output and Availability of the Generating Unit for the Trading Period forms the basis for calculating POR Capability. The POR Capability is the lesser of (i) the sustained load lift obtained from the POR HAS Reserve Curve adjusted by the average Availability of the Generating Unit and (ii) the Declared Maximum POR for the Trading Period. The POR Capability (as calculated in accordance with paragraph 3.1) for the Trading Period is multiplied by the POR Payment Rate to determine the payment to be made to the Service Provider for the Trading Period. The payment for the Trading Period is adjusted by the POR Scaling Factor if the Declared Maximum POR is less than the Contracted Maximum POR.

3.1 POR Capability

The Capability of the Generating Unit to provide POR in a Trading Period will be determined from the lesser of:

- (a) the value on the POR HAS Reserve Curve, adjusted by the Time Weighted Average Availability of the Generating Unit (expressed in MW) over the Trading Period. The relevant value on the curve will be determined from the MW Output of the Generating Unit (expressed in MW) over the Trading Period; and
- (b) the Declared Maximum POR (this figure cannot be greater than the Contracted Maximum POR).

3.2 POR Payments

The Service Provider will receive a payment for each MW of POR Capability in each Trading Period determined in accordance with the following provisions of this paragraph 3.2. Unless stated otherwise, all parameters used in the calculation of such payments are the Time Weighted Average for a Trading Period.

The payment to the Service Provider for POR Capability of the Generating Unit in a Trading Period is determined as:

POR Trading Period Payment = POR Capability × POR Payment Rate × POR Scaling Factor × Trading Period Duration

Where

- a) POR Capability (expressed in MW) is the Capability of the Generating Unit in respect of POR and is calculated in accordance with paragraph 3.1;
- b) POR Payment Rate is the Payment Rate (expressed in €/MWh) applicable to POR;
- c) POR Scaling Factor is the Scaling Factor applicable to POR and is equal to: $((\text{Declared Maximum POR} + \text{Contracted Maximum POR}) / (2 \times \text{Contracted Maximum POR}))$.

3.3 Assessment of POR Performance

In order to assess the quality of delivery of POR when required by the power system, the Generating Unit will be monitored and assessed during a Frequency Event in accordance with the provisions of this Section 3. The assessment of POR performance is carried out at one point in time corresponding to the time of the Nadir Frequency during the POR time range of T+5 seconds to T+15 seconds (the “**POR Period**”).

Charges will be applied based on the extent of the difference between the Expected POR and the Achieved POR for the Generating Unit.

The basis for calculating the Expected POR is the anticipated Generating Unit response to the Frequency reduction. The increase in the Generating Unit MW Output is driven by the governor response and is limited by the sustained loading ability of the Generating Unit. In the initial phase of the POR Period it is recognised that the Generating Unit MW Output may lag behind the theoretical droop determined response due to the physical reaction of the unit to a power system Frequency change, the variation depending on generating unit type. To compensate for this, the assessment uses the POR Governor Droop Multiplier which decays to a value of one over time, the value during the POR Period determined from the POR Governor Droop Multiplier Alpha and the POR Governor Droop Multiplier Beta.

If the Achieved POR response is less than the Expected POR response after the application of the Applicable Tolerance a POR failure is recorded.

Where a Frequency Event has occurred while the Generating Unit was Synchronised to the power system, the Generating Unit response to any further Frequency Event occurring within 5 minutes after the end of the Frequency Event will not be taken into account for settlement purposes.

3.4 Calculation of Expected Provision of POR

3.4.1 The Expected POR following a Frequency Event is derived from –

- 1) The Pre-Event Output of the Generating Unit;
- 2) The Pre-Event System Frequency;
- 3) The “**Nadir Frequency**”, being the minimum Frequency during the POR Period;
- 4) The “**Nadir Time**”, the time at which the minimum Frequency occurs during the POR Period with reference to the start of the Frequency Event at T=0;
- 5) The “**Nadir Frequency Delta**”, being the difference between the Pre-Event System Frequency and the minimum Frequency during the POR Period;
- 6) The “**Generating Unit Output Delta**”, being the change in the Generating Unit MW Output from the Pre-Event Output to the Generating Unit MW Output at the Nadir Time;
- 7) The MW Output of the Generating Unit at the Nadir Time;
- 8) The declared Availability of the Generating Unit (in MW) at the start of a Frequency Event;
- 9) The POR HAS Reserve Curve;
- 10) The Declared Maximum POR;

- 11) The Declared Governor Droop;
- 12) The Governor Droop Demanded POR;
- 13) The **"POR Governor Droop Multiplier"** being the multiplier calculated, where applicable, under paragraph 3.4.2;
- 14) The Generating Unit Frequency / Capacity Function (if applicable); and
- 15) The Unit Load Controller settings, if applicable. If a Unit Load Controller is in service during the Frequency Event the Pre-Event System Frequency and Pre-Event Output of the Generating Unit will be determined using the Unit Load Controller settings.

3.4.2 The POR Governor Droop Multiplier, where applicable, is calculated as:

$$\text{PORGovernorDroopMultiplier} = 1 + (\text{PORgovernordroopmultiplier} \times e^{(-\text{PORGovernordroopmultiplier} \beta \times \text{nadirtime})})$$

(Where e is the exponential function)

3.4.3 The Governor Droop Demanded POR is calculated as the product of:

the Governor Droop Generating Unit Related Capacity (MW) and the Nadir Frequency Delta (Hz) divided by the Declared Governor Droop (PU) times the POR Governor Droop Multiplier (PU) times the nominal Frequency (50 Hz)

3.4.4 The Expected POR is the increase from the Pre-Event Output from the Generating Unit at the Nadir Frequency and is calculated as the minimum of -

- (a) The POR value determined from the POR HAS Reserve Curve in conjunction with:
 - (i) the Generating Unit Pre-Event Output; and
 - (ii) the Generating Unit declared Availability.
- (b) The difference between the Generating Unit Pre-Event Output and the declared Availability. This value will be adjusted by the Generating Unit Frequency / Capacity Function at the Nadir Frequency in accordance with the Connection Conditions in the Grid Code, if applicable.
- (c) The Governor Droop Demanded POR.
- (d) The Declared Maximum POR.

3.5 Calculation of Achieved Provision of POR

The Achieved POR following a Frequency Event is equal to the Generating Unit Output Delta.

3.6 POR Charges

POR Charges are payable by the Service Provider if the Achieved POR is less than the Expected POR by an amount that exceeds the Applicable Tolerance.

