BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o

IN THE MATTER OF THE COMPLAINT FILED BY JUHL ENERGY, INC., AGAINST NORTHWESTERN CORPORATION d/b/a NORTHWESTERN ENERGY REGARDING AVOIDED COST AND FOR THE BRULE COUNTY, WIND, LLC, AURORA COUNTY WIND, LLC, AND DAVISON COUNTY WIND, LLC PROJECTS	:	Docket No.-_____ **COMPLAINT**

o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o

I. INTRODUCTION

Juhl Energy, Inc., ("Juhl") hereby files this Complaint requesting the South Dakota Public Utilities Commission ("Commission") assert its jurisdiction and resolve a dispute between the Complainant and Respondent NorthWestern Corporation d/b/a NorthWestern Energy ("NWE") with respect to establishing a proper avoided cost for a long-term electric power purchase agreement between Juhl and NorthWestern.

Juhl proposes to sell electricity from three Juhl wind projects,[1] each with an installed capacity of 20 megawatts or less ("MW"), to NWE pursuant to the Public Utility Regulatory Policy Act of 1978, 16 U.S.C. § 824a-n ("PURPA"). Each of the three Juhl wind projects are "qualifying facilities" or "QFs" as that term is defined in PURPA. Under the Federal Energy Regulatory Commission's (hereinafter "FERC") regulations implementing PURPA, NWE is obliged to purchase "any energy and capacity which is made available from a qualifying

[1] The three projects are: (1) Brule County Wind, LLC, which is located in Brule County near Kimball, South Dakota; (2) Aurora County Wind, LLC, which is located in Aurora County near White Lake, South Dakota; and (3) Davison County Wind, LLC, which is located in Davison County near Letcher, South Dakota.

facility." 18 C.F.R. § 292.303(a). Such purchases, according to FERC's regulations, must be at the utility's full avoided cost. 18 CFR § 292.304(b)(2).[2] The utility's full avoided cost is "the cost to the electric utility of the electric energy which, but for the purchase from such cogenerator or small power producer, such utility would generate or purchase from another source." PURPA § 210(d), 16 U. S. C. § 824a-3(d)). *See* 18 CFR § 292.101(b)(6) (1982) (the term full "avoided costs" used in the regulations is the equivalent of the term "incremental cost of alternative electric energy" used in § 210(d) of PURPA). Juhl and NWE disagree over the proper method and estimate of "full avoided costs" for the three Juhl wind projects, and Juhl believes that negotiations have hit an impasse on this issue, and that Commission resolution of this dispute is needed.

II. COMPLAINT AND RESPONDENT

1. Complainant's address is:

Juhl Energy, Inc.
1502 17th St. SE
Pipestone, MN 56164

2. Respondent's address is:

Service Address:
CT Corporation System
319 S. Coteau Street
Pierre, SD 57501 -3108

Corporate Office:
NorthWestern Energy
3010 W. 69"' Street
Sioux Falls, SD 57 108

[2] FERC's regulation requiring that utilities pay QFs full avoided cost was upheld by the United States Supreme Court in *Paper Inst. v. Am. Elec. Power Serv. Corp.*, 461 U.S. 402, 406 (U.S. 1983)

III. BACKGROUND FACTS

3. Juhl is an independent developer of power projects throughout the Midwest and West. The Juhl projects for which it seeks an avoided cost determination are known respectively as the Brule, Aurora, and Davison projects (collectively "the Projects"). The Projects will each have a nameplate capacity of 20 Mw or less. It is anticipated that the Projects will each have a commercial operation date prior to the end of December 2018.

4. The legal descriptions of the location of the Projects are as follows:

a. Brule County Wind: SEC 12, 13, & 24 of Kimball Township – Brule County, SD.

b. Aurora County Wind: SEC 17, 18, 19, & 20 0f Eureka Township – Aurora County, SD

c. Davison County Wind**:** SEC 26, 27, 35, & 36 of Letcher Township – Davison County, SD

5. Juhl has secured the contract and real property rights needed to construct and operate the Projects from the landowners at the three sites. These rights are for a period of 20 years, with an option for another 10 years.

6. The Projects are each located within NWE's service territory. NWE is an electric utility within the meaning of PURPA and is subject to the requirements of PURPA, and its federal and state implementing regulations and authority.

7. A copy of the FERC Form 556 for each of the Projects are attached to this Complaint and incorporated by reference herein for all purposes. *See,* Exhibit 1. Juhl has previously provided copies of the FERC Form 556 for each of the Projects to the Commission and NWE.

8. Juhl has completed the interconnection process for the Projects and is awaiting NWE's sending a final interconnection agreement for the Projects.

