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| NPRR Number | [1278](https://www.ercot.com/mktrules/issues/NPRR1278) | NPRR Title | Establishing Advanced Grid Support Service as an Ancillary Service |
| Date Posted | March 30, 2025 |
|  |  |
| Requested Resolution  | Normal |
| Nodal Protocol Sections Requiring Revision  | 2.1, Definitions2.2, Acronyms and Abbreviations3.14, Contracts for Reliability Resources and Emergency Response Service Resources3.14.6, Advance Grid Support (new)6.6.15 Advanced Grid Support Capacity (new)6.6.15.1, Advanced Grid Support Hourly Availability Fee Payment (new)6.6.15.2, Advanced Grid Support Capacity Charge (new)8.1.1.2.1.8, AGSS Testing and Qualification (new)16.20, Resources Providing Advanced Grid Support Service (new)22, Attachment Q, Standard Form Advanced Grid Support Service (AGSS) Agreement (new)22, Attachment R, Standard Form Amendment to Advanced Grid Support Service (AGSS) Agreement (new) |
| Related Documents Requiring Revision/Related Revision Requests | None |
| Revision Description | In order to fulfill the Public Utility Commission of Texas’s (PUCT’s) blueprint requirement for a compensated service to maintain grid stability, this Nodal Protocol Revision Request (NPRR) creates an Advanced Grid Support Service (AGSS). AGSS will incent Inverter-Based Resources (IBRs), particularly Energy Storage Resources (ESRs), to provide valuable stability support to the ERCOT grid and will do so more quickly and efficiently than a mandate, as qualifications are clearly stated, without punitive and unclear compliance mechanisms, which may slow technology growth altogether. This NPRR defines Resource capabilities and provides for compensation based on an annual bidding process, similar to Black Start Service (BSS). |
| Reason for Revision |  [Strategic Plan](https://www.ercot.com/files/docs/2023/08/25/ERCOT-Strategic-Plan-2024-2028.pdf) Objective 1 – Be an industry leader for grid reliability and resilience [Strategic Plan](https://www.ercot.com/files/docs/2023/08/25/ERCOT-Strategic-Plan-2024-2028.pdf) Objective 2 - Enhance the ERCOT region’s economic competitiveness with respect to trends in wholesale power rates and retail electricity prices to consumers [Strategic Plan](https://www.ercot.com/files/docs/2023/08/25/ERCOT-Strategic-Plan-2024-2028.pdf) Objective 3 - Advance ERCOT, Inc. as an independent leading industry expert and an employer of choice by fostering innovation, investing in our people, and emphasizing the importance of our mission General system and/or process improvement(s) Regulatory requirements ERCOT Board/PUCT Directive*(please select ONLY ONE – if more than one apply, please select the ONE that is most relevant)* |
| Justification of Reason for Revision and Market Impacts | In the “Approval of Blueprint for Wholesale Electric Market Design and Directives to ERCOT,” filed on December 6, 2021, which was intended as the blueprint to address ERCOT market design issues identified during and after Winter Storm Uri, the PUCT concluded that “the ERCOT market will develop a product to compensate valuable voltage support service that will help maintain grid stability as more inverter-based resources enter the market.” To date, no stability or voltage support service with compensation, has been designed or proposed. Moreover, in Nodal Operating Guide Revision Request (NOGRR) 272, Advanced Grid Support Requirements for Inverter-Based ESRs, ERCOT intends that “proposed requirements will help improve grid stability and resilience to maintain stable operation of the ERCOT Transmission Grid in this context in which IBRs are predominant.” This proposal mandates that valuable grid stability services be provided with no compensation and invokes an inaccurate and problematic cost-causation argument that would set a precedent for other Ancillary Services. Markets outside of ERCOT have had success with providing their grids with stability services through compensated products. For example, the United Kingdom’s Electric System Operator (“ESO”), has seen ESRs provide commercially available grid forming technology, under a “stability pathfinder” which is a paid, voluntary request for proposals for stability services. Grid-forming battery energy storage was first awarded under an ESO pathfinder in 2022. The ESO has already further gone beyond the pathfinders towards creating markets for stability services, both near-term procurement (day-ahead) and long-term (one-year plus out), and grid-forming battery energy storage is contracted to provide 12% of Great Britain’s inertia by 2026.  |

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| Sponsor |
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| Cell Number | 832-435-7815 / 832-326-1238 |
| Market Segment | Independent Generator |

|  |
| --- |
| **Market Rules Staff Contact** |
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| **Phone Number** | 512-248-6464 |

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| Proposed Protocol Language Revision |

## 2.1 DEFINITIONS

**Advanced Grid Capable Resource**

An Inverter-Based Resource (IBR) that interconnects to the ERCOT Transmission Grid that can maintain an internal voltage phasor that is constant or near-constant in the sub-transient to transient timeframe. An IBR that can respond to changes in the external system and maintain IBR control stability during normal and transient conditions. The voltage phasor can be controlled to maintain synchronism with the ERCOT Transmission Grid and regulate real power and Reactive Power appropriately to support the ERCOT Transmission Grid

Advanced Grid Support Service (AGSS)

An Ancillary Service provided by an Inverter-Based Resource (IBR) able to provide specific grid support electrical characteristics as determined by ERCOT for the support of the ERCOT Transmission Grid.

**Resource Attribute**

Specific qualities associated with various Resources (i.e., specific aspects of a Resource or the services the Resource is qualified to provide).

***Aggregate Generation Resource (AGR)***

A Generation Resource that is an aggregation of generators, with the exception of Intermittent Renewable Resources (IRRs) pursuant to paragraph (13) of Section 3.10.7.2, Modeling of Resources and Transmission Loads, each of which is less than 20 MW in output, which share identical operational characteristics and are located behind the same Main Power Transformer (MPT).

***Advanced Grid Resource (AGR)***

An Inverter-Based Resource (IBR) under contract with ERCOT to provide Advanced Grid Support Service (AGSS).

***Black Start Resource***

A Generation Resource under contract with ERCOT to provide Black Start Service (BSS).

***Combined Cycle Train***

The combinations of gas turbines and steam turbines in an electric generation plant that employs more than one thermodynamic cycle. For example, a Combined Cycle Train refers to the combination of gas turbine generators (operating on the Brayton Cycle) with turbine exhaust waste heat boilers and steam turbine generators (operating on the Rankine Cycle) for the production of electric power. In the ERCOT market, Combined Cycle Trains are each registered as a plant that can operate as a Generation Resource in one or more Combined Cycle Generation Resource configurations.

***Decommissioned Generation Resource***

A Generation Resource for which a Resource Entity has submitted a Notification of Suspension of Operations or a Notification of Change of Generation Resource Designation, for which ERCOT has declined to execute a Reliability Must-Run (RMR) Agreement, and which has been decommissioned and permanently retired.

