



NOTREES WINDPOWER, L.P.
7000 North MoPac Expressway
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October 31, 2013

ERCOT Technical Advisory Committee
Executive and Administration Center
7620 Metro Center Drive
Austin, Texas 78744

Attn: Kenan Ogelman, Chair, kogelman@cpsenergy.com and
Randa Stephenson, Vice Chair, Randa.Stephenson@Lonestar-Transmission.com

Re: Application of Notrees Windpower, L.P. for a Permanent Exemption from Compliance with ERCOT-Polled Settlement Metering Protocols Pursuant to Nodal Protocols Section 10.14

Ladies and Gentlemen:

Pursuant to Section 10.14 of the ERCOT Nodal Protocols, Notrees Windpower, L.P. ("Notrees"), an indirect, wholly owned subsidiary of Duke Energy Corporation ("Duke Energy") and a registered resource entity, submits this application to the ERCOT Technical Advisory Committee ("TAC") seeking approval for a permanent exemption from compliance with Section 10.9.1 of the ERCOT Nodal Protocols relating to ERCOT-Polled Settlement ("EPS") Meters for its Notrees battery facility (the "Notrees Battery Facility"). The Notrees Battery Facility is currently operating under a temporary metering exemption most recently granted effective September 1, 2013.

Notrees submits the following information required by Section 10.14.3.1 of the ERCOT Nodal Protocols and requests that this application be considered at the TAC meeting on November 7, 2013.

1. Application Background Information

Applicant/Resource Entity Name: Notrees Windpower, L.P.
Applicant/Resource Entity Phone Number: (C) 432-269-9051 (O)432-221-7500
TDSP Name: Oncor Electric Delivery Company ("Oncor")
Design Proposal Approval Date: 02-28-2013
Design Proposal Facility Name: Notrees Windpower, L.P.
Design Proposal Unit or Load Name: Notrees – WSL
Design Proposal Meter ID: Notrees WSL-P & Notrees WSL-B
Resource Owner Contact: Casey Hayes (casey.hayes@duke-energy.com)
Jeffrey Gates (jeff.gates@duke-energy.com)

2. Information Related to the Application

- (a) **A detailed description of the exemption sought, including specific reference to the relevant Section(s) of these Protocols or the SMOG authorizing ERCOT to grant the exemption, and the Metering Facilities to which the exemption will apply.**

Notrees seeks a permanent exemption from having to install EPS Metering Facilities at the Notrees Battery Facility to separately meter the Wholesale Storage Load from the auxiliary loads.

Pursuant to Section 10.14 of the ERCOT Nodal Protocols (Exemptions from Compliance to Metering Protocols), and in particular pursuant to Section 10.14.1 (which authorizes TAC and the ERCOT Board to grant permanent exemptions), Notrees seeks a permanent exemption from compliance with Section 10.9.1 of the Protocols for the Notrees Battery Facility:

10.9.1 ERCOT-Polled Settlement Meters

- (1) The Transmission Service Provider (TSP) or Distribution Service Provider (DSP) for ERCOT-Polled Settlement (EPS) Meters shall ensure that the EPS Metering Facilities comply with this Section and the Settlement Metering Operating Guide (SMOG).

The loads in question deemed to be non-WSL loads (250 kW) are very small relative to the overall load of the Notrees Battery Facility (36 MW). As discussed in detail below, Notrees seeks permanent relief from the requirement that all auxiliary loads be separately metered, as it would be cost prohibitive to rewire the entire Notrees Battery Facility to isolate these particular loads.