The POR Charge will be based on the difference between the Expected POR and Achieved POR for the Generating Unit.

The Service Provider will be required to pay to the Company a POR Charge in respect of any Trading Period in which a Frequency Event occurs where the difference between Expected POR and Achieved POR is greater than the Applicable Tolerance calculated as follows:

$$\text{POR Charge} = (\text{Expected POR} - \text{Achieved POR}) \times \text{POR Payment Rate} \times \text{POR Charge Period}$$

Where:

- a) Expected POR is calculated in accordance with paragraph 3.4 above;
- b) Achieved POR is calculated in accordance with paragraph 3.5 above;
- c) POR Payment Rate is the Payment Rate (expressed in €/MWh) applicable to POR.
- d) POR Charge Period is the Charge Period (expressed in hours) applicable to POR;

4 Secondary Operating Reserve (SOR) - Capability and Payment

The basis for payments for Secondary Operating Reserve (SOR) is the calculation of the SOR Capability of the Generating Unit over a Trading Period. The average MW Output and Availability of the Generating Unit for the Trading Period forms the basis for calculating SOR Capability. The SOR Capability is the lesser of (i) the sustained load lift obtained from the SOR HAS Reserve Curve adjusted by the average Availability of the Generating Unit and (ii) the Declared Maximum SOR for the Trading Period. The SOR Capability (as calculated in accordance with paragraph 4.1) for the Trading Period is multiplied by the SOR Payment Rate to determine the payment to be made to the Service Provider for the Trading Period. The payment for the Trading Period is adjusted by the SOR Scaling Factor if the Declared Maximum SOR is less than the Contracted Maximum SOR.

4.1 SOR Capability

The Capability of the Generating Unit to provide SOR in a Trading Period will be determined from the lesser of:

- (a) the value on the SOR HAS Reserve Curve, adjusted by the Time Weighted Average Availability of the Generating Unit (expressed in MW) over the Trading Period. The relevant value on the curve will be determined from the MW Output of the Generating Unit (expressed in MW) over the Trading Period; and
- (b) the Declared Maximum SOR (this figure cannot be greater than the Contracted SOR).

4.2 SOR Payments

The Service Provider will receive a payment for each MW of SOR Capability in each Trading Period determined in accordance with the following provisions of this paragraph 4.2. Unless stated otherwise, all parameters used in the calculation of such payments are the Time Weighted Average for a Trading Period.

The payment to the Service Provider for SOR Capability of the Generating Unit in a Trading Period is determined as:

$$\text{SOR Trading Period Payment} = \text{SOR Capability} \times \text{SOR Payment Rate} \times \text{SOR Scaling Factor} \times \text{Trading Period Duration}$$

Where

- a) SOR Capability (expressed in MW) is the Capability of the Generating Unit in respect of SOR and is calculated in accordance with paragraph 4.1;
- b) SOR Payment Rate is the Payment Rate (expressed in €/MWh) applicable to SOR;
- c) SOR Scaling Factor is the Scaling Factor applicable to SOR and is equal to: $\{(\text{Declared Maximum SOR} + \text{Contracted Maximum SOR}) / (2 \times \text{Contracted Maximum SOR})\}$.

4.3 Assessment of SOR Performance

In order to assess the quality of delivery of SOR when required by the power system, the Generating Unit will be monitored and assessed during a Frequency Event in accordance with the provisions of this Section 4. The assessment of SOR performance is carried out during the entire SOR time range of T+15 seconds to T+90 seconds (the "**SOR Period**").

SOR Charges will be applied based on the extent of the difference between the Expected SOR and the Achieved SOR for the Generating Unit.

The Expected SOR is determined for each sample point during the SOR Period and compared to the Achieved SOR. If the Achieved SOR is less than the Expected SOR, the deficit is summated for all the Event Recorder sample points and an average deficit produced. If a deficit remains after the application of the Applicable Tolerance a SOR failure is recorded.

Where a Frequency Event has occurred while the Generating Unit was Synchronised to the power system, the Generating Unit response to any further Frequency Event occurring within 5 minutes after the end of the Frequency Event will not be taken into account for settlement purposes.

4.4 Calculation of Expected Provision of SOR

4.4.1 The Expected SOR following a Frequency Event is derived from –

- 1) The Pre-Event Output of the Generating Unit;
- 2) The Pre-Event System Frequency;
- 3) The declared Availability of the Generating Unit (in MW) at the start of a Frequency Event;
- 4) The SOR HAS Reserve Curve;
- 5) The Declared Maximum SOR;
- 6) The Declared Governor Droop;
- 7) The Governor Droop Demanded SOR;
- 8) The Generating Unit Frequency /Capacity Function (if applicable);
- 9) The Unit Load Controller settings, if applicable. If a Unit Load Controller is in service during the Frequency Event the Pre-Event System Frequency and Pre-Event Output of the Generating Unit will be determined using the Unit Load Controller settings.

4.4.2 The Governor Droop Demanded SOR is calculated by reference to each sample point during the SOR Period, as the product of –

the Governor Droop Generating Unit Related Capacity (MW) and the sample point Frequency delta (Hz) divided by the Declared Governor Droop (PU) times the nominal Frequency (50 Hz).

4.4.3 The Expected SOR is the increase from the Pre-Event Output from the Generating Unit at each sample point during the SOR Period and is calculated as the minimum of:

- (a) The SOR value determined from the SOR HAS Reserve Curve in conjunction with (i) the Generating Unit Pre-Event Output and (ii) the declared Availability;
- (b) The difference between the Generating Unit Pre-Event Output and the declared Availability. In the case of a CCGT only, this value will be adjusted by the Generating Unit Frequency/Capacity Function at the each sample point Frequency, if applicable;
- (c) The Governor Droop Demanded SOR;
- (d) The Declared Maximum SOR.

The sample point Expected SOR values are averaged over the SOR Period to give the **“Average SOR Requirement”**.

4.5 Calculation of Achieved Provision of SOR

The Achieved SOR following a Frequency Event will be calculated for each sample point during the SOR Period as the Generating Unit MW Output minus the Generating Unit Pre-Event Output.

If the Achieved SOR is less than the Expected SOR, at a sample point, a deficit of SOR is recorded. SOR deficits averaged over the SOR Period produce the **“Average SOR Deficit”**.