***Dynamically Scheduled Resource (DSR)***

A Resource that has been designated by the Qualified Scheduling Entity (QSE), and approved by ERCOT, as a DSR status-type and that follows a DSR Load.

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| ***[NPRR1000: Delete the definition “Dynamically Scheduled Resource (DSR)” above upon system implementation.]*** |

***Intermittent Renewable Resource (IRR)***

A Generation Resource that can only produce energy from variable, uncontrollable Resources, such as wind, solar, or run-of-the-river hydroelectricity.

***Intermittent Renewable Resource (IRR) Group***

A group of two or more IRRs whose performance in responding to Security-Constrained Economic Dispatch (SCED) Dispatch Instructions will be assessed as an aggregate for Generation Resource Energy Deployment Performance (GREDP) and Base Point Deviation. An IRR Group cannot contain any IRRs that are Split Generation Resources. Additionally, only IRRs that have the same Resource Node can be mapped to an IRR Group. Resource Entities can choose to group IRRs and shall provide the grouping information in a timely manner for ERCOT review prior to the scheduled database loads.

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| ***[NPRR1013: Replace the definition “Intermittent Renewable Resource (IRR) Group” above with the following upon system implementation of the Real-Time Co-Optimization (RTC) project:]******Intermittent Renewable Resource (IRR) Group***A group of two or more IRRs whose performance in responding to Security-Constrained Economic Dispatch (SCED) Dispatch Instructions will be assessed as an aggregate for Generation Resource Energy Deployment Performance (GREDP) and Set Point Deviation. An IRR Group cannot contain any IRRs that are Split Generation Resources. Additionally, only IRRs that have the same Resource Node can be mapped to an IRR Group. Resource Entities can choose to group IRRs and shall provide the grouping information in a timely manner for ERCOT review prior to the scheduled database loads. |

***Inverter-Based Resource (IBR)***

A Resource that is connected to the ERCOT System either completely or partially through a power electronic converter interface.

***Mothballed Generation Resource***

A Generation Resource for which a Resource Entity has submitted a Notification of Suspension of Operations, for which ERCOT has declined to execute a Reliability Must-Run (RMR) Agreement, and which has not been decommissioned and retired.

***Quick Start Generation Resource (QSGR)***

A Generation Resource that in its cold-temperature state can come On-Line within ten minutes of receiving ERCOT notice and has passed an ERCOT QSGR test that establishes an amount of capacity that can be deployed within a ten-minute period.

***Split Generation Resource***

Where a Generation Resource has been split to function as two or more independent Generation Resources in accordance with Section 10.3.2.1, Generation Resource Meter Splitting, and Section 3.10.7.2, Modeling of Resources and Transmission Loads, each such functionality independent Generation Resource is a Split Generation Resource.

***Switchable Generation Resource (SWGR)***

A Generation Resource that can be connected to either the ERCOT Transmission Grid or a non-ERCOT Control Area.

## 2.2 ACRONYMS AND ABBREVIATIONS

**AGR** Advanced Grid Resource

**AGSS** Advanced Grid Support Service

3.14 Contracts for Reliability Resources and Emergency Response Service Resources

(1) ERCOT shall procure Reliability Must-Run (RMR) Service, Black Start Service (BSS) Emergency Response Service (ERS), or Advanced Grid Support Service (AGSS) through Agreements.

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| ***[NPRR885: Replace paragraph (1) above with the following upon system implementation:]***(1) ERCOT shall procure Reliability Must-Run (RMR) Service, Must-Run Alternative (MRA) Service, Black Start Service (BSS), Emergency Response Service (ERS), or Advanced Grid Support Service (AGSS) through Agreements. |

3.14.6 Advance Grid Support

(1) Each Inverter-Based Resource (IBR) providing Advanced Grid Support Service (AGSS) must meet the requirements specified in these Protocols.

(2) Each IBR providing AGSS must meet the technical requirements specified in Section 8.1.1, QSE Ancillary Service Performance Standards, and Section 8.1.1.1, Ancillary Service Qualification and Testing.

(3) Bids for AGSS are due on or before February 15th of each yearly period. Bids must be evaluated based on evaluation criteria attached as an appendix to the request for bids and contracted by December 31st for the following yearly period.

(a) Resources shall disclose any weather-related limitations that could affect the Resource’s ability to provide AGSS as part of a bid to provide AGSS.

(b) AGSS bids shall include the hourly availability price.

(c) When a Resource is selected to provide AGSS, the Advanced Grid Resource shall be required to complete all applicable testing requirements as specified in Section 8.1.1.2.1.8, AGR Qualification and Testing.

(4) ERCOT may schedule unannounced Advanced Grid Support Service testing, to verify that AGSS is operable as specified in Section 8.1.1.2.1.8.

(6) ERCOT shall periodically determine and review the location and number of Advanced Grid Resource(s) (AGR(s)) required. ERCOT and providers of this service shall meet the requirements as specified in these Protocols.

(7) A Resource Entity representing an AGR may request that an alternate IBR be substituted in place of the original AGR during the yearly term of an executed Standard Form Advanced Grid Support Service Agreement (Section 22, Attachment Q, Standard Form Advanced Grid Support Service Agreement) if the alternate IBR meets testing and verification under established qualification criteria to ensure AGSS.

(a) ERCOT, in its sole discretion, may reject a Resource Entity’s request for an alternate IBR and will provide the Resource Entity an explanation of such rejection.

(b) If ERCOT accepts the alternative IBR as the substituted AGR, such acceptance shall not affect the original terms, conditions and obligations of the Resource Entity under the Standard Form Advanced Grid Support Service Agreement. The Resource Entity shall submit to ERCOT an Amendment to Standard Form Advanced Grid Support Service Agreement (Section 22, Attachment R, Amendment to Standard Form Advance Grid Support Service) after qualification criteria has been met.

(8) For the purpose of the Advanced Grid Support Hourly Availability Fee as described in Section 6.6.15.1, Advanced Grid Support Sevice Fee Payment, the AGSS Availability Reduction Factor shall be determined by using the availability for the original AGR and any substituted AGR(s), as appropriate for the rolling 4380-hour period of the evaluation.

(9) Each IBR selected to provide AGSS shall be prepared and able to provide AGSS at all hours of operation as may be required by ERCOT, subject only to the limitations described in ERCOT Protocols or the Advanced Grid Support Service Agreement.

6.6.15 Advanced Grid Support Capacity

6.6.15.1 Advanced Grid Support Hourly Availability Fee Payment

(1) ERCOT shall pay an Hourly Availability Fee to the QSEs representing an Advanced Grid Resource (AGR). This Availability fee is determined through a competitive bi-annual bidding process, with an adjustment for reliability based on a six-month rolling Resouce Unit availability equal to 85% in accordance with Section 22, Attachment Q, Standard Form Advanced Grid Agreement.