- (b) **A detailed statement of the reason for seeking the exemption, including any supporting documentation.**

Factual Background

It is of critical importance to note at the outset that the Notrees Battery Facility was designed and constructed prior to the adoption of P.U.C. Substantive Rule 25.501(m) and prior to the adoption of Nodal Protocol Revision Request (NPRR) 461. After working in close coordination with Oncor, the TDSP, Notrees determined that the generation site for the energy storage Load Resource (battery) does not allow the core battery value to be separately metered at the Notrees Battery Facility from all other loads and generation in order to measure the Wholesale Storage Load (WSL). Other auxiliary loads would be included in the WSL value if an EPS Meter was placed at the battery site location. As indicated in NPRR 461, Energy Storage Settlements Consistent with PUCT Project No. 39917, paragraph (3)(a) of Protocol Section 10.3.2.3 indicates the following:

“For configurations where the WSL is not at the POI, it must be separately metered behind a single POI metering point.”

On February 28, 2013, ERCOT approved Oncor’s application for a temporary metering exemption for the Notrees Battery Facility, conditioned upon Oncor separately seeking a Protocol Interpretation Request (PIR), addressing what energy storage site Loads are eligible for WSL treatment under NPRR461. On June 11, 2013, ERCOT issued a Protocol interpretation (Notice M-A061113-01) on the definition of WSL in Protocol Section 2. The Protocol interpretation provides guidance on which loads are eligible for WSL treatment under the ERCOT Protocols.

Notrees, the Resource Entity, is still unable to separately meter WSL from other auxiliary loads at the Notrees Battery Facility, due to technical infeasibility. On August 31, 2013, ERCOT approved Oncor’s application for a temporary metering exemption, conditioned upon the Resource Entity beginning the permanent exemption process by the November 2013 TAC meeting. Notrees thus is seeking this permanent exemption for the Notrees Battery Facility by providing this application for TAC consideration no later than the November 7, 2013 TAC meeting.

Reasons for Seeking the Permanent Exemption

Notrees seeks a permanent exemption from the requirements of Section 10.9.1 of the Protocols because it remains technically and economically infeasible for Notrees to separately meter the WSL from other auxiliary loads at the Notrees Battery Facility.

In working with Oncor and the ERCOT staff, Notrees has investigated certain possible options to determine whether there is an economically feasible solution that would allow the Notrees Battery Facility to be able to comply with the Protocol requirement. These options include:

Option 1: Install separate metering devices to each individual load, ranging from 1kW to 30kW, in addition to significant rewiring of the existing electrical panels.

Preliminary engineering assessments of this option suggest a total cost in excess of \$600,000 related to this option. At a minimum, this option would require the installation of new enclosures to house additional required metering equipment, new primary and backup meters, related conduit and cable, data aggregators, engineering design costs and labor and materials related to installation. In addition, some vendors whose equipment is already installed and commissioned would need to re-qualify in order to preserve the warranty on that equipment.

Option 2: Install metering devices on the transformers feeding the 24 inverters (requiring 24 meters for primary and back-up).

Preliminary engineering assessments of this option suggest a cost in excess of \$400,000. This option would require, at a minimum, the installation of new enclosure to house additional required metering equipment, related VTs and CTs, related conduit and cable, data aggregators, engineering design costs and labor and materials related to installation. The transformers that are already installed and commissioned would need to be re-tested and re-qualified to maintain the existing warranty.

Option 3: Install metering devices on the 2x switchgear equipment to measure the flows to and from the inverter transformers.

Preliminary engineering assessments of this option suggest a cost in excess of \$250,000. This option would require, at a minimum, the installation of new enclosure to house additional required metering equipment, related VTs and CTs, related conduit and cable, reinstallation of bussing, data aggregators, engineering design costs and labor and materials related to installation. In addition, this would invalidate the existing equipment warranties, putting the Notrees Battery Facility at significant additional economic risk in the absence of agreement on new warranty terms.

Option 4: Run separate Oncor 34.5 kV feeds to the AUX transformers.

Preliminary engineering assessments of this option suggest a cost in excess of \$500,000. This option would require control house expansion, bus extension, addition of a breaker position at the substation, installation of additional relay/controls, and even with this configuration, it would still include some WSL loads.