4.6 SOR Charges

SOR Charges are applied if the Average SOR Deficit is greater than the Applicable Tolerance. The SOR Charge is calculated as follows:

$$\text{SOR Charge} = \text{Average SOR Deficit} \times \text{SOR Payment Rate} \times \text{SOR Charge Period}$$

Where:

- a) the Average SOR Deficit is calculated in accordance with paragraph 4.5 above;
- b) SOR Payment Rate is the Payment Rate (expressed in €/MWh) applicable to SOR; and
- c) SOR Charge Period is the Charge Period (expressed in hours) applicable to SOR.

5 Tertiary 1 Operating Reserve (TOR1) - Availability and Payment

The basis for payments for Tertiary Operating Reserve 1 (TOR1) is the calculation of the TOR1 Capability of the Generating Unit over a Trading Period. The average MW Output and Availability of the Generating Unit for the Trading Period forms the basis for calculating TOR1 Capability. The TOR1 Capability is the lesser of (i) the sustained load lift obtained from the TOR1 HAS Reserve Curve adjusted by the average Availability of the Generating Unit and (ii) the Declared Maximum TOR1 for the Trading Period. The TOR1 Capability (as calculated in accordance with paragraph 5.1) for the Trading Period is multiplied by the TOR Payment Rate to determine the payment to be made to the Service Provider for the Trading Period. The payment for the Trading Period is adjusted by the TOR1 Scaling Factor if the Declared Maximum TOR1 is less than the Contracted Maximum TOR1.

5.1 TOR1 Capability

The Capability of the Generating Unit to provide TOR1 in a Trading Period will be determined from the lesser of:

- (a) the value on the TOR1 HAS Reserve Curve, adjusted by the Time Weighted Average Availability of the Generating Unit (expressed in MW) over the Trading Period. The relevant value on the curve will be determined from the MW Output of the Generating Unit (expressed in MW) over the Trading Period; and
- (b) the Declared Maximum TOR1. (this figure cannot be greater than the Contracted TOR1).

5.2 TOR1 Payments

The Service Provider will receive a payment for each MW of TOR1 Capability in each Trading Period determined in accordance with the following provisions of this paragraph 5.2. Unless stated otherwise, all parameters used in the calculation of such payments are the Time Weighted Average for a Trading Period.

The payment to the Service Provider for TOR1 Capability of the Generating Unit in a Trading Period is determined as:

$$\text{TOR1 Trading Period Payment} = \text{TOR1 Capability} \times \text{TOR1 Payment Rate} \times \text{TOR1 Scaling Factor} \times \text{Trading Period Duration}$$

Where

- a) TOR1 Capability (expressed in MW) is the Capability of the Generating Unit in respect of TOR1 and is calculated in accordance with paragraph 5.1;
- b) TOR1 Payment Rate is the Payment Rate for TOR1 (expressed in €/MWh); and
- c) TOR1 Scaling Factor is the Scaling Factor applicable to TOR1 and is equal to: $\{(Declared\ Maximum\ TOR1 + Contracted\ Maximum\ TOR1) / (2 \times Contracted\ Maximum\ TOR1)\}$.

5.3 Assessment of TOR1 Performance

In order to assess the quality of delivery of TOR1 when required by the power system, the Generating Unit will be monitored and assessed during a Frequency Event in accordance with the provisions of this section 5. The assessment of TOR1 performance is carried out during the entire TOR1 time range of T+90 seconds to T+300 seconds (the "**TOR1 Period**").

TOR Charges will be applied based on the extent of the difference between the Expected TOR1 and the Achieved TOR1 for the Generating Unit.

The Expected TOR1 is determined for each sample point during the TOR1 Period and compared to the Achieved TOR1. If the Achieved TOR1 is less than the Expected TOR1, the deficit is summated for all the Event Recorder sample points and an average deficit produced. If a deficit remains after the application of the Applicable Tolerance a TOR1 failure is recorded.

Where a Frequency Event has occurred while the Generating Unit was Synchronised to the power system, the Generating Unit response to any further Frequency Event occurring within 5 minutes after the end of the Frequency Event will not be taken into account for settlement purposes.

5.4 Calculation of Expected Provision of TOR1

5.4.1 The Expected TOR1 following a Frequency Event is derived from –

- 1) The Pre-Event Output of the Generating Unit;
- 2) The Pre-Event System Frequency;
- 3) The declared Availability of the Generating Unit (in MW) at the start of a Frequency Event;
- 4) The TOR1 HAS Reserve Curve;
- 5) The Declared Maximum TOR1;
- 6) The Declared Governor Droop;
- 7) The Governor Droop Demanded TOR1.

- 8) The Generating Unit Frequency / Capacity Function (if applicable);
- 9) The Unit Load Controller settings, if applicable. If a Unit Load Controller is in service during the Frequency Event the Pre-Event System Frequency and Pre-Event Output of the Generating Unit will be determined using the Unit Load Controller settings.

5.4.2 The Governor Droop Demanded TOR1 is calculated by reference to each sample point during the TOR1 Period, as the product of -

the Governor Droop Generating Unit Related Capacity (MW) and the sample point Frequency delta (Hz) divided by the Declared Governor Droop (PU) times the nominal Frequency (50 Hz).

5.4.3 The Expected TOR1 following a Frequency Event is the increase from the Pre-Event Output from the Generating Unit at each sample point during the TOR1 Period and is calculated as the minimum of:

- (a) The TOR1 value determined from the TOR1 HAS Reserve Curve in conjunction with (i) the Generating Unit Pre-Event Output and (ii) the declared Availability;
- (b) The difference between the Generating Unit Pre-Event Output and the declared Availability. In the case of a CCGT only, this value will be adjusted by the Generating Unit Frequency/Capacity Function at each sample point Frequency, if applicable;
- (c) The Governor Droop Demanded TOR1;
- (d) The Declared Maximum TOR1.

The sample point Expected TOR1 values are averaged over the TOR1 Period to give the **“Average TOR1 Requirement”**.

5.5 Calculation of Achieved Provision of TOR1

The Achieved TOR1 will be calculated for each sample point during the TOR1 Period as the Generating Unit MW Output minus the Generating Unit Pre-Event Output.

If the Achieved TOR1 is less than the Expected TOR1, at a sample point, a deficit of TOR1 is recorded. TOR1 deficits averaged over the TOR1 Period produce the **“Average TOR1 Deficit”**.