(2) The Advanced Grid Hourly Availability Fee is subject to reduction and claw-back provisions as described in Section 8.1.1.2.1.15, System Advanced Grid Capability Qualification and Testing.

(3) ERCOT shall pay an Advanced Grid Hourly Availability Fee payment to each QSE for each Advanced Grid Resource. The payment for each hour is calculated as follows:

AGSSAMT *q, r* = (-1) \* AGSSPR *q, r* \* AGSSARF *q, r*

Where:

Advanced Grid Service Availability Reduction Factor

If (AGSSHREAF *q, r* ≥ 0.85)

AGSSARF *q, r* = 1

Otherwise

AGSSARF *q, r* = Max (0, 1 - (0.85 - AGSSHREAF *q, r*) \* 2)

Advanced Grid Service Hourly Rolling Equivalent Availability Factor

If (AGSSEH *q, r* < 4380)

AGSSHREAF *q, r* = 1

Otherwise

AGSSHREAF *q, r* = ( AGSSAFLAG *q,r,hr*) / 4380

Availability for a Combined Cycle Train will be determined pursuant to contractual terms but no more than once per hour.

The above variables are defined as follows:

| Variable | Unit | Definition |
| --- | --- | --- |
| AGSSAMT *q, r* | $ | *Advanced Grid Service Amount per QSE per Resource by hour*—The Availability payment to QSE *q* for the Advanced Grid Service (AGSS) provided by Resource *r*, for the hour. |
| AGSSPR *q, r* | $ per hour | *Advanced Grid Service Price per QSE per Resource*—The availability price of AGSS Resource *r* represented by QSE *q*, as specified in the Advanced Grid Agreement.  |
| AGSSARF *q, r* | none | *Advanced Grid Service Availability Reduction Factor per QSE per Resource by hour*—The availability reduction factor of Resource *r* represented by QSE *q* under the Advanced Grid Agreement, for the hour.  |
| AGSSHREAF *q, r* | none | *Advanced Grid Service Hourly Rolling Equivalent Availability Factor per QSE per Resource by hour*—The equivalent availability factor of the AGSS Resource *r* represented by QSE *q* over 4,380 hours, for the hour.  |
| AGSSEH *q, r* | none | *Advanced Grid Service Elapsed number of Hours per QSE per Resource by hour*—The number of the elapsed hours of AGSS Resource *r* represented by QSE *q* since the beginning of the AGSS Agreement, for the hour.  |
| AGSSAFLAG *q, r, hr* | none | *Advanced Grid Service Availability Flag per QSE per Resource by hour*—The flag of the availability of AGSS Resource *r* represented by QSE *q*, 1 for available and 0 for unavailable, for the hour.  |
| *q* | none | A QSE. |
| *r* | none | A AGSS Resource. |
| *hr* | none | The index of a given hour and the previous 4379 hours. |
| 4380 | none | The number of hours in a six-month period. |

(3) The total of the payments to each QSE for all AGSS Resources represented by this QSE for a given hour is calculated as follows:

AGSSAMTQSETOT *q* = AGSSAMT *q, r*

The above variables are defined as follows:

| Variable | Unit | Definition |
| --- | --- | --- |
| AGSSAMTQSETOT *q* | $ | *Advanced Grid Service Amount QSE Total per QSE*⎯The total of the payments to QSE *q* for AGSS provided by all the AGSS Resources represented by this QSE for the hour *h*. |
| AGSSAMT *q, r* | $ | *Advanced Grid Service Amount per QSE per Resource*—The availability payment to QSE *q* for AGSS provided by Resource *r*, for the hour.  |
| *q* | none | A QSE. |
| *r* | none | A AGSS Resource. |

6.6.15.2 Advanced Grid Support Capacity Charge

(1) ERCOT shall allocate the total Advanced Grid Support Capacity Charge payment to the QSEs representing Loads based on a Load Ratio Share (LRS). The resulting charge to each QSE for a given hour is calculated as follows:

LAAGSSAMT *q* = (-1) \* AGSSAMTTOT \* HLRS *q*

Where:

BSSAMTTOT = BSSAMTQSETOT *q*

The above variables are defined as follows:

|  |  |  |
| --- | --- | --- |
| Variable | Unit | Definition |
| LAAGSSAMT *q* | $ | *Load-Allocated Advance Grid Support Service Amount per QSE*—The charge allocated to QSE *q* for the AGSS, for the hour. |
| BSSAMTQSETOT *q* | $ | *Advanced Grid Support Service Amount QSE Total per QSE*—The Advanced Grid Support Service payment to QSE *q* for AGSS Resource *r*, for the hour. |
| BSSAMTTOT | $ | *Advanced Grid Support Service Amount QSE Total ERCOT-Wide —* The total of the payments to QSE *q* for AGSS provided by all the BSS Resource represented by this QSE for the hour h. |
| HLRS *q* | none | The hourly LRS calculated for QSE *q* for the hour. See Section 6.6.2.4, QSE Load Ratio Share for an Operating Hour. |
| *q* | none | A QSE. |

**8.1.1.2.1.8 AGSS Testing and Qualification**

(1) An Inverter-Based Resource (IBR) seeking qualification to provide Advanced Grid Support Service (AGSS) as an Advanced Grid Capable Resourse must maintainan internal voltage phasor that is constant or near-constant in the sub-transient to transient timeframe. An IBR that can respond to changes in the external system and maintain ESR control stability during normal and transient conditions. The voltage phasor can be controlled to maintain synchronism with the ERCOT Transmission Grid and regulate real power and Reactive Power appropriately to support the ERCOT Transmission Grid

(a) For inverter-based ESRs qualifying for AGSS, results for the following model quality tests shall be provided to demonstrate acceptable model performance. Additional details about each test, including the set up and description of desirable response, are included in the Dynamics Working Group Procedure Manual:

(i) Flat start test: A no-disturbance test shall be performed to demonstrate appropriate model initialization and the Facility’s dynamic response under a non-trancient condition.

(ii) Small voltage disturbance test: A voltage step increase and decrease shall be applied to the POI to demonstrate the Facility’s dynamic response.

(iii) Large voltage disturbance test: The high and low voltage ride-through profiles as described in Nodal Operating Guide Section 2.9.1, shall be applied to the POI to demonstrate the Facility’s dynamic response.

(iv) Frequency change and inertia response test: A frequency change increase and decrease shall be applied to the POI to demonstrate the Facility’s dynamic response. The performance of this test will be assessed when operating within the inverter current limit.

(v) System strength test: The Facility shall be tested under multiple equivalent short circuit ratios, as described in the Dynamics Working Group Procedure Manual. This tests the robustness of the model to varying system conditions.