Given that the Notrees Battery Facility was designed and constructed in accordance with industry standards, with no reasonable expectation that those standards would later be insufficient, Notrees seeks relief from the requirement that all auxiliary loads be separately metered, as it would be cost prohibitive to rewire the entire facility to isolate these particular relatively small auxiliary loads with EPS Settlement Meters. To dis-integrate and rewire the Notrees Battery Facility under any of the options listed above would result in Notrees incurring significant costs which could not have been reasonably anticipated during the period in which the Notrees Battery Facility was designed and constructed. Moreover, the adverse economic impacts outlined above are only meant to list the major factors of engineering design, material and labor. None of the options outlined above include downtime and associated lost revenue, nor do any take into account the challenges of aggregated multiple metered values to calculate a single WSL value. Additionally, if new metering enclosures were installed, they would also require HVAC for climate control, which in turn needs new power feeds. These estimates also do not include any required additional software and controls development. For all of these reasons, Notrees respectfully requests that TAC and the ERCOT Board grant a permanent exemption.

How Notrees Will Account for WSL and Auxiliary Load at the Notrees Battery Facility

Finally, it is important to note that Notrees is not trying to obtain WSL treatment for loads at the Notrees Battery Facility that are considered auxiliary loads under ERCOT's Protocol Interpretation. Accurate meter data for all of these loads will be calculated for purposes of settlement through the following process: The WSL telemetry point data provided by the QSE/Resource Entity will be integrated into a 15-minute interval value by ERCOT, and the integrated value will be a proxy for the WSL metering point identified as NotreesWSL-P in the EPS Metering Design Proposal.

The telemetry points and supporting equipment required to provide a WSL telemetry value are currently installed and maintained by the QSE/Resource Entity. The WSL telemetry will be a positive value and clamped at zero when the applied logic creates a negative value.

Consistent with the position of Notrees regarding the accuracy of the telemetered values and in working in cooperation with both the ERCOT staff and Oncor, Notrees commits to comply with the detailed design proposal, site certification, access notification, annual testing and audit requirements set forth in Attachment 1 hereto.

The exemption that Notrees seeks through this application is simply to take the current metering configuration outlined above, which ERCOT uses to calculate these loads today, and make permanent the metering exemption that is approved and in effect on a temporary basis today. The telemetered values under the permanent exemption will be no different than what the Notrees Battery Facility is sending to ERCOT today, and will result in an accurate calculation of the core battery value and the loads generated at the Facility deemed to be non-WSL load.

(c) Details of the Entity(s) to which the exemption will apply.

The Entity to which the requested Permanent Exemption will apply is Duke Energy's indirect, wholly-owned subsidiary, Notrees Windpower, L.P. The Notrees Battery Facility is owned by Notrees Windpower, L.P., which is a registered Resource Entity in ERCOT.

(d) Details of the location to which the exemption will apply.

The requested permanent exemption will apply to the metering facilities at the Notrees Battery Facility, which is located in the Oncor service area.

- (e) **Details of the period of time for which the exemption will apply, including the proposed start and finish dates of that period.**

Notrees requests a permanent exemption from compliance with the requirements of ERCOT Nodal Protocol Section 10.9.1, subject to the provisions in ERCOT Nodal Protocol Section 10.14.3.

- (f) **Any other information requested by ERCOT.**

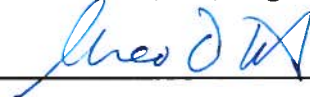
No other information has been requested by ERCOT as of this date.

Notrees sincerely appreciates ERCOT's efforts to address the array of challenging issues inherent in the integration of emerging energy storage resources into the ERCOT system and ERCOT-administered markets. Notrees respectfully submits this application seeking approval by TAC and the ERCOT Board for a permanent exemption from compliance with Section 10.9.1 ERCOT-Polled Settlement Meters for its Notrees Battery Facility. Notrees requests that this application be considered at the TAC November 7, 2013 meeting, and that its permanent exemption request be approved.

Respectfully Submitted,

NOTREES WINDPOWER, L.P.