5.6 TOR1 Charges

The TOR1 Charge is not applied if the average Frequency during the first 30 seconds of the TOR1 Period has been greater than 49.8 Hz. Otherwise, the TOR1 Charge will be applied if the Average TOR1 Deficit is greater than the Applicable Tolerance and is calculated as follows:

$$\text{TOR1 Charge} = \text{TOR1 Payment Rate} \times \text{Average TOR Deficit} \times \text{TOR Charge Period}$$

Where:

- a) TOR1 Payment Rate is the Payment Rate (expressed in €/MWh) applicable to TOR1;
- b) the Average TOR1 Deficit is calculated in accordance with paragraph 5.5 above; and
- c) TOR1 Charge Period is the Charge Period (expressed in hours) applicable to TOR1.

6 Tertiary 2 Operating Reserve (TOR2) - Availability and Payment

The basis for payments for Tertiary Operating Reserve 2 (TOR2) is the calculation of the TOR2 Capability of the Generating Unit over a Trading Period. The average MW Output and Availability of the Generating Unit for the Trading Period forms the basis for calculating TOR2 Capability. The TOR2 Capability is the lesser of (i) the sustained load lift value obtained from the TOR2 HAS Reserve Curve adjusted by the average Availability of the Generating Unit and (ii) the Declared Maximum TOR2 for the Trading Period. The TOR2 Capability (as calculated in accordance with paragraph 5.1) for the Trading Period is multiplied by the TOR Payment Rate to determine the payment to be made to the Service Provider for the Trading Period. The payment for the Trading Period is adjusted by the TOR2 Scaling Factor if the Declared Maximum TOR2 is less than the Contracted Maximum TOR2.

6.1 TOR2 Capability

The Capability of the Generating Unit to provide TOR2 in a Trading Period will be determined from the lesser of:

- (a) the value on the TOR2 HAS Reserve Curve, adjusted by the Time Weighted Average Availability of the Generating Unit (expressed in MW) over the Trading Period. The relevant value on the curve will be determined from the MW Output of the Generating Unit (expressed in MW) over the Trading Period; and
- (b) the Declared Maximum TOR2 (this figure cannot be greater than the Contracted TOR2).

6.2 TOR2 Payments

The Service Provider will receive a payment for each MW of TOR2 Capability in each Trading Period determined in accordance with the following provisions of this paragraph 6.2. Unless stated otherwise, all parameters used in the calculation of such payments are the Time Weighted Average for a Trading Period.

The payment to the Service Provider for TOR2 Capability of the Generating Unit in a Trading Period is determined as:

$$\text{TOR2 Trading Period Payment} = \text{TOR2 Capability} \times \text{TOR2 Payment Rate} \times \text{TOR2 Scaling Factor} \times \text{Trading Period Duration}$$

Where

- a) TOR2 Capability (expressed in MW) is the Capability of the Generating Unit in respect of TOR2 and is calculated in accordance with paragraph 6.1;
- b) TOR2 Payment Rate is the Payment Rate for TOR2 (expressed in €/MWh) applicable to TOR2; and
- c) TOR2 Scaling Factor is the Scaling Factor applicable to TOR2 and is equal to: $\{(\text{Declared Maximum TOR2} + \text{Contracted Maximum TOR2}) / (2 \times \text{Contracted Maximum TOR2})\}$.

6.3 Assessment of TOR2 Performance

In order to assess the quality of delivery of TOR2 when required by the power system, the Generating Unit will be monitored and assessed during a Frequency Event in accordance with this section 6. The assessment of TOR2 performance is carried out for the entire TOR2 time range of T+5 minutes to T+20 minutes (the "**TOR2 Period**") taking into account, but not limited to, the power system Frequency, Dispatch Instructions and the status of the Generating Unit prior to the Frequency Event.

6.4 TOR2 Charges

Not applied.

7. Replacement Reserve

The basis for payments for Replacement Reserve (RR) is the calculation of the RR Capability of the Generating Unit over a Trading Period.

For Generating Units already Synchronised to the power system, the average MW Output and Availability of the Generating Unit for the Trading Period forms the basis for calculating RR

Capability. The RR Capability is the lesser of (i) the sustained load lift obtained from the RR HAS Reserve Curve adjusted by the average Availability of the Generating Unit and (ii) the Declared Maximum RR for the Trading Period. The RR Capability (as calculated in accordance with paragraph 7.1) for the Trading Period is multiplied by the RR Synchronised Payment Rate to determine the payment to be made to the Service Provider for the Trading Period. The payment for the Trading Period is adjusted by the RR Scaling Factor if the Declared Maximum RR is less than the Contracted Maximum RR.

For Generating Units not Synchronised to the power system, the Availability of the Generating Unit for the Trading Period forms the basis for calculating RR Capability. The RR Capability is the lesser of (i) the sustained load lift value obtained from the RR HAS Reserve Curve adjusted by the average Availability of the Generating Unit and (ii) the Declared Maximum RR for the Trading Period. The RR Capability (as calculated in accordance with paragraph 7.1) for the Trading Period is multiplied by the RR De-Synchronised Payment Rate to determine the payment to be made to the Service Provider for the Trading Period. The payment for the Trading Period is adjusted by the RR Scaling Factor if the Declared Maximum RR is less than the Contracted Maximum RR.

7.1 RR Capability

7.1.1 Generating Units Synchronised to the power system

The Capability of the Generating Unit to provide RR in a Trading Period in which it is Synchronised to the power system will be determined from the lesser of:

- (a) the value on the RR HAS Reserve Curve, adjusted by the Time Weighted Average Availability of the Generating Unit (expressed in MW) over the Trading Period. The relevant value on the curve will be determined from the MW Output of the Generating Unit (expressed in MW) over the Trading Period; and
- (b) the Declared Maximum RR. Note that this figure cannot be greater than the Contracted RR.

7.1.2 Generating Units not Synchronised to the power system

The Capability of the Generating Unit to provide RR in a Trading Period in which it is not Synchronised to the power system will be determined from the lesser of:

- (a) the value on the RR HAS Reserve Curve. The relevant value on the curve will be determined from the Time Weighted Average Availability of the Generating Unit (expressed in MW) over the Trading Period; and
- (b) the Declared Maximum RR. Note that this figure cannot be greater than the Contracted RR.

7.2 RR Payments

The Service Provider will receive a payment for each MW of RR Capability in each Trading Period determined in accordance with the following provisions of this paragraph 7.2. Unless stated otherwise, all parameters used in the calculation of such payments are the Time Weighted Average for a Trading Period.