(vi) Phase angle jump test: A step change is applied to the phase angle. This tests the capability to maintain the voltage phasor and resistance to phase angle change. The performance of this test will be assessed when operating within the inverter current limit.

(vii) Loss of synchronous machine test: This test confirms the performance of the Facility to maintain synchronism and voltage phasor after changes occur on the ERCOT Transmission System. This test is not intended to require the Facility to operate reliably without connecting to the ERCOT Transmission Grid.

**16.20 Resources Providing Advanced Grid Support Service**

(1) Any Entity providing Advanced Grid Support Service (AGSS) must comply with all the requirements to become a Resource Entity under this Section and must sign a Standard Form Advanced Grid Support Support Agreement (Section 22, Attachment Q, Standard Form Advanced Grid Support Service Agreement).

**ERCOT Nodal Protocols**

**Section 22**

**Attachment Q: Standard Form** **Advanced Grid Support Service (AGSS) Agreement**

**TBD**

Standard Form Advanced Grid Support Service (AGSS) Agreement

Between

Insert Participant

and

Electric Reliability Council of Texas, Inc.

 This Advanced Grid Support Service Agreement (“Agreement”), effective as of \_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_ (“Effective Date”), is entered into by and between Insert Participant, a [Insert State of Registration and Entity type] (“Participant”) and Electric Reliability Council of Texas, Inc., a Texas non-profit corporation (“ERCOT”).

Recitals

WHEREAS:

A. Participant is a Resource Entity as defined in the ERCOT Protocols, and Participant intends to provide Advanced Grid Support Service (AGSS)

B. ERCOT is the Independent Organization certified under the Public Utility Regulatory Act, Tex. Util. Code Ann. § 39.151 (Vernon 1998 & Supp. 2007) (PURA) for the ERCOT Region; and

C. The Parties enter into this Agreement in order to establish the terms and conditions by which ERCOT and Participant will discharge their respective duties and responsibilities under the ERCOT Protocols.

Agreements

NOW, THEREFORE, in consideration of the mutual covenants and promises contained herein, ERCOT and Participant (the “Parties”) hereby agree as follows:

Section 1. Resource-Specific Terms.

A. Start Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

B. Advanced Grid Capable Resource

(1) Description of Advanced Grid Capable Resource [including location, number of inverters, metering scheme, etc.]:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, as described in more detail on Exhibit 1.

(2) Nameplate Capacity in MW: \_\_\_\_\_

(3) Delivery Point: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(4) Revenue Meter Location (use Resource IDs): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

C. Price:

Hourly Availability Price: $\_\_\_\_\_\_\_\_ per hour

D. Notice. All notices required to be given under this Agreement shall be in writing, and shall be deemed delivered three days after being deposited in the U.S. mail, first class postage prepaid, registered (or certified) mail, return receipt requested, addressed to the other Party at the address specified in this Agreement or shall be deemed delivered on the day of receipt if sent in another manner requiring a signed receipt, such as courier delivery or Federal Express delivery. Either Party may change its address for such notices by delivering to the other Party a written notice referring specifically to this Agreement. Notices required under the ERCOT Protocols shall be in accordance with the applicable Section of the ERCOT Protocols.

If to ERCOT:

Electric Reliability Council of Texas, Inc.

8000 Metropolis Drive (Building E), Suite 100

Austin, Texas 78744

Tel No. (512) 225-7000

If to Participant:

[Insert Participant Name]

[Insert Contact Person/Dept.]

[Insert Street Address]

[Insert City, State Zip]

[Insert Telephone]

[Insert Facsimile]

Section 2. Definitions.

A. Unless herein defined, all definitions and acronyms found in the ERCOT Protocols shall be incorporated by reference into this Agreement.

B. “ERCOT Protocols” shall mean the document adopted by ERCOT, including any attachments or exhibits referenced in that document, as amended from time to time, that contains the scheduling, operating, planning, reliability, and Settlement (including Customer registration) policies, rules, guidelines, procedures, standards, and criteria of ERCOT. For the purposes of determining responsibilities and rights at a given time, the ERCOT Protocols, as amended in accordance with the change procedure(s) described in the ERCOT Protocols, in effect at the time of the performance or non-performance of an action, shall govern with respect to that action.

Section 3. Term and Termination.

A. Term.

(1) This Agreement is effective beginning on the Effective Date.

(2) The full term (“Full Term”) of this Agreement begins on the Start Date and continues for a period of one year.

B. Termination by Participant. Participant may, at its option, terminate this Agreement immediately upon the failure of ERCOT to continue to be certified by the Public Utility Commission of Texas (PUCT) as the Independent Organization under PURA §39.151 without the immediate certification of another Independent Organization under PURA §39.151.

C. Effect of Termination and Survival of Terms. If this Agreement is terminated by a Party pursuant to the terms hereof, the rights and obligations of the Parties hereunder shall terminate, except that the rights and obligations of the Parties that have accrued under this Agreement prior to the date of termination shall survive.

Section 4. Representations, Warranties, and Covenants.

A. Participant represents, warrants, and covenants that:

(1) Participant is duly organized, validly existing, and in good standing under the laws of the jurisdiction under which it is organized, and is authorized to do business in Texas;

(2) Participant has full power and authority to enter into this Agreement and perform all of Participant’s obligations, representations, warranties, and covenants under this Agreement;

(3) Participant’s past, present, and future agreements or Participant’s organizational charter or bylaws, if any, or any provision of any indenture, mortgage, lien, lease, agreement, order, judgment, or decree to which Participant is a party or by which its assets or properties are bound do not materially affect performance of Participant’s obligations under this Agreement;

(4) The execution, delivery, and performance of this Agreement by Participant have been duly authorized by all requisite action of its governing body;

(5) Except as set out in an exhibit (if any) to this Agreement, ERCOT has not, within the 24 months preceding the Effective Date, terminated for Default any Prior Agreement with Participant, any company of which Participant is a successor in interest, or any Affiliate of Participant;

(6) If any Defaults are disclosed on any such exhibit mentioned in subsection 4(A)(5), either (a) ERCOT has been paid, before execution of this Agreement, all sums due to it in relation to such Prior Agreement, or (b) ERCOT, in its reasonable judgment, has determined that this Agreement is necessary for system reliability, and Participant has made alternate arrangements satisfactory to ERCOT for the resolution of the Default under the Prior Agreement;

(7) Participant has obtained, or will obtain prior to beginning performance under this Agreement, all licenses, registrations, certifications, permits, and other authorizations and has taken, or will take prior to beginning performance under this Agreement, all actions required by applicable laws or governmental regulations except licenses, registrations, certifications, permits or other authorizations that do not materially affect performance under this Agreement;

(8) Participant is not in violation of any laws, ordinances, or governmental rules, regulations, or order of any Governmental Authority or arbitration board materially affecting performance of this Agreement and to which it is subject;

(9) Participant is not Bankrupt, does not contemplate becoming Bankrupt nor, to its knowledge, will become Bankrupt;

(10) Participant acknowledges that it has received and is familiar with the ERCOT Protocols; and

(11) Participant acknowledges and affirms that the foregoing representations, warranties, and covenants are continuing in nature throughout the term of this Agreement. For purposes of this Section, “materially affecting performance” means resulting in a materially adverse effect on Participant’s performance of its obligations under this Agreement.