By: TE NOTREES, LLC, its general partner

By: _____

Name: Theodore D. Matula

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ATTACHMENT 1
NOTREES PERMANENT EXEMPTION REQUEST
NOTREES BATTERY FACILITY – WSL EPS METERING

1. Design Proposal

- a. Notrees shall provide Oncor detailed one line drawings, sealed by a P.E., identifying the telemetry/SCADA points involved in the WSL calculation;
- b. Notrees shall provide Oncor detailed logic being used to create WSL telemetry
 - i. the accuracy of WSL telemetry shall be within $\pm 1.5\%$, taking into consideration all equipment involved in creating the telemetry
- c. Notrees shall provide Oncor the manufacturer, type and accuracy ratings of measuring equipment being used for WSL telemetry. This includes, but is not limited to the following equipment:
 - i. Voltage transformers, if applicable
 - ii. Current transformers, if applicable
 - iii. Conversion device (meter or transducers)
- d. Information provided by Notrees to Oncor will be submitted as part of the EPS Metering Design Proposal for this Facility

2. Site Certification

- a. Notrees to provide to Oncor, an affidavit with P.E. certification and seal, confirming:
 - i. the accuracy of WSL telemetry is within $\pm 1.5\%$, taking into consideration all equipment involved in creating the telemetry ,
 - ii. the WSL telemetry logic is per the approved design proposal (if Notrees is unable to find a P.E. that will certify the WSL telemetry logic, then Notrees will provide a certification letter by an officer or person with binding authority (a) stating that Notrees has exerted its best effort to find a competent P.E. (with expertise on the subject and willing to sign and seal) but could not find one, and (b) certifying that, based on the attestation of its SCADA subject matter expert, the telemetry architecture and calculation logic is per plan and the WSL facility is built and will be maintained to comply with the accuracy and integrity requirements as stated on their drawings and ERCOT's requirements for permanent exemption), and
 - iii. the location of the installed measuring equipment used in the WSL calculation is per one line drawings bearing the P.E. seal from Notrees

- b. Notrees to assist Oncor in performing a verification that WSL telemetry point locations are per Notrees, P.E. sealed, one line drawings
3. In the absence of parameters available from EPS meters, ERCOT's ability to perform Protocol defined VEE for this metering point is impacted.
 - a. Notrees shall make reasonable efforts to maintain and monitor the integrity of the telemetry representing the WSL.
 - b. If data errors are detected, Notrees shall promptly provide corrected data to ERCOT to support any upcoming settlements.
 - c. Such data correction requests shall be fifteen minute integrated data in a format prescribed by ERCOT and include specific information on the reason the data correction is required.
 - i. ERCOT will assess the need for the requested data correction before making the correction. If ERCOT requires further information in regards to the data correction, Notrees shall promptly supply such information.
4. Access Notification
 - a. Notrees shall provide notification to ERCOT and Oncor meter engineering teams for changes impacting the telemetry configuration or logic for WSL calculation. Such changes constitute a change to the EPS Metering Design Proposal and require ERCOT review and approval before being implemented by Notrees. Such changes include:
 - i. modifications to the configuration or addition of telemetry points, and
 - ii. modifications to the logic for WSL calculation
5. Annual Test of WSL Telemetry
 - a. Notrees to perform an annual calibration test on telemetry/SCADA equipment, consistent with the requirements defined in Protocols Section 10.6.1.2(1) for EPS Meters.
 - b. Notrees to provide an annual affidavit to Oncor sealed by a P.E., confirming:
 - i. the detailed logic being used to create WSL telemetry is as reflected in the ERCOT approved EPS Metering Design Proposal (as provided for in Section 2.a.ii. above), and
 - ii. the equipment accuracy used in the WSL calculation is consistent with the requirements defined in this permanent exemption request
6. Audit
 - a. Notrees will participate and provide all needed support for ERCOT Site audits in regards to verification of the WSL telemetry.