7.2.1 The payment to the Service Provider for RR Capability of the Generating Unit in a Trading Period in which it is Synchronised to the power system is determined as:

$$\text{RR (Synchronised) Trading Period Payment} = \text{RR (Synchronised) Capability} \times \text{RR (Synchronised) Payment Rate} \times \text{RR Scaling Factor} \times \text{Trading Period Duration}$$

Where

- a) RR (Synchronised) Capability (expressed in MW) is calculated in accordance with paragraph 7.1.1;
- b) RR (Synchronised) Payment Rate is the Payment Rate for RR (Synchronised) (expressed in €/MWh); and
- c) RR Scaling Factor is the Scaling Factor applicable to RR and is equal to: $\{(\text{Declared Maximum RR} + \text{Contracted Maximum RR}) / (2 \times \text{Contracted Maximum RR})\}$.

7.2.2 The payment to the Service Provider for RR Capability of the Generating Unit in a Trading Period in which it is not Synchronised to the power system is determined as:

$$\text{RR (De-Synchronised) Trading Period Payment} = \text{RR (De-Synchronised) Capability} \times \text{RR (De-Synchronised) Payment Rate} \times \text{RR Scaling Factor} \times \text{Trading Period Duration}$$

Where

- a) RR (De-Synchronised) Capability (expressed in MW) is calculated in accordance with paragraph 7.1.2;
- b) RR (De-Synchronised) Payment Rate is the Payment Rate for RR (De-Synchronised) (expressed in €/MWh); and
- c) RR Scaling Factor is the Scaling Factor applicable to RR and is equal to: $\{(Declared\ Maximum\ RR + Contracted\ Maximum\ RR) / (2 \times Contracted\ Maximum\ RR)\}$.

7.3 Assessment of RR Performance

In order to assess the quality of delivery of RR when required by the power system, the Generating Unit will be monitored and assessed in accordance with this Section 7 over the RR time range of T+20 minutes to T+ 4 hours (“**RR Time Period**”) taking into account, but not limited to, the power system Frequency, Dispatch Instructions and the status of the Generating Unit prior to the Frequency Event.

7.4 RR Charges

Not applied.

Schedule 3

Reactive Power Capability

1. Definition of Service

The Service Provider agrees to provide Reactive Power Capability (Leading) and Reactive Power Capability (Lagging) from each of the Generating Units, in accordance with the provisions of the Grid Code and this Schedule 3.

The Company shall have the right (but shall not be under any obligation) at any time to instruct the Service Provider, by the issue of a Dispatch Instruction, to provide Reactive Power (Leading) or Reactive Power (Lagging) from any one or more of the Generating Units. References in this Schedule 3 to “the Generating Unit” shall mean each and every Generating Unit that is instructed to provide Reactive Power (Leading) and Reactive Power (Lagging).

2. Minimum Technical Requirements

The Service Provider must provide Reactive Power in accordance with the technical requirements of the Grid Code and the relevant Operating Parameters for the Generating Unit.

Unless stated otherwise, all quantities used in Reactive Power calculations are generated values.

3. Reactive Power – Capability and Payment

The Service Provider will be entitled to payments for the Reactive Power Capability (Leading) and Reactive Power Capability (Lagging) of the Generating Unit calculated in accordance with this Schedule 3.

Performance of the Generating Unit will be monitored by the Company in real time operation and by post real time review.

3.1 Reactive Power Capability

For the purposes of settlement, the Reactive Power capability of the Generating Unit shall be determined separately for Reactive Power (Leading) and Reactive Power (Lagging) for each Trading Period as described in paragraphs 3.1.1 and 3.1.2. The Generating Unit will, for the purposes of this Schedule 3, only have Reactive Power Capability (Leading) or Reactive Power Capability (Lagging)

when the Generating Unit is Synchronised to the power system and/or a Reactive Power Device is in service.

3.1.1 Reactive Power Capability (Leading):

- a) For a CDGU, the “**Reactive Power Capability (Leading)**” for a Trading Period is equal to the lower of the Contracted Reactive Power (Leading) and the Time Weighted Average of all Declared Reactive Power (Leading) values notified by the Service Provider in respect of that Trading Period.

OR

- b) For a non-CDGU, the “**Reactive Power Capability (Leading)**” for a Trading Period is equal to the value of the Contracted Reactive Power (Leading) determined from the point on the Reactive Power Characteristic Curve for the Generating Unit corresponding to the average MW Output for that Trading Period.

3.1.2 Reactive Power Capability (Lagging):

- a) For a CDGU, the “**Reactive Power Capability (Lagging)**” for a Trading Period is equal to the lower of the Contracted Reactive Power (Lagging) and the Time Weighted Average of all Declared Reactive Power (Lagging) values notified by the Service Provider for that Trading Period.

OR

- b) For a non-CDGU, the “**Reactive Power Capability (Lagging)**” for a Trading Period is equal to the value of Contracted Reactive Power (Lagging) determined from the point on the Reactive Power Characteristic Curve for the Generating Unit corresponding to the average MW Output for that Trading Period.

3.1.3 Automatic Voltage Regulator Status

- a) For a CDGU, the “**Automatic Voltage Regulator Status (AVR Status)**” for a Trading Period shall be equal to the Time Weighted Average of all Declared Automatic Voltage Regulator Status values submitted by the Service Provider that apply to that Trading Period.

OR

- b) For a non-CDGU, the “**Automatic Voltage Regulator Status (AVR Status)**” is deemed to be in service unless the Service Provider notifies the Company that the AVR is not in service or if the Company, through monitoring, discovers that the AVR is not in service.

3.2 Reactive Power Payment

Subject to the terms of this Agreement, the payment rates for the purposes of calculating the amount payable to the Service Provider by the Company in respect of the provision of Reactive Power will be as set out in the Charging Statement. The payment for the provision of Reactive Power is based on the Reactive Power capability of the Generating Unit.

Payment will be made to the Service Provider in respect of each Trading Period in which the Generating Unit is Synchronised and/or has a Reactive Power Device in service. The Service Provider will be paid an amount calculated in accordance with paragraphs 3.2.1 and 3.2.2 on the basis of the Reactive Power capability of the Generating Unit, the Automatic Voltage Regulator Status and a scaling factor. The scaling factor is calculated from the declared capability and the contracted capability (as further described below).