B. ERCOT represents, warrants, and covenants that:

(1) ERCOT is the Independent Organization certified under PURA §39.151 for the ERCOT Region;

(2) ERCOT is duly organized, validly existing, and in good standing under the laws of Texas, and is authorized to do business in Texas;

(3) ERCOT has full power and authority to enter into this Agreement and perform all of ERCOT’s obligations, representations, warranties and covenants under this Agreement;

(4) ERCOT’s past, present and future agreements or ERCOT’s organizational charter or bylaws, if any, or any provision of any indenture, mortgage, lien, lease, agreement, order, judgment, or decree to which ERCOT is a party or by which its assets or properties are bound do not materially affect performance of ERCOT’s obligations under this Agreement;

(5) The execution, delivery, and performance of this Agreement by ERCOT have been duly authorized by all requisite action of its governing body;

(6) ERCOT has obtained, or will obtain prior to beginning performance under this Agreement, all licenses, registrations, certifications, permits and other authorizations and has taken, or will take prior to beginning performance under this Agreement, all actions required by applicable laws or governmental regulations except licenses, registrations, certifications, permits or other authorizations that do not materially affect performance under this Agreement;

(7) ERCOT is not in violation of any laws, ordinances, or governmental rules, regulations or order of any Governmental Authority or arbitration board materially affecting performance of this Agreement and to which it is subject;

(8) ERCOT is not Bankrupt, does not contemplate becoming Bankrupt nor, to its knowledge, will become Bankrupt; and

(9) ERCOT acknowledges and affirms that the foregoing representations, warranties, and covenants are continuing in nature throughout the term of this Agreement. For purposes of this Section, “materially affecting performance” means resulting in a materially adverse effect on ERCOT’s performance of its obligations under this Agreement.

Section 5. Participant Obligations.

A. Participant shall comply with, and be bound by, all ERCOT Protocols, and ERCOT Operating Guides as they pertain to operation of a Advanced Grid Capable Resource by a Resource Entity.

B. Participant shall not take any action, without first providing written notice to ERCOT and reasonable time for ERCOT and Market Participants to respond, that would cause a Market Participant within the ERCOT Region that is not a “public utility” under the Federal Power Act, 16 U.S.C. § 824(e)(2005), or ERCOT itself to become a “public utility” under the Federal Power Act or become subject to the plenary jurisdiction of the Federal Energy Regulatory Commission (FERC).

Section 6. ERCOT Obligations.

A. ERCOT shall comply with, and be bound by, all ERCOT Protocols.

B. ERCOT shall not take any action, without first providing written notice to Participant and reasonable time for Participant and other Market Participants to respond, that would cause Participant if Participant is not a “public utility” under the Federal Power Act, or ERCOT itself to become a “public utility” under the Federal Power Act or become subject to the plenary jurisdiction of the FERC. If ERCOT receives any notice similar to that described in Section 5(B) from any Market Participant, ERCOT shall provide notice of same to Participant.

Section 7. Advanced Grid Support Service Decertification.

If a Advanced Grid Capable Resource does not remain certified, or if it is in default as described in Section 10(A)(2)(e) during the term of this Agreement, then the Hourly Availability Fee is reduced to zero for the remainder of the Full Term, and Participant will be required to refund to ERCOT certain amounts paid by ERCOT under this Agreement during the Full Term as described in the ERCOT Protocols.

Section 8. Operation.

A. Advanced Grid Capable Resource Maintenance. The Advanced Grid Capable Resource for the contract year shall report all planned and forced outages in accordance with these protocols

B. Planning Data.

Participant shall timely report to ERCOT those items and conditions necessary for ERCOT’s internal planning and compliance with ERCOT’s guidelines in effect from time to time. The information supplied must include, without limitation, the following:

(1) Availability Plan for each hour of the next Operating Day submitted by 0600 of the preceding day; and

(2) Revised Availability Plan reflecting changes in hourly availability of Advanced Grid Capability status as indicated in a revised Availability Plan as soon as reasonably practical, but in no event later than 60 minutes after the event that caused the change.

C. Testing.

 Participant shall perform any ERCOT requested performance testing as described in these Protocols.

D. Delivery.

(1) Each Inverter-Based Resource (IBR) selected to provide AGSS shall be prepared and able to provide AGSS at all hours of operation as may be required by ERCOT, subject only to the limitations described in ERCOT Protocols or the Advanced Grid Support Service Agreement.

Section 9. Payment.

A. Hourly Standby Fee Payments. ERCOT shall pay Participant the Hourly Standby Fee as described below, except as specified otherwise in Section 7 above.

(1) Availability

(a) “Available” means, with respect to a given hour, that Participant has declared, in its Availability Plan.

(b) The Advanced Grid Capable Resourceis not Available if:

(i) The Advanced Grid Capable Resource has failed a unannounced performance test as described in the ERCOT.

(c) ERCOT shall use the Advanced Grid Capable Resource’s Availability Plan as the source of Advanced Grid Capable Resource availability information.

(2) “Advanced Grid Support Service hourly Rolling Equivalent Availability Factor (AGSSHREAF)” means, with respect to a given hour, the quotient (expressed as a percentage) of (a) the number of hours, including the given hour and the immediately preceding 4,379 hours, in which the Advanced Grid Capable Resource was Available, divided by (b) 4,380; provided that, to the extent that 4,379 hours have not elapsed since the Start Date (the difference between 4,379 and the hours that have elapsed being referred to herein as the “Assumed Hours”), the Advanced Grid Capable Resource shall be deemed, for purposes of this calculation, to be Available for the Assumed Hour unless the Advanced Grid Capable Resource has failed to perform in response to a Dispatch Instruction to come On-Line has been issued. Participant’s failure to perform shall be subject to possible claw-back of its Hourly Standby Fee and reduced payment during the Assumed Hours period. A Force Majeure Event is treated the same as any other cause for unavailability for the purposes of calculating AGSSHREAF.