IV. REGULATORY BACKGROUND

9. Section 210(a) of PURPA requires NWE to purchase electricity from QFs, such as the Projects, located in NWE's service territory. 16 U.S.C. §824a-3.

10. The price NWE must pay for electricity delivered to it by a QF is not to exceed NWE'S full avoided cost. *See generally*, 18 C.F.R. § 292.304.

11. The Commission, pursuant to its delegated authority under PU RPA, issued a decision and order on December 14, 1982, in which the Commission made certain findings and conclusions relative to avoided cost. See Commission Docket F-3365, "In the Matter of the Investigation of the Implementation of Certain Requirements of Title II of the Public Utilities Regulatory Policy Act of 1978 Regarding Cogeneration and Small Power Production," ("Commission PURPA Order").

12. In the Commission PURPA Order, the Commission found that "long term contracts" (defined as greater than ten years in duration) from QFs with a design capacity greater than 100 kilowatts "should be set by contract negotiated between the QF and the electric utility." *Id*. at 7. The Commission further found that its own role in these negotiations was to assist in "resolving any disputes which arise between the parties." *Id.*

13. In the Commission PURPA Order, the Commission approved the method for calculating avoided cost rates with respect to capacity credits:

> Mr. Bernal proposed that long-term contracts, i.e., contracts of 10 years' duration or longer, should include capacity credits based upon the avoided cost of base load generation. He recommended against adjustments to the capacity credit over

> the life of the contract. Mr. Bernal testified that the generation that a QF provides can change the long-run future load which must be met by the utilities' generating system. Thus, the added capacity provided by the QF increases the probability that the electric utility can alter its construction schedule so as to cancel or defer planned generating additions, scale down the size of future plant additions, or reduce its firm purchase commitments. Witness Bernal further testified that the capacity credit included in the long-term contracts should be applied to the average KW provided by the QF during the on-peak hours of each month. 1982 PURPA Order at pp. 4-5.

14. The Commission PURPA Order also approved the manner in which the energy component of avoided cost would be calculated:

> Mr. Bernal testified that the energy credit included in long-term and short-term contracts should be based on the average of the expected hourly incremental avoided costs calculated over the hours in the appropriate peak and off-peak hours as defined by the utility. He recommended that the QF be paid according to its contribution of kilowatt hours during each of the periods. Witness Bernal recommended that the off-peak and on-peak periods reflected in the energy credit be consistent with the periods reported in the utility's filing with the FERC under PURPA Section 133. *Id*. at p. 5.

V. HISTORY OF AVOIDED COST/CONTRACT NEGOTIATIONS

15. Juhl and NWE began to communicate about a power purchase agreement ("PPA") for the Juhl Projects in early October of 2015. *See* Exhibit 2, hereto. The parties exchanged avoided cost information during the winter and into early Spring, with both sides exchanging proposals based on different approaches to avoided cost. *See* Exhibits 3-9, hereto. As set forth in Exhibit 10, hereto, is a summary of NWE's various avoided cost proposals which changed significantly over time. In response, ultimately, Mr. Schiffman offered the avoided cost proposal based on a differential revenue requirement analysis he performed using PROMOD IV™. Eventually, on April 5, 2016, the parties appeared to agree that their respective avoided

cost proposals were too far apart, and that the Commission should resolve their differences on the appropriate avoided cost rate.

16. The parties exchanged contract language during the last weeks of March and early April. Although no agreement has been reached, Juhl expects to reach agreement with NWE on the specific contract language soon, but does not anticipate that contract terms will prevent an agreement at this juncture.

17. As is set forth in detail below, Juhl has attempted to faithfully implement the 1982 Commission PURPA Order regarding the appropriate energy and capacity components of the avoided cost rate for the Projects. As is also set forth in detail below, NWE's capacity credit calculation appears to be based on a formula created by the Southwest Power Pool or "SPP" and only provides capacity credit to the Projects once every three years. NWE's energy component does not provide an appropriate calculation on the average of the expected hourly incremental avoided cost over peak and off-peak hours over a 20-year period.

18. As is set forth in the prefiled testimony of Roger Schiffman on behalf of Juhl filed contemporaneously with this Complaint, Mr. Schiffman properly assigns an incremental cost value to each hour of NWE production and includes a capacity cost consistent with the Commission PURPA Order. Mr. Schiffman's estimate of NWE's full avoided cost was modeled using Ventyx Energy, LLC's PROMOD IV™ proprietary software. PROMOD IV™ is an off the shelf product commonly sold and widely used in the energy industry to value resource acquisition decisions, market forecasts, and in portfolio planning. Mr. Schiffman utilized PROMOD IV™ because it is an independent forecasting and modeling software with sufficient granularity to address fundamental market changes in the South Dakota region over the next 20