3.2.1 Reactive Power Capability Payments (Leading)

Reactive Power Capability Payment (Leading) for any Trading Period =
Reactive Power Capability (Leading) x Reactive Power Capability (Leading) Rate x Reactive Power (Leading) Scaling Factor x AVR Factor x Trading Period Duration

where

- a) the Reactive Power Capability (Leading) (expressed in MVAR) is the capability of the Generating Unit to absorb Reactive Power as determined in accordance with paragraph 3.1;
- b) the Reactive Power Capability (Leading) Rate is the rate for Reactive Power (Leading) (expressed in €/MVARh) specified in the Charging Statement applicable to the Trading Period;
- c) the Reactive Power (Leading) Scaling Factor is a factor calculated as the sum of the Contracted Reactive Power (Leading) and Declared Reactive Power (Leading) divided by twice the Contracted Reactive Power (Leading);

- d) the AVR Factor is a factor, calculated on a Time Weighted Average basis, of 2 where the Automatic Voltage Regulator is in service (AVR Status ON) and 1 where the AVR for the Generating Unit is not in service (AVR Status OFF) during the Trading Period; and
- e) the Trading Period Duration (expressed in hours).

3.2.2 Reactive Power Capability Payments (Lagging)

Reactive Power Capability Payment (Lagging) for any Trading Period =

Reactive Power Capability (Lagging) x Reactive Power Capability (Lagging) Rate x Reactive Power (Lagging) Scaling Factor x AVR Factor x Trading Period Duration

where

- a) the Reactive Power Capability (Lagging) (expressed in MVar) is the capability of the Generating Unit to produce Reactive Power as determined in accordance with paragraph 3.1;
- b) the Reactive Power Capability (Lagging) Rate is the rate for Reactive Power (Lagging) (expressed in €/MVarh) specified in the Charging Statement applicable to the Trading Period;
- c) the Reactive Power (Lagging) Scaling Factor is a factor calculated as the sum of the Contracted Reactive Power (Lagging) and Declared Reactive Power (Lagging) divided by twice the Contracted Reactive Power (Lagging);
- d) the AVR Factor is a factor, calculated on a Time Weighted Average basis, of 2 where the Automatic Voltage Regulator is in service (AVR Status ON) and 1 where the AVR is not in service (AVR Status OFF) during the Trading Period; and
- e) Trading Period Duration (expressed in hours).

Schedule 4

Black Start Capability

1. Definition of Service

The Service Provider agrees to provide Black Start Capability, in accordance with the provisions of the Grid Code and this Schedule 4.

2. Minimum Technical Requirements

- 2.1 The Service Provider must provide Black Start Capability from each of its Black Start Stations in accordance with the technical requirements of the Grid Code and the relevant Operating Parameters for each Generating Unit identified in Schedule 9 Part 1 as having Black Start Capability ("**Black Start Unit**").
- 2.2 The Company shall have the right (but shall not be under any obligation) (and either as part of a Black Start Test or in the event of a Total Shutdown or Partial Shutdown) to instruct the Service Provider, by the issue of a Dispatch Instruction, to provide Black Start (in Ireland, issued as a Blue Alert signal). Following the issue of a Dispatch Instruction to Black Start, the Service Provider must Start Up the Black Start Unit or Units at the Black Start Station and energise its system up to the Connection Point in accordance with its Black Start Plan by not later than the Contracted Black Start Time.

3. Black Start – Capability and Payment

The Service Provider will be entitled to payments for the Black Start Capability of the Black Start Station calculated in accordance with this Schedule 4. The performance of the Black Start Station will be assessed by the Company by real time testing and by monitoring the performance of the Black Start Station following a Total Shutdown or a Partial Shutdown.

3.1 Black Start Capability

For the purposes of this Agreement, the Black Start Capability of a Black Start Station shall be determined for each Trading Period as described in paragraphs 3.1.1 and 3.1.2 based on the Black Start Capability of the relevant Black Start Units.

3.1.1 Black Start Unit Capability

A Black Start Unit will be treated as having Black Start Capability in each Trading Period when it is both declared available for Black Start and the Time Weighted Average of all declared Availability values as notified by the Service Provider in respect of the Black Start Unit for that

Trading Period is greater than or equal to the value specified in Schedule 9, Part 2 (the “**Black Start Threshold MW Availability**”) .

3.1.2 Black Start Station Capability

A Black Start Station will be treated as having Black Start Capability in each Trading Period when:

- a) the number of Black Start Units within the Black Start Station having Black Start Capability is greater than or equal to the Minimum Number of Black Start Units; and
- b) following a failed Black Start Test, the Service Provider has declared in accordance with the Grid Code that the Black Start Capability of its Black Start Station has been restored and the Company has accepted this declaration,

but otherwise the Black Start Station will be treated as not having Black Start Capability.

3.2 Black Start Payment

The Payment Rate for the purposes of calculating the amount payable to the Service Provider by the Company in respect of the provision of Black Start Capability from a Black Start Station will be as set out in the Charging Statement. The payment for the provision of Black Start Capability is based on the Black Start Capability of the Power Station.

Payment will be made to the Service Provider in respect of each Trading Period in which the Black Start Station has Black Start Capability, as calculated below. Unless stated otherwise, all parameters used in the calculation of such payments are the Time Weighted Average for a Trading Period.

The payment to the Service Provider for Black Start Capability in a Trading Period in which the Black Start Station has Black Start Capability (as determined under paragraph 3.1.2) is determined as:

$$\text{Black Start Station Trading Period Payment} = \text{Black Start Capability Payment Rate} \times \text{Trading Period Duration}$$

Where the Black Start Capability Payment Rate (expressed in €/h) is the Payment Rate for Black Start Capability specified for the Black Start Station in the Charging Statement applicable to the Trading Period.

3.3 Assessment of Black Start Performance

In order to assess Black Start Capability, each Black Start Station will be monitored and assessed following the issue of a Dispatch Instruction to Black Start (either as part of a Black Start Test or in the event of a Total Shutdown or Partial Shutdown).

3.3.1 A charge (a “**Partial Black Start Failure Charge**”) will be payable by the Service Provider in circumstances where it has been established as a consequence of Black Start Tests conducted in accordance with the relevant procedures set out in the Grid Code that the Black Start Station has failed to Start Up and to energise the Service Provider’s system up to the Connection Point by the Contracted Black Start Time but does successfully Start Up and energise the Service Provider’s system up to the Connection Point by the Black Start Achievement Time (a “**Partial Black Start Failure**”).