(3) “Hourly Standby Fee” means, with respect to a given hour, the result determined from the following table:

|  |  |
| --- | --- |
| Advanced Grid Support Service Hourly Rolling Availability Factor (AGSSHREAF) | Hourly Standby Fee |
| If AGSSHREAF is more than or equal to 85% | Hourly Standby Price ($) |
| If AGSSHREAF is less than 85% but more than 35% | Hourly Standby Price \* [100%-(85%-AGSSHREAF) \* 2] ($) |
| If AGSSHREAF is equal to or less than 35% | Zero |

Section 10. Default.

A. Event of Default.

(1) Failure by Participant to (i) pay when due, any payment or Financial Security obligation owed to ERCOT or its designee, if applicable, under any agreement with ERCOT (“Payment Breach”), or (ii) designate/maintain an association with a QSE (if required by the ERCOT Protocols) (“QSE Affiliation Breach”), shall constitute a material breach and event of default ("Default") unless cured within one (1) Business Day after ERCOT delivers written notice of the breach to Participant. Provided further that if such a material breach, regardless of whether such breach is cured within the allotted time after notice of the material breach, occurs more than three times within a rolling 12-month period, the fourth such breach shall constitute a Default.

(2) A material breach other than a Payment Breach or a QSE Affiliation Breach includes any material failure by Participant to comply with the ERCOT Protocols. A material breach under this subsection shall constitute an event of Default by Participant unless cured within fourteen (14) Business Days after delivery by ERCOT of written notice of the material breach to Participant.

Participant must begin work or other efforts within three (3) Business Days to cure such material breach after delivery of the breach notice by ERCOT, and must prosecute such work or other efforts with reasonable diligence until the breach is cured. Provided further that if a material breach, regardless of whether such breach is cured within the allotted time after notice of the material breach, occurs more than three (3) times within a 12-month period, the fourth such breach shall constitute a Default.

A material breach under this subsection shall not result in a Default if the breach cannot reasonably be cured within fourteen (14) Business Days, and Participant:

(a) Promptly provides ERCOT with written notice of the reasons why the breach cannot reasonably be cured within fourteen (14) Business Days;

(b) Begins to work or other efforts to cure the breach within three (3) Business Days after ERCOT’s delivery of the notice to Participant; and

(c) Prosecutes the curative work or efforts with reasonable diligence until the curative work or efforts are completed.

(3) The occurrence and continuation of any of the following events shall constitute an automatic Default by Participant:

(a) Participant becomes Bankrupt, except for the filing of a petition in involuntary bankruptcy, or similar involuntary proceeding, that is dismissed within 90 days thereafter;

(b) The Advanced Grid Capable Resource’s operation is abandoned without an intent to return it to operation during the Full Term;

(c) At any time, the Advanced Grid Support Service Hourly Rolling Equivalent Availability Factor (AGSSHREAF) is equal to or less than 50%; or

(d) An Available Advanced Grid Capable Resource is de-certified.

(4) Except as otherwise excused herein, a material breach of this Agreement by ERCOT, including any material failure by ERCOT to comply with the ERCOT Protocols, other than a Payment Breach, shall constitute a Default by ERCOT unless cured within fourteen (14) Business Days after delivery by Participant of written notice of the material breach to ERCOT. ERCOT must begin work or other efforts within three (3) Business Days to cure such material breach after delivery by Participant of written notice of such material breach by ERCOT and must prosecute such work or other efforts with reasonable diligence until the breach is cured. Provided further that if a material breach, regardless of whether such breach is cured within the allotted time after notice of the material breach, occurs more than three (3) times within a 12-month period, the fourth such breach shall constitute a Default.

(5) If, due to a Force Majeure Event, a Party is in breach with respect to any obligation hereunder, such breach shall not result in a Default by that Party.

B. Remedies for Default.

(1) ERCOT’s Remedies for Default. In the event of a Default by Participant, ERCOT may pursue any remedies ERCOT has under this Agreement, at law, or in equity, subject to the provisions of Section 12, Dispute Resolution, of this Agreement. In the event of a Default by Participant, if the ERCOT Protocols do not specify a remedy for a particular Default, ERCOT may, at its option, upon written notice to Participant, immediately terminate this Agreement, with termination to be effective upon the date of delivery of notice. In the event of Participant’s bankruptcy, Participant waives any right to challenge ERCOT’s right to set-off amounts ERCOT owes to Participant by the amount of any sums owed by Participant to ERCOT, including any amounts owed pursuant to the operation of the Protocols.

(2) Participant’s Remedies for Default.

(a) Unless otherwise specified in this Agreement or in the ERCOT Protocols, and subject to the provisions of Section 12, Dispute Resolution, of this Agreement, in the event of a Default by ERCOT, Participant’s remedies shall be limited to:

(i) Immediate termination of this Agreement upon written notice to ERCOT;

(ii) Monetary recovery in accordance with the Settlement procedures set forth in the ERCOT Protocols; and

(iii) Specific performance.

(b) However, in the event of a material breach by ERCOT of any of its representations, warranties or covenants, Participant’s sole remedy shall be immediate termination of this Agreement upon written notice to ERCOT.

(3) A Default or breach of this Agreement by a Party shall not relieve either Party of the obligation to comply with the ERCOT Protocols.

C. Force Majeure.

(1) If, due to a Force Majeure Event, either Party is in breach of this Agreement with respect to any obligation hereunder, such Party shall take reasonable steps, consistent with Good Utility Practice, to remedy such breach. If either Party is unable to fulfill any obligation by reason of a Force Majeure Event, it shall give notice and the full particulars of the obligations affected by such Force Majeure Event to the other Party in writing or by telephone (if followed by written notice) as soon as reasonably practicable, but not later than fourteen (14) calendar days, after such Party becomes aware of the event. A failure to give timely notice of the Force Majeure event shall constitute a waiver of the claim of Force Majeure Event. The Party experiencing the Force Majeure Event shall also provide notice, as soon as reasonably practicable, when the Force Majeure Event ends.

(2) Notwithstanding the foregoing, a Force Majeure Event does not relieve a Party affected by a Force Majeure Event of its obligation to make payments or of any consequences of non-performance pursuant to the ERCOT Protocols or under this Agreement, except that the excuse from Default provided by subsection 10(A)(5) above is still effective.

D. Duty to Mitigate. Except as expressly provided otherwise herein, each Party shall use commercially reasonable efforts to mitigate any damages it may incur as a result of the other Party’s performance or non-performance of this Agreement.

Section 11. Limitation of Damages and Liability and Indemnification.

