

ATTACHMENT XI-C

ATTACHMENT XI-C: Demand Response Program

Recommended Action: Informational.

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The district has an opportunity to contract with NRG or Direct Energy for a Demand Response program. This program is funded by PJM which is a regional transmission organization that coordinate the movement of wholesale electricity. The Demand Response program asks the district to reduce their energy usage once or twice a year in exchange for cash reimbursement for that reduction.

Customer: North Boone CUSD 200

Location: Illinois

PJM Zone: Commonwealth Edison



Estimated PJM Demand Response Payments

Curtailment Amount (kW)		2020-21	2021-22	2022-23*	Annual Energy	3-Year Payment
Summer	Winter	CP - Capacity Payment	CP - Capacity Payment	CP - Capacity Payment	Payment	Totals
350	350	\$ 18,024	\$ 18,736	\$ 18,380	\$ 3,883	\$ 66,789

PJM DR Program Details

Capacity Performance (CP)

Length (Months): June - May (Annual)

Call Hours:

June - Oct & May: 10am - 10pm

Nov - April: 6am - 9pm

Notification: 30 -120 min

Event Length:

June - Oct & May: 1-12 hrs

Program Period	6/1/2020 to 5/31/2021	6/1/2021 to 5/31/2022	6/1/2022 to 5/31/2023	
Estimated Capacity Rate (\$/MW-year)	\$ 68,664	\$ 71,376	\$ 70,020	
% Share	75%	75%	75%	75%
Estimated Events per Year				2
Estimated Hours per Event				4
Estimated Energy Rate (\$/MWH)				\$ 1,849

This indicative estimate is for information only. It shall neither be construed as a binding offer to enter into any transaction nor an advisement to enter into any transaction. Metering costs may be applied.

*PJM capacity auction rates have not been finalized for 2022-23, values shown are estimated based on average of past two years of auction clearing prices.

YOUR DEMAND RESPONSE CHECKLIST



Ready to move on to the next phase of the Demand Response journey?

Below is important information we need from you in order to provide a contract.

Customer Name: North Boone CUSD 200

☐ Primary Contact Information (Required):

Name: _____ Phone: _____ Email: _____

☐ Secondary Contact Information (Optional):

Name: _____ Phone: _____ Email: _____

☐ Complete a Letter of Authorization (LOA) for DEB to request utility usage data.

☐ Provide a recent copy of the electric utility invoice for each account planning to enroll.

☐ The benefits of PowerRadar® Energy Insights and metering options have been discussed with me and I understand metering may be provided by DEB at a low or no-cost option.*

*No-cost metering is dependent on contract terms and enrollment values. Interval metering is required, if opting out, customer will pay out of pocket for cost.

Select one method to receive DR payment:

☐ Check ☐ ACH Direct Deposit ☐ Apply payment to Electric Invoice
(Must be a DEB electric customer)

☐ Payment Contact Information:

Name: _____ Phone: _____ Email: _____

Select one Event Notification Lead Time:

*NOTE: Quick (30) is standard. Lead time exceptions for 60 and 120 minutes will require approval from the program administrator. Subject to reduced energy payment.

☐ Quick (30) ☐ Short (60)* ☐ Long (120)*

Select Load Reduction Method (check all that apply):

*NOTE: If intending to use a generator for Demand Response participation, please contact your account manager for additional information.

☐ Lighting ☐ Refrigeration ☐ HVAC ☐ Manufacturing

☐ Plug Load ☐ Water Heating ☐ Batteries ☐ Generator*
(Permits Required)

Please refer to the following page for additional instructions for identifying load reduction strategies.

Instructions – Please identify possible load reduction strategies you may implement, keeping in mind that you may be asked to reduce load in the Summer (May – October) and Winter (November – April).

General Reduction Strategies (Summer / Winter)

- ❑ Use on-site back-up generators with emission permits
- ❑ Turn off all non-essential lighting and office equipment not in use (i.e., printers, copiers).
- ❑ **Pre-cool / Pre-heat** work areas, turn off ceiling fans and room fans, and **raise / lower** temperature settings.
- ❑ Conduct meetings during events to minimize use of equipment.
- ❑ Charge batteries and battery-operated equipment prior to an event, then unplug battery chargers and use only pre-charged equipment during an event.
- ❑ Adjust employee schedules and shifts so that times of increased production or energy use occur before or after the event.

Manufacturing

- ❑ Reduce, slow down or shut down operations.
- ❑ Produce extra product a day ahead and do only packaging on the event day.
- ❑ Turn off all motors, vertical lifts and other non-essential process and pumping equipment.
- ❑ Turn off or turn down chillers and reset chilled water temperature.
- ❑ Adjust variable speed drive controls to reduce load from fans, pumps and chillers.
- ❑ Shift melting (kilns), finishing (grinders) and other tasks to either before or after an event.
- ❑ Pre-cool, then float or cycle refrigeration.
- ❑ Pump water into storage tanks prior to an event and use this water during an event.
- ❑ Shut down or cycle air compressors, air handlers and ventilation systems.
- ❑ Alternate cooling methods between cold storage areas to lower simultaneous demand.

Commercial (Summer / Winter)

- ❑ Turn off or turn down boilers, pumps, fans and equipment not in use.
- ❑ Turn off excess elevator banks and escalators (as permitted).
- ❑ Apply ventilation control – temporarily reducing outside air flow can reduce **cooling / heating** demand.
- ❑ Conduct dishwashing, housekeeping, waste processing and laundry before or after an event.
- ❑ Turn off all non-essential food preparation equipment not in use.
- ❑ Delay use of electric resistance defrost controls and the use of anti-sweat heaters.
- ❑ Back-store refrigerated storage and refrigerant compressors can be turned down, cycled or turned off.
- ❑ Turn off pool heating and pumps.

Other Reduction Strategies

Summer – _____

Winter - _____



Company Name: _____ (Hereinafter, "Customer", "You" and "Your") Utility Zone: _____

Utility Acct #(s): _____

Address: _____ City: _____ Zip: _____

Contact Person: _____ Tel # _____ Fax: _____ Email: _____

Customer hereby agrees to enroll in NRG Curtailment Solutions, Inc. (NRGCS) PowerPay! Program(s) and authorizes NRGCS to be its exclusive demand response provider for all applicable programs offered with PJM relating to energy, capacity and ancillary services ("Agreement"). Customer represents it is within its authority to enter into this Agreement and to curtail electricity usage at its facilities.

Payment Terms:

Annual – Year Round

For the Pre-emergency and Emergency programs Customer will be paid as follows for its reduction:

Capacity Payments: Customer will receive 70% of the PJM weighted clearing price for all auctions in which NRGCS has cleared capacity for its zone (Capacity Payment Rate). Payments are made twice a year, prior to December 31st and June 30th, reflecting separately the summer performance and winter performance. Capacity Payments are based on Customer's Capacity Payment Rate multiplied by Customer's Summer Expected Reduction multiplied by Customer's Performance (summer performance payment) plus Customer's Capacity Payment Rate multiplied by Customer's Winter Expected Reduction multiplied by Customer's Performance (winter performance payment).

Energy Payment: Customer will receive 100% of energy payments (based on applicable zonal Locational Marginal Price per kWh), if any, that NRGCS receives from PJM associated with its reduction, paid no later than every May.

In the event that PJM calls a *Deploy All Resources Action*, Customer's payments shall be adjusted based upon its performance during such action in accordance with PJM program rules.

Term. This Agreement will be effective as of the date Customer signs this Agreement ("Effective Date") and will continue for five (5) year(s) following the Effective Date, ("Initial Term"), which period shall begin to run as of the date Customer is first enrolled in the applicable program ("Start Date") and shall end at the conclusion of the last Performance Obligation Period in the Initial Term. NRGCS has a right of first refusal to match any other offers for demand response by another provider at the end of the Term of this Agreement or renewal period. If Customer is unable to participate during a Performance Obligation Period, NRGCS will not register Customer for that Performance Obligation Period and Customer will not receive any payments, however this contract will continue to remain in effect and NRGCS will continue to be Customer's exclusive demand response provider.

Each Party represents to the other Party that the execution, delivery and performance of this Agreement have been duly authorized, and this Agreement has been duly executed and delivered by the signatory so authorized, and the obligations contained herein constitute the valid and binding obligations of such Party.

Miscellaneous. This Agreement and any Renewals or Addenda constitute Customer's entire Agreement with NRGCS and supersede any prior agreements between the parties. This Agreement may only be modified in writing.

Signature: _____ Title: _____ Date: _____

Print Name: _____

NRGCS Signature: _____ Title: _____ Date: _____





Terms of Service for PowerPay! Program

NRGCS shall determine in its discretion if you qualify for a PJM program or other program and whether you will be registered in the applicable program. NRGCS reserves the right to withhold your registration should there be a material change(s) to program rules, terms or conditions.

Definitions. Any capitalized terms not defined herein shall have the meaning ascribed to that term in the Registration Confirmation, or if undefined in the Registration Confirmation, in the applicable tariff, manual, or program rules.

"Delivery Year" is the one year period defined by each RTO/ISO, utility, or other program administrator during which programs are available, which may include a full year or lesser periods defined by multiple seasons or multi-month periods.

"Event" is a load curtailment event called by PJM.

"Expected Reduction" is the expected kW reduction based on your hourly metered load, which may be referred to as "Annual Expected Reduction", "Winter Expected Reduction", and/or "Summer Expected Reduction", as applicable in this Agreement and Registration Confirmation. The Expected Reduction shall be determined in consultation with and shall be based on NRGCS's assessment of your ability to perform. NRGCS will notify you of the Expected Reduction in a Registration Confirmation and/or acknowledgement ("Registration Confirmation") that shall be incorporated and made part of this Agreement. NRGCS shall reassess your Expected Reduction periodically and maintains sole discretion in determining your final, registered Expected Reduction, including the right to reduce Expected Reductions. You agree to acknowledge and comply with the terms of the Registration Confirmation, however, in no case shall you be required to exceed the Maximum Performance Requirements defined, herein. Should there be a material change(s) to contract terms and conditions, performance requirements or program rules, Customer will receive with its annual Registration Confirmation a contract amendment with the right to opt-out of the program. The term "Expected Reduction" may be used more than one time in this Agreement and shall be distinguished by the season identified preceding the term "Expected Reduction" (e.g., "Annual" Expected Reduction), or as context dictates.

"Performance" equals your average, actual delivered kW reduction, without taking into account a winter weather adjustment factor, expressed as a percentage of your Expected Reduction (capped at 100% per hour) over all called Event hours during the Performance Obligation Period. If no Event is called, your payments will be based on your performance during any Tests. NRGCS is authorized year-to-year to exercise discretion to apply, or not to apply, a winter weather adjustment factor to your zone, and any changes shall be disclosed in your Registration Confirmation. The term "Performance" may be used more than one time in this Agreement and shall be evaluated with reference to the season referenced, or as this Agreement or context dictates (e.g., unless otherwise noted, if no Event is called during the winter season, your "winter Performance" shall be determined based on your performance during a summer Test).

"Test" is your obligation to demonstrate your ability to curtail load. You agree to curtail during one or more tests required under the PJM program rules. You also authorize NRGCS to perform seasonal tests at its discretion to verify your ability to participate. You authorize NRGCS to perform tests of notification processes during which you are not required to curtail any load.

Access. You agree to grant NRGCS and/or its authorized representative reasonable access to your premises for the purpose of determining an achievable kW reduction level. You agree to acknowledge and comply with the terms of the Registration Confirmation, however, in no case shall you be required to exceed the Maximum Performance Requirements defined, herein. NRGCS retains the right to reduce offers submitted by you at its discretion.

You agree to curtail your electric usage for all Event and Test hours during the Performance Obligation Period as dispatched by PJM and/or NRGCS for your zone(s). You agree to begin curtailing when notified with sufficient lead time to achieve your Expected Reduction within the designated Performance Response Time. You agree to use commercially reasonable efforts to curtail your usage at the Expected Reduction value.

You will not be subject to out-of-pocket financial penalties when participating in the PowerPay! Program, even if you fail to reduce electricity when called.

You acknowledge and agree that NRGCS has no obligation to pay you under this Agreement unless and until payment is received from PJM.

Metering Equipment. You authorize NRGCS or its authorized representative to install an interval meter ("NRGCS Equipment") at a mutually agreed upon location, at no cost to you, and you authorize NRGCS or its representative to enter your premises for this purpose. You understand that NRGCS retains ownership of this NRGCS Equipment. If you no longer have an agreement with NRGCS, you will cooperate with NRGCS in the event that it wishes to recover the NRGCS Equipment. A meter installed by NRGCS contains software proprietary to NRGCS and NRGCS grants you a license to use the software for as long as you are enrolled with NRGCS.

Generator Attestation. You shall promptly notify NRGCS if the status of your permits has changed, or if your use or ownership of a generator has changed.

Agency Authorization. In order to streamline the registration of your account(s), you authorize NRGCS to act as your agent to complete any documents required by PJM in connection with your enrollment in NRGCS's demand response program. This includes a Third Party Authorization allowing your utility to release to NRGCS information such as billing records and meter usage data. You also authorize NRGCS to complete any forms on your behalf required to allow NRGCS to install an interval meter, if eligible. Such agency authorization shall remain in effect for the duration of this agreement.

Information Sharing. In order to provide better value and ensure quality of service you authorize NRGCS to share your information with NRGCS affiliates or subsidiaries, as well as with third party partners that we have contracted with NRGCS to perform certain functions or services on behalf of you and/or NRGCS.

Assignment. NRGCS may contract with its affiliates and subsidiaries and with subcontractors to perform its obligations under the Agreement and may assign, without your consent, its rights and obligations under the Agreement in whole or in part to an affiliate or to a successor-in-interest.

Complete Program Terms. The program terms and these Terms of Service may change from time to time. We will notify you of such changes, and you agree to cooperate in good faith and make best efforts to comply with such changes if needed to give effect to the intent of the parties to this Agreement.

Baseline Measurement. NRGCS shall calculate and utilize for compliance data submission a baseline value, if applicable, as defined in the prevailing tariff, manuals, and business rules that apply to each program that you are enrolled in. NRGCS reserves the right to exercise for payment settlement purposes discretion in calculating and/or utilizing a baseline value..

Notifications. If you are unable to provide your committed curtailment amount, you agree to notify NRGCS as soon as commercially practicable. NRGCS reserves the right to discontinue at its discretion your participation in any program based upon your performance.

Customer Cooperation. You will provide NRGCS, for the duration of this agreement, all necessary information to register you and maintain your enrollment in the program selected by NRGCS. You agree to take all commercially reasonable steps necessary to qualify for a program and to facilitate your enrollment, and/or if requested at NRGCS' discretion, to re-qualify for any program where your registration has been suspended or disqualified.

Electronic Signature Agreement

Scope. The parties agree that this agreement or document may be electronically signed. Your consent to an electronic signature covers the transaction you are presently completing (e.g., PowerPay Enrollment Form), which you will be prompted to sign electronically. You understand and agree that your electronic signature of the transaction you are presently completing shall be legally binding and such transaction shall be considered authorized by you. You understand that by agreeing to sign electronically, your electronic signature has the same legal force and effect as a handwritten signature. If you would like to receive a true and exact copy of the signed document, you may contact us.

Opting Out. At any time prior to submitting your electronic signature, you may opt out of the electronic signature process and continue with a paper process. Simply sign below and return the executed document to us

Please Initial & Date

Initials:

Date:



ADDENDUM NO. 1

PARTICIPATION IN NRGCS POWERPAY!
PROGRAM FOR 2020/2021

- (1) **Program Election.** For the 2020/2021 PJM Program Delivery Year, Customer agrees to participate in the following PowerPay Program (both capacity and energy) ("Program Election"):
- a. Annual
- (2) **Performance Obligations.** NRGCS will notify Customer annually of its Expected Reduction(s) for the PowerPay Program(s) elected above in a Registration Confirmation that will set forth the specific program parameters governing Customer's Program election(s), however Customer's obligations shall not exceed the Maximum Performance Requirements below.
- (3) Customer agrees to notify NRGCS as soon as commercially practicable if there is any change in its use of a generator during the Program Delivery Year.

Maximum Performance Requirements	
Performance Obligation Period:	June 1st to May 31st Each Year
Performance Response Time:	Reduction within 30-minutes based on PJM's notification of an Event*
Event Availability:	Any Day Jun – Oct and the following May: 10am to 10pm; Nov- April: 6am to 9pm
Maximum Calls per Period:	Unlimited
Event Duration:	Jun- Oct and the following May: up to 12-hours; Nov – April: up to 15 hours
Tests:	At least one, 1 hour test per year called by PJM and/or NRGCS
Expected Reduction:	See Confirmation for kW reduction level.
Baseline Methodology:	Summer Peak Load Contribution ("PLC") or Winter Peak Load Contribution ("WPLC")

*In the unlikely event that PJM calls a *Deploy All Resources Action* for emergency events that develop rapidly and without prior warning, Customer agrees to employ commercially reasonable efforts to reduce its committed load immediately upon notification from NRGCS.

☐ By checking this box, Customer indicates that it intends to run a generator to satisfy its obligation(s) under this Agreement. Customer represents that it holds all Local, State and Federal environmental and use permits required to operate as a demand response resource in the enrolled program(s), and that it will operate the generator in accordance with the permits. Customer agrees to complete an NRGCS Generator Attestation and, if requested, provide NRGCS copies of all permits, interconnection agreements, and supporting documents required to complete Customer's enrollment.

Signature: _____ Title: _____ Date: _____

Print Name: _____

NRGCS Signature: _____ Title: _____ Date: _____



North Boone CUSD 200

Poplar Grove, Illinois



revenue
projection

Program Period	June 1st, 2020 - May 31st, 2021	June 1st, 2021 - May 31st, 2022
Estimated Rate per MW	\$48,064.66 \$/MW	\$49,963.03 \$/MW

Commonwealth Edison Utility Zone

Reduction Amount	2020 Capacity Performance	2021 Capacity Performance	Two Year Payment Totals
100 kilowatts (kW)	\$4,806.47	\$4,996.30	\$9,804.77
200 kilowatts (kW)	\$9,612.93	\$9,992.61	\$19,605.54
300 kilowatts (kW)	\$14,419.40	\$14,988.91	\$29,408.31



2020 Capacity Performance Details		Notes
Season Length & Event Call Hour Window	Summer Season Any Day Jun – Oct and the following May: 10am to 10pm; Winter Season Nov- April: 6am to 9pm	For reference, 1,000 kW = 1 MW. Capacity \$/MW is your estimated rate of payment per megawatt (MW) that you agree to reduce.
Event Activation Notice	30 minutes with up to 2 hours with PJM approval	Because the season, time of day and amount of performance are different for each individual customer, the following revenue projection is an estimate of a potential scenario using information currently available to us. NRG will require your actual utility data in order to more accurately estimate your compensation for the program, and to model your best chances for performance. Once we receive your authorization to obtain your Utility data, you will receive an updated analysis with the recommendations that could leverage the highest revenue potential possible.
Event Length	Jun- Oct and the following May: up to 12-hours; Nov – April: up to 15 hours	

This information is provided for informational purposes only, and it is not (nor may it be construed as) a binding offer to enter into any transaction. In addition, this information is not (nor should it be viewed as) recommending or advising on a particular strategy or trading decision in any market, nor does it guarantee any result. No commodity trading advice is being provided, nor is advice being provided with respect to exchange-traded futures contracts (or options thereon) or swap transactions, and we do not undertake any fiduciary duty to you. There can be no guarantee as to the success of any product, strategy or trade referenced herein. We do not guarantee the accuracy of any information contained herein and undertake no obligation to correct any error or omission.

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