3.3.2 A charge (a “**Total Black Start Failure Charge**”) will be payable by the Service Provider in circumstances where it has been established as a consequence of Black Start Tests conducted in accordance with the relevant procedures set out in the Grid Code that the Black Start Station has failed to Start Up and to energise the Service Provider’s system up to the Connection Point by the Black Start Achievement Time (a “**Total Black Start Failure**”).

3.4 Black Start Plan

The Service Provider shall develop, maintain and practice a plan for achieving Black Start at each Black Start Station (“**Black Start Plan**”) and shall supply a copy of the plan to the Company from time to time on request. The Service Provider shall notify the Company when it makes any change to the Black Start Plan. The Service Provider should carry out regular maintenance and testing (“**Black Start Service Provider Tests**”) of the Generating Unit’s Black Start Capability and shall provide details of such tests to the Company for information. Black Start Service Provider Tests do not constitute Black Start Tests for the purposes of this Schedule 4.

3.5 Black Start Charge

3.5.1 Partial Black Start Failure

The Service Provider shall pay to the Company a Partial Black Start Failure Charge in respect of any Partial Black Start Failure, calculated as follows:

Partial Black Start Failure Charge = Black Start Payment Rate x Partial Black Start Failure Charge Period

Where:

- a) the Black Start Payment Rate is the Payment Rate (expressed in €/h) applicable to Black Start Capability; and
- b) the Partial Black Start Failure Charge Period is the Charge Period (expressed in hours) applicable to a Partial Black Start Failure.

3.5.2 Total Black Start Failure

The Service Provider shall pay to the Company a Total Black Start Failure Charge in respect of any Total Black Start Failure, calculated as follows:

Total Black Start Failure Charge = Black Start Payment Rate × Total Black Start Failure Charge Period

Where:

- a) the Black Start Payment Rate is the Payment Rate (expressed in €/h) applicable to Black Start Capability; and
- b) the Total Black Start Failure Charge Period is the Charge Period (expressed in hours) applicable to a Total Black Start Failure.

Schedule 5

Billing and Payment Plan

1. Statement of Account and Invoicing

1.1 Within twenty five (25) Business Days after the end of each Charging Period, the Company shall submit to the Service Provider a statement of account (the “**Statement**”) specifying:

(i) the quantity of Ancillary Service(s) provided and (ii) the Ancillary Services Payments and Ancillary Services Charges due in respect of that Charging Period.

The Company shall use its reasonable endeavours to provide to the Service Provider such reasonable information as may be required to enable the Service Provider to verify the services provided for that Charging Period. Such information shall be based on data from meters and other systems the Company may use. If, following a Charging Period, the Company is unable to obtain all or part of the information necessary to prepare a Statement, in respect of that Charging Period, then the Company shall make such estimates as are necessary to prepare a Statement for the Charging Period and provide the Service Provider with the basis for such estimates.

1.2 Following confirmation by the Company of the actual service provided and calculation of the correct payments due, then the Statement for the subsequent Charging Period will be revised up or down accordingly.

1.3 Within ten (10) Business Days after the date on which the Company submits to the Service Provider a Statement, the Service Provider shall either:

(a) where the Service Provider agrees with the Statement’s accuracy, submit to the Company an invoice for the same aggregate amount as is specified in the Statement (the “**Invoice**”) together with a written notice confirming the accuracy of the Statement; or

(b) where the Service Provider disputes the Statement’s accuracy, submit to the Company an Invoice for such sum as the Service Provider, acting in good faith, believes is due together with a written notice (the “**Claim**”) specifying the sum disputed and the grounds of such dispute. For the avoidance of doubt, the Service Provider shall not be entitled to issue an Invoice for an amount greater than the

aggregate amount specified in the Statement. Any claim under this Paragraph 1.3 shall be subject to the dispute resolution mechanism set out in Paragraph 3 below.

- 1.4 The Service Provider shall be deemed to have agreed with the accuracy of the Statement if it fails to submit the Claim to the Company in accordance with Paragraph 1.3.

2. Invoice Payment Date

- 2.1 Subject to Clause 4.2.3, within ten (10) Business Days after the Company's receipt of the Invoice, the Company shall pay to the Service Provider the sum due in respect of the Invoice by electronic transfer of funds to such bank account as is specified in Schedule 8 or otherwise communicated in writing to the Company, quoting the invoice number against which payment is made.
- 2.2 Subject to Paragraph 3, if any amount included in the Invoice remains unpaid after the time period stated in Paragraph 2.1, then the Service Provider shall be entitled to charge interest on the amount unpaid, including interest on any Value Added Tax unpaid, in accordance with the European Communities (Late Payments in Commercial Transactions) Regulations 2002.

3. Billing and Payment Reconciliation and Dispute Resolution Mechanism

- 3.1 Where the Service Provider pursuant to Paragraph 1.3 (b) disputes the Statement and submits a Claim to the Company:
- (a) the Parties shall use reasonable endeavours to resolve the dispute in good faith; or
 - (b) where the dispute remains unresolved forty (40) Business Days after the Company's receipt of the Claim, either Party may refer the dispute for resolution by the Expert in accordance with the Dispute Resolution Procedure; and
 - (c) following resolution of the dispute, any amount agreed or determined to be payable shall be paid within ten (10) Business Days after such agreement or determination and interest shall accrue on such amounts plus Valued Added Tax (if any) from the date such amount was originally due until the date of payment in accordance with the European Communities (Late Payments in Commercial Transactions) Regulations 2002.

- 3.2 Within forty-five (45) Business Days after the end of the calendar year, the Company shall submit to the Service Provider a statement of account (the “**Reconciliation Statement**”) which shall be based on data from meters and/or other systems and specify:
- (i) the metered reading (ii) the Ancillary Service Payments payable for the last Charging Period and (iii) the amount of the Ancillary Service Payment outstanding, and such sum will take into account any overpayment or underpayment made by the Company in any previous Charging Period.
- 3.3 The Company shall use its reasonable endeavours to provide the Service Provider with such reasonable information as may be required to enable the Service Provider to verify the accuracy of the Reconciliation Statement.
- 3.4 By the sixtieth (60th) Business Day after the end of the calendar year, the Service Provider shall either:
- (a) where the Service Provider agrees with the Reconciliation Statement’s accuracy, submit to the Company an invoice for the same aggregate amount as is specified in the Reconciliation Statement (the “**Final Invoice**”) together with a written notice confirming the accuracy of the Statement; or
- (b) where the Service Provider disputes the Reconciliation Statement, issue and submit to the Company a Final Invoice for such sum as the Service Provider acting in good faith, believes is due together with a written notice (the “**Final Claim**”) specifying the sum disputed and the grounds of such dispute. For the avoidance of doubt, the Service Provider shall not be entitled to issue a Final Invoice for an amount greater than the aggregate amount specified in the Reconciliation Statement. Any claim under this Paragraph 3.4 shall be subject to the dispute resolution mechanism set out in Paragraph 3.7.
- 3.5 The Service Provider shall be deemed to have agreed with the accuracy of the Reconciliation Statement if it fails to submit the Final Claim to the Company in accordance with Paragraph 3.4(b).
- 3.6 On the seventieth (70th) Business Day after the end of the calendar year or within ten (10) Business Days of the Company’s receipt of the Final Invoice, whichever is the later, the Company shall pay to the Service Provider the sum due in respect of the Final Invoice by electronic transfer of funds to such bank account as is specified in Schedule 8 or otherwise communicated in writing to the Company, quoting the invoice number against

which payment is made. Subject to Clause 3.7, if any amount included in the Final Invoice remains unpaid after the due date hereof, the Service Provider shall be entitled to charge interest on the amount unpaid, including interest on any Value Added Tax unpaid, in accordance with the European Communities (Late Payments in Commercial Transactions) Regulations 2002.

3.7 Where the Service Provider has notified the Final Claim to the Company in accordance with Paragraph 3.4:

- (a) the Parties shall use reasonable endeavours to resolve the dispute in good faith; or
- (b) where the dispute remains unresolved forty (40) Business Days after the Company's receipt of the Final Claim, either Party may refer the dispute for resolution by the Expert in accordance with the Dispute Resolution Procedure; and
- (c) following resolution of the dispute, any amount agreed or determined to be payable by one Party to the other shall be paid within ten (10) Business Days after such agreement or determination and interest shall accrue on such amounts plus Value Added Tax (if any) from the date such amount was originally due until the date of payment in accordance with the European Communities (Late Payments in Commercial Transactions) Regulations 2002.

Schedule 6

DISPUTE RESOLUTION PROCEDURE

- 1 Either Party may notify the other Party following the occurrence or discovery of any item or event which the notifying Party acting in good faith considers to be a dispute under this Agreement.
- 2 Within fifteen (15) Business Days of the notice in Paragraph 1, either Party ("first Party") may, if considered appropriate and by further notice to the other Party ("second Party"), appoint a senior company official with expertise in the area of dispute to represent it. The second Party shall then also appoint a senior company official with expertise in the area of dispute to represent it and shall notify the first Party accordingly within a further ten (10) Business Days. The Parties shall procure that their respective representatives meet within ten (10) Business Days after the date of the second Party's notice and attempt in good faith to satisfactorily resolve the dispute.
- 3 If the dispute shall fail to be resolved pursuant to Paragraph 2 within thirty (30) Business Days of the meeting referred to then, save where expressly stated to the contrary, either Party may refer the matter to the Regulatory Authority for resolution.
4. If the dispute is of a type which a provision of this Agreement states may be referred for resolution by an Expert, the following provisions shall apply between the Parties in relation to such dispute:
 - (a) The Expert shall be appointed by the Parties, or in default of agreement upon such appointment within seven (7) days of a Party notifying the other Party of its decision to refer the matter to an Expert, the Expert shall be appointed by the President for the time being of the Institution of Engineers of Ireland in the case of a technical dispute and the President for the time being of the Institute of Chartered Accountants in Ireland in the case of a financial dispute.
 - (b) The Parties will refer matters, differences or disputes in issue between them to the appropriate Expert as determined by the reasonable agreement of the Parties. If the Parties do not agree upon whether the dispute is a technical or financial dispute within seven (7) days of a Party notifying the other Party of its decision to refer the matter to an Expert, the Expert shall be appointed by the President for the time being of the Institute of Chartered Accountants in Ireland.

- (c) The Expert will resolve or settle such matter or dispute in such manner as he shall in his absolute discretion see fit. The Expert shall be requested to reach his decision within thirty (30) days of the matter being referred to him. Any decision of the Expert shall be final and binding on the Parties.
- (d) Unless otherwise determined by the Expert, the costs of the Expert in settling or determining such matter or dispute shall be borne equally by the Parties

Schedule 7

Address Details, Billing Address of EirGrid and Address Details of The Service Provider

1. EirGrid plc

EirGrid plc
The Oval
160 Shelbourne Road
Ballsbridge
Dublin 4

For the attention of

Chief Executive

b) Billing Address

Accounts Payable
EirGrid plc
The Oval
160 Shelbourne Road
Ballsbridge
Dublin 4

For the attention of

Accounts Payable

2. SERVICE PROVIDER

[insert address]

For the attention of

[insert name]

Schedule 8

Banking Details of The Service Provider

SERVICE PROVIDER

Bank Name

Address

Account Name

Sort Code

Account Number

Schedule 9

Part 1 – Generating Units

Part 2 – Operating Parameters

Unit:

Name	Variable	Units	Values
Designated Black Start Station			
Contracted Black Start Capability	CBSC	MW	
Contracted Black Start Time	CBST	Minutes	
Black Start Threshold MW Availability	BSTHMTWA		
Contracted Reactive Power (Production)	CRPP	MVAr	
Contracted Reactive Power (Absorption)	CRPC	MVAr	
Contracted POR	CPOR	MW	
Contracted SOR	CSOR	MW	
Contracted TOR1	CTOR1	MW	
Contracted TOR2	CTOR2	MW	
Contracted RR	CRR	MW	
Minimum MW for POR	MINPOR	MW	
Minimum MW for SOR	MINSOR	MW	
Minimum MW for TOR1	MINTOR1	MW	
Minimum MW for TOR2	MINTOR2	MW	
Minimum MW for RR	MINRR	MW	
POR Decrement Rate	PORDR	Number	
SOR Decrement Rate	SORDR	Number	
TOR1 Decrement Rate	TOR1DR	Number	
TOR2 Decrement Rate	TOR2DR	Number	
RR Decrement Rate	RRDR	Number	

Registered Capacity	RCAP	MW	
Governor Droop	DROOP	%	
Correction Factor Consumption	CORRC	Number	
Correction Factor Production	CORRP	Number	
House Load	HL	MW	
Unit Loss Factor	ULF	Number	