A. EXCEPT AS EXPRESSLY LIMITED IN THIS AGREEMENT OR THE ERCOT PROTOCOLS, ERCOT OR PARTICIPANT MAY SEEK FROM THE OTHER, THROUGH APPLICABLE DISPUTE RESOLUTION PROCEDURES SET FORTH IN THE ERCOT PROTOCOLS, ANY MONETARY DAMAGES OR OTHER REMEDY OTHERWISE ALLOWABLE UNDER TEXAS LAW, AS DAMAGES FOR DEFAULT OR BREACH OF THE OBLIGATIONS UNDER THIS AGREEMENT; PROVIDED, HOWEVER, THAT NEITHER PARTY IS LIABLE TO THE OTHER FOR ANY SPECIAL, INDIRECT, PUNITIVE OR CONSEQUENTIAL DAMAGES OR INJURY THAT MAY OCCUR, IN WHOLE OR IN PART, AS A RESULT OF A DEFAULT UNDER THIS AGREEMENT, A TORT, OR ANY OTHER CAUSE, WHETHER OR NOT A PARTY HAD KNOWLEDGE OF THE CIRCUMSTANCES THAT RESULTED IN THE SPECIAL, INDIRECT, PUNITIVE OR CONSEQUENTIAL DAMAGES OR INJURY, OR COULD HAVE FORESEEN THAT SUCH DAMAGES OR INJURY WOULD OCCUR.

B. With respect to any dispute regarding a Default or breach by ERCOT of its obligations under this Agreement, ERCOT expressly waives any Limitation of Liability to which it may be entitled under the Charitable Immunity and Liability Act of 1987, Tex. Civ. Prac. & Rem. Code §84.006, or successor statute.

C. The Parties have expressly agreed that, other than subsections A and B of this Section, this Agreement shall not include any other limitations of liability or indemnification provisions, and that such issues shall be governed solely by applicable law, in a manner consistent with Section 13(A), Choice of Law and Venue, of this Agreement, regardless of any contrary provisions that may be included in or subsequently added to the ERCOT Protocols (outside of this Agreement).

Section 12. Dispute Resolution.

A. In the event of a dispute, including a dispute regarding a Default, under this Agreement, Parties to this Agreement shall first attempt resolution of the dispute using the applicable dispute resolution procedures set forth in the ERCOT Protocols.

B. In the event of a dispute, including a dispute regarding a Default, under this Agreement, each Party shall bear its own costs and fees, including, but not limited to attorneys’ fees, court costs, and its share of any mediation or arbitration fees.

Section 13. Miscellaneous.

A. Choice of Law and Venue. Notwithstanding anything to the contrary in this Agreement, this Agreement shall be deemed entered into and performable solely in Texas and, with the exception of matters governed exclusively by federal law, shall be governed by and construed and interpreted in accordance with the laws of the State of Texas that apply to contracts executed in and performed entirely within the State of Texas, without reference to any rules of conflict of laws. Neither Party waives primary jurisdiction as a defense; provided that any court suits regarding this Agreement shall be brought in a state or federal court located within Travis County, Texas, and the Parties hereby waive any defense of forum non-conveniens, except defenses under Tex. Civ. Prac. & Rem. Code §15.002(b).

B. Assignment.

(1) Notwithstanding anything herein to the contrary, a Party shall not assign or otherwise transfer all or any of its rights or obligations under this Agreement without the prior written consent of the other Party, which shall not be unreasonably withheld or delayed, except that a Party may assign or transfer its rights and obligations under this Agreement without the prior written consent of the other Party (if neither the assigning Party or the assignee is then in Default of any Agreement with ERCOT):

(a) Where any such assignment or transfer is to an Affiliate of the Party; or

(b) Where any such assignment or transfer is to a successor to or transferee of the direct or indirect ownership or operation of all or part of the Party, or its facilities; or

(c) For collateral security purposes to aid in providing financing for itself, provided that the assigning Party will require any secured party, trustee or mortgagee to notify the other Party of any such assignment. Any financing arrangement entered into by either Party pursuant to this Section will provide that prior to or upon the exercise of the secured party’s, trustee’s or mortgagee’s assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify the other Party of the date and particulars of any such exercise of assignment right(s). If requested by the Party making any such collateral assignment to a Financing Person, the other Party shall execute and deliver a consent to such assignment containing customary provisions, including representations as to corporate authorization, enforceability of this Agreement and absence of known Defaults, notice of material breach pursuant to Section 10(A), notice of Default, and an opportunity for the Financing Person to cure a material breach pursuant to Section 10(A) prior to it becoming a Default.

(2) An assigning Party shall provide prompt written notice of the assignment to the other Party. Any attempted assignment that violates this Section is void and ineffective. Any assignment under this Agreement shall not relieve either Party of its obligations under this Agreement, nor shall either Party’s obligations be enlarged, in whole or in part, by reason thereof.

C. No Third Party Beneficiary. Except with respect to the rights of the Financing Persons in subsection 13(B)(1)(c), (a) nothing in this Agreement nor any action taken hereunder shall be construed to create any duty, liability or standard of care to any third party, (b) no third party shall have any rights or interest, direct or indirect, in this Agreement or the services to be provided hereunder, and (c) this Agreement is intended solely for the benefit of the Parties, and the Parties expressly disclaim any intent to create any rights in any third party as a third party beneficiary to this Agreement or the services to be provided hereunder. Nothing in this Agreement shall create a contractual relationship between one Party and the customers of the other Party, nor shall it create a duty of any kind to such customers.

D. No Waiver. Parties shall not be required to give notice to enforce strict adherence to all provisions of this Agreement. No breach or provision of this Agreement shall be deemed waived, modified or excused by a Party unless such waiver, modification or excuse is in writing and signed by an authorized officer of such Party. The failure by or delay of either Party in enforcing or exercising any of its rights under this Agreement shall (a) not be deemed a waiver, modification or excuse of such right or of any breach of the same or different provision of this Agreement, and (b) not prevent a subsequent enforcement or exercise of such right. Each Party shall be entitled to enforce the other Party’s covenants and promises contained herein, notwithstanding the existence of any claim or cause of action against the enforcing Party under this Agreement or otherwise.

E. Headings. Titles and headings of paragraphs and sections within this Agreement are provided merely for convenience and shall not be used or relied upon in construing this Agreement or the Parties’ intentions with respect thereto.

F. Severability. In the event that any of the provisions, or portions or applications thereof, of this Agreement is finally held to be unenforceable or invalid by any court of competent jurisdiction, that determination shall not affect the enforceability or validity of the remaining portions of this Agreement, and this Agreement shall continue in full force and effect as if it had been executed without the invalid provision; provided, however, if either Party determines, in its sole discretion, that there is a material change in this Agreement by reason thereof, the Parties shall promptly enter into negotiations to replace the unenforceable or invalid provision with a valid and enforceable provision. If the Parties are not able to reach an agreement as the result of such negotiations within fourteen (14) days, either Party shall have the right to terminate this Agreement on three (3) days written notice.