years, and because of its reputation for reliability in the energy community. Mr. Schiffman's prefiled testimony details other problems with NWE's avoided cost estimate and critiques the methodology employed by NWE. Primary among Mr. Schiffman's criticisms are:

a. What NorthWestern describes as a Differential Revenue Requirements ("DRR") method is in reality not a Differential Revenue Requirements Method. The DRR method is also sometimes referred to as "QF-In/QF-Out" approach. The reason that the DRR avoided cost approach is used, and sometimes preferred by state commissions, is because it captures the changes in system dispatch and in underlying cost to produce energy, on a system-wide basis, when a QF resource is introduced onto a power system. In contrast to the traditional DRR approach, NorthWestern's avoided cost approach did not actually use the PowerSimm model to measure changes in production cost with and without the Juhl Energy projects. Instead, NorthWestern apparently completed PowerSimm simulations with and without Juhl Energy, tabulated results on a monthly basis, and then external to the simulation, applied a combination of forecast monthly energy prices, and/or production cost estimates for its existing generation, or zero to the monthly forecast production of Juhl Energy. According to Mr. Schiffman, NorthWestern limited its use of the PowerSimm model only to estimate whether its system would be in a net purchase or net sale position, on a monthly basis, segmented by High Load (On-Peak) and Low Load (Off-Peak) periods. NorthWestern also used the PowerSimm model to develop long-term market price projections in SPP, but the approach taken in that area is not transparent.

b. According to Mr. Schiffman, NorthWestern's decision to not use the PowerSimm simulations to assess production costs differences on its system, with and without Juhl Energy, means that NorthWestern is not using a DRR method to calculate avoided cost. What NorthWestern is doing, again according to Mr. Schiffman, is calculating hourly results from PowerSimm to calculate NorthWestern's net purchase/sales position monthly, on-peak and off-peak, and then it applies forecast prices in SPP, or in some instances, either the production cost of generation or assigns a zero value to that generation. According to Mr. Schiffman, the lack of transparency regarding the statistical parameters, stochastic modeling and related issues render PowerSimm a less than transparent tool for calculating avoided costs.

19. Mr. Schiffman's calculation of NWE's full avoided cost, which he derived by using the PROMOD IV™ software, including modeling the NWE system in South Dakota, produces an avoided cost estimate for the three Projects of $ 47.29/MWH exclusive of avoided carbon costs. Mr. Schiffman also provided an estimate of avoided carbon costs which was derived by applying PROMOD IV™ and a true DRR method that produces a value of $11.63/MWH, which increases the total estimate of avoided cost to $58.92/MWH. Mr. Schiffman also provided a capacity payment which converts to $1.78/MWH, which produces a total "all in" avoided cost of $60.70/MWH for the Juhl Projects applying the differential revenue requirement model. NWE's avoided cost forecast of $24.35/MWH appears unreasonably low and as can be seen, is more than $20/MWH less than Mr. Schiffman's avoided cost forecast exclusive of avoided carbon costs. The reasons for the spread between Juhl's avoided cost

estimate and that of NWE's are specifically detailed in Mr. Schiffman's prefiled direct testimony which accompanies this Complaint.

20. As the Commission can see from the foregoing correspondence in Exhibits 3-9, both parties have negotiated in good faith and the difference between the parties is too great to overcome without Commission assistance. NorthWestern's methodology and adjustments drive its avoided cost down to a level below a reasonable forecast over a 20-year time frame. Mr. Schiffman's approach, which is consistent with a differential revenue requirement model and the Commission's PURPA Order, is a sound, reasonable approach to calculating avoided costs for the Juhl Projects.

VI. RELIEF REQUESTED

Based on the foregoing, Juhl Energy requests that the Commission grant the following relief:

(1) Hold a hearing on an expedited basis to consider the proposed avoided costs for the Projects in order to determine an appropriate avoided cost for the Juhl Projects over the 20-year period of the proposed PPA in a manner consistent with PURPA, FERC's implementing regulations, and the Commission's PURPA Order;

(2) Grant Juhl such other and further relief the Commission finds just and reasonable.

Dated this 23rd day of June, 2016.

WOODS, FULLER, SHULTZ & SMITH P.C.

By /s/ James E. Moore

James E. Moore
PO Box 5027
300 South Phillips Avenue, Suite 300
Sioux Falls, SD 57117-5027
Phone (605) 336-3890
Fax (605) 339-3357
Email James.Moore@woodsfuller.com
Attorneys for Juhl Energy

UDA LAW FIRM P.C.

Michael Uda
7 West 6th Avenue
Power Block West, Suite 4H
Helena, MT 59601
Email michaeluda@udalaw.com
Phone (406) 457-5311
(Admission pro hac vice pending)