G. Entire Agreement. Any exhibits attached to this Agreement are incorporated into this Agreement by reference and made a part of this Agreement as if repeated verbatim in this Agreement. This Agreement represents the Parties’ final and mutual understanding with respect to its subject matter. It replaces and supersedes any prior agreements or understandings, whether written or oral. No representations, inducements, promises, or agreements, oral or otherwise, have been relied upon or made by any Party, or anyone on behalf of a Party, that are not fully expressed in this Agreement. An agreement, statement, or promise not contained in this Agreement is not valid or binding.

H. Amendment. The standard form of this Agreement may only be modified through the procedure for modifying ERCOT Protocols described in the ERCOT Protocols. Any changes to the terms of the standard form of this Agreement shall not take effect until a new Agreement is executed between the Parties.

I. ERCOT’s Right to Audit Participant. Participant shall keep detailed records for a period of three years of all activities under this Agreement giving rise to any information, statement, charge, payment or computation delivered to ERCOT under the ERCOT Protocols. Such records shall be retained and shall be available for audit or examination by ERCOT as hereinafter provided. ERCOT has the right during Business Hours and upon reasonable written notice and for reasonable cause to examine the records of Participant as necessary to verify the accuracy of any such information, statement, charge, payment or computation made under this Agreement. If any such examination reveals any inaccuracy in any such information, statement, charge, payment or computation, the necessary adjustments in such information, statement, charge, payment, computation, or procedures used in supporting its ongoing accuracy will be promptly made.

J. Participant’s Right to Audit ERCOT. Participant’s right to data and audit of ERCOT shall be as described in the ERCOT Protocols and shall not exceed the rights described in the ERCOT Protocols.

K. Further Assurances. Each Party agrees that during the term of this Agreement it will take such actions, provide such documents, do such things and provide such further assurances as may reasonably be requested by the other Party to permit performance of this Agreement.

L. Conflicts. This Agreement is subject to applicable federal, state, and local laws, ordinances, rules, regulations, orders of any Governmental Authority and tariffs. Nothing in this Agreement may be construed as a waiver of any right to question or contest any federal, state and local law, ordinance, rule, regulation, order of any Governmental Authority, or tariff. In the event of a conflict between this Agreement and an applicable federal, state, and local law, ordinance, rule, regulation, order of any Governmental Authority or tariff, the applicable federal, state, and local law, ordinance, rule, regulation, order of any Governmental Authority or tariff shall prevail, provided that Participant shall give notice to ERCOT of any such conflict affecting Participant. In the event of a conflict between the ERCOT Protocols and this Agreement, the provisions expressly set forth in this Agreement shall control.

M. No Partnership. This Agreement may not be interpreted or construed to create an association, joint venture, or partnership between the Parties or to impose any partnership obligation or liability upon either Party. Neither Party has any right, power, or authority to enter any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

N. Construction. In this Agreement, the following rules of construction apply, unless expressly provided otherwise or unless the context clearly requires otherwise:

(1) The singular includes the plural, and the plural includes the singular.

(2) The present tense includes the future tense, and the future tense includes the present tense.

(3) Words importing any gender include the other gender.

(4) The word “shall” denotes a duty.

(5) The word “must” denotes a condition precedent or subsequent.

(6) The word “may” denotes a privilege or discretionary power.

(7) The phrase “may not” denotes a prohibition.

(8) References to statutes, tariffs, regulations, or ERCOT Protocols include all provisions consolidating, amending, or replacing the statutes, tariffs, regulations, or ERCOT Protocols referred to.

(9) References to “writing” include printing, typing, lithography, and other means of reproducing words in a tangible visible form.

(10) The words “including,” “includes,” and “include” are deemed to be followed by the words “without limitation.”

(11) Any reference to a day, week, month or year is to a calendar day, week, month or year unless otherwise indicated.

(12) References to articles, Sections (or subdivisions of Sections), exhibits, annexes or schedules are to this Agreement, unless expressly stated otherwise.

(13) Unless expressly stated otherwise, references to agreements, ERCOT Protocols and other contractual instruments include all subsequent amendments and other modifications to the instruments, but only to the extent the amendments and other modifications are not prohibited by this Agreement.

(14) References to persons or Entities include their respective successors and permitted assigns and, for governmental Entities, Entities succeeding to their respective functions and capacities.

(15) References to time are to Central Prevailing Time (CPT).

O. Multiple Counterparts. This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

SIGNED, ACCEPTED, AND AGREED TO by each undersigned signatory who, by signature hereto, represents and warrants that he or she has full power and authority to execute this Agreement.

*Electric Reliability Council of Texas, Inc.:*

By: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Participant:*

By: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name:

Title:

Date:

Market Participant Name:

Market Participant DUNS:

**ERCOT Nodal Protocols**

**Section 22**

**Attachment R: Amendment to Standard Form Advanced Grid Support Services Agreement**

**TBD**

Amendment to

Standard Form Advanced Grid Support Service Agreement

Between

Insert Participant

and

Electric Reliability Council of Texas, Inc.

 This AMENDMENT to the Standard Form Advanced Grid Support Service Agreement (“Amendment”), effective as of the \_\_\_\_\_\_\_\_\_\_\_ day of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_ (“Effective Date”), is entered into by and between Insert Participant, a [Insert State of Registration and Entity type] (“Participant”) and Electric Reliability Council of Texas, Inc., a Texas non-profit corporation (“ERCOT”).

Recitals

WHEREAS, Participant and ERCOT entered into a Standard Form Advanced Grid Support Service Agreement (Agreement) dated \_\_\_\_\_\_\_\_\_\_\_\_\_\_; and

WHEREAS, Participant and ERCOT wish to amend that Agreement to substitute the current Advanced Grid Resource with an alternative Inverter-Based Resource (IBR) that will now serve as the designated Advanced Grid Resource under the Agreement.

NOW, THEREFORE, Participant and ERCOT agree that paragraphs (A) and (B) of Section 1, Resource-Specific Terms, of that Agreement shall be deleted in its entirety and replaced with the following:

Section 1. Resource-Specific Terms.

A. Start Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

B. Advanced Grid Resource.

(1) Description of Advanced Grid Resource [including location, number of inverters, metering scheme, etc.]:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, as described in more detail on Exhibit 1.

(2) Nameplate Capacity in MW: \_\_\_\_\_

(3) Delivery Point: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(4) Revenue Meter Location (use Resource IDs): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

This Amendment modifies the existing Agreement only to include the Resource-specific terms designated above by Participant.

This Amendment in no way alters the terms and conditions of the existing Agreement other than as specifically set forth herein.

SIGNED, ACCEPTED AND AGREED TO by each undersigned signatory who, by signature hereto, represents and warrants that he or she has full power and authority to execute this Amendment to the Standard Form Advanced Grid Agreement.

***Electric Reliability Council of Texas, Inc.:***

By: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Participant:***

By: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name:

Title:

Date:

Market Participant Name:

Market Participant DUNS: