BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE COMPLAINT BY CONSOLIDATED EDISON DEVELOPMENT, INC. AGAINST NORTHWESTERN CORPORATION DBA NORTHWESTERN ENERGY FOR ESTABLISHING A PURCHASE POWER AGREEMENT	)	EL16-021 COMMISSION STAFF'S POST-HEARING BRIEF

COMMISSION STAFF'S POST-HEARING BRIEF

I. INTRODUCTION

Procedural History

On June 23, 2016, Juhl Energy, Inc. (Juhl) filed a Complaint seeking resolution of a dispute with NorthWestern Corporation dba NorthWestern Energy (NorthWestern) regarding the proper avoided cost for a long-term electric power purchase agreement. On July 19, 2016, NorthWestern filed its answer to Juhl's complaint and requested that the Commission establish a procedural schedule. On August 4, 2016, the Parties filed a Joint Request for a Procedural Schedule. On August 19, 2016, the Commission issued a Procedural Scheduling Order. On October 24, 2016, Juhl submitted a request for Confidential Treatment of Responses to NorthWestern Energy Discovery Requests 1-29 and 1-31. On November 17, 2016, the Commission issued an Order Granting Juhl's Request for Confidential Treatment. On February 1, 2016, Consolidated Edison Development, Inc. (CED) filed a Notice of Appearance and Motion to Amend Complaint based on CED's acquisition of Juhl's interest in the three wind energy projects that are the subject of this docket. On February 9, 2017, the parties filed a Stipulation Allowing Amended Complaint between Juhl, NorthWestern, and Staff. On February 15, 2017 the Commission issued an Order Granting Motion to Amend Complaint. On February

21, 2017, CED filed a motion *In Limine* to exclude the rebuttal testimony of Autumn Mueller and Luke P. Hansen. On February 27, 2017, CED filed motions *In Limine* to prohibit PUC Staff from offering portions of the pre-filed testimony of Ms. Maini and Mr. Thurber and to prohibit NorthWestern from offering portions of the pre-filed testimony of Mr. LaFave. On March 7, 2017, NorthWestern filed responses to Consolidated Edison's motions *In* Limine. On March 7, 2017, Staff filed a Response in Opposition to CED's Motions *In Limine.* On March 14, 2017, the Commission held a Commission meeting regarding CED's motions *In Limine* and issued an Order Denying Motions *In Limine* on March 21, 2017. On March 20, 2017, the Commission issued an Order For and Notice of Evidentiary Hearing. The Evidentiary Hearing was held on April 11 & 12, 2017. On May 3, 2017 NorthWestern filed its response to Commissioner Nelson that stemmed from the Evidentiary Hearing. On May 17, 2017 CED filed a motion to Exclude NorthWestern's May 3 Response to Commissioner Nelson. On May 30, 2017, the Commission issued an Order Denying in Part and Granting in Part Motion to Exclude NorthWestern's May 3 Response to Commissioner Nelson.

II. ARGUMENT

A. CED DID NOT ESTABLISH THAT ALL THREE PROJECTS ARE ENTITLED TO A LEGALLY ENFORECABLE OBLIGATION BY APRIL 4, 2016.

Under 18 CFR 292.304(d), FERC regulations establish that "each qualifying facility shall have the option either:

> **(1)** To provide energy as the qualifying facility determines such energy to be available for such purchases, in which case the rates for such purchases shall be based on the purchasing utility's avoided costs calculated at the time of delivery; or

(2) To provide energy or capacity pursuant to a legally enforceable obligation for the delivery of energy or capacity over a specified term, in which case the rates for such purchases shall, at the option of the qualifying facility exercised prior to the beginning of the specified term, be based on either:

(i) The avoided costs calculated at the time of delivery; or

(ii) The avoided costs calculated at the time the obligation is incurred.

However, the FERC did not establish specific standards for establishing a LEO nor has the FERC specifically defined what constitutes a LEO. FERC has left these decisions up to each individual state. "It is up to the States, not [FERC], to determine the specific parameters of individual QF power purchase agreements, including the date at which a legally enforceable obligation is incurred under State law." *Metro. Edison*, 72 FERC at ¶ 61,050; *New PURPA 210(m) Regulations Applicable to Small Power Production and Cogeneration Facilities*, 119 FERC ¶ 61,305, para. 139 (2007). To date, the Commission has not adopted specific standards or rules to determine when a LEO is established. As such, the Commission must decide in each case whether a LEO has been established.

The Commission has taken up only one true docket related to establishing a LEO under PURPA and this docket does not establish a precedent. In EL11-006, In the Matter of the Complaint by Oak Tree Energy, LLC against NorthWestern Energy for refusing to Enter into a Purchase Power Agreement (Oak Tree), the Commission did determine in it Order dated, that a LEO was established on February 25, 2011. The Commission specifically found that Oak Tree's letter sent on that date made "notice to NWE of the establishment of a legally enforceable obligation" and that "coupled with [Oak Tree's] unsuccessful efforts to engage NWE in

meaningful negotiations" did create a LEO under 18 C.F. R.292.304(d).[1] In Oak Tree, the Commission did not address the issue of site control or the issue of obtaining a permit to construct a facility in determining whether a LEO was established. The initial complaint in that docket specified that Oak Tree had obtained the property rights necessary to construct the facility and it does not appear that this statement was contested at any point. Additionally, in Oak Tree, the Commission did not rule on whether the lack of the required permits necessary to build a facility affects the establishment of a LEO.

The facts in this case are clearly distinguishable from those in Oak Tree and require a different conclusion than in Oak Tree. As a result, the Commission is free to review the facts presented and consider whether these facts established a LEO, and if so, on what date the LEO was established. CED alleges that a LEO was established for all three projects included in the complaint by April 4, 2016. However, CED did not show guarantees of deliverability for all three projects by April 4, 2016. In this docket, CED has not shown that it had obtained site control secured for the projects, specifically the Aurora project, nor had CED obtained the necessary permits to construct the Aurora or Davison County Wind projects by that date.

Significantly, Mr. Juhl testified the company had "secured the necessary real property rights needed to complete the interconnection application" but went on further to explain that "all land required to construct and operate the projects is or will be secured via long term land lease." (Juhl Direct Testimony p. 3). The fact that the land rights to construct the project were not secured at the time the complaint was filed, and was still not complete at the date of hearing casts doubt on whether energy is actually deliverable. Mr. Juhl later testified at the hearing on April 11, 2017, that at the time of his testimony only, "80 percent of the land needed to construct a 20

[1] Amended Final Decision and Order; EL11-006, Findings of Fact, p. 8¶ 8

megawatt facility at each site was secured." (T 54:5-12). The fact that CED did not have the land rights needed to construct any of the three facilities by April 4, 2016 adds doubt to the deliverability of the energy.

1) CED May Have Established a LEO for the Brule County Wind Project on April 4, 2016.

By April 4, 2016, CED had obtained the necessary permits and site control to construct the Brule County Wind Project. CED had also started the interconnection process for that facility, though no data was presented as to whether the interconnection costs were available at this time or whether CED had obtained sufficient site control by April 4, 2016. CED had engaged in good faith negotiations with NorthWestern to establish a PPA but reached an impasse in negotiations on this date. If CED can demonstrate that it had the interconnection cost estimates and sufficient site control by April 4, 2016, CED would have established a LEO on that date.

2) CED Did Not Establish That the Davison County Wind Project Met the Standard of Deliverability.

CED's application for a county conditional use permit for the Davison County Wind project was denied by Davison County on February 9, 2016, well before the alleged LEO date. (Staff Exhibit 1 JPT-9 pg 1, DR2-2). Additionally, Mr. Juhl testified that Davison County would adopt a new Wind Energy Ordinance and put it in place by January 15, 2017. (Staff Exhibit1 JPT-9 pg 1, DR2-2). However, Mr. Juhl then testified at the hearing on April 11, 2017 that as of that date, Davison County had not adopted a new wind Energy Ordinance. (T 51:1-9). CED provided no assurances that the permits needed to construct the facility in Davison County can

be obtained nor did CED provide evidence that the energy from this proposed facility is actually deliverable. As a result, CED could not commit to deliver power from the Davison County Wind Project on April 4, 2016 as asserted.

3) CED Did Not Establish That the Aurora County Wind Project met the Standard of Deliverability by April 4, 2016.

CED had not obtained a permit to construct the Aurora County Wind Project by April 4, 2016. CED did obtain conditional use permit to construct from Aurora County on November 21, 2016 so prior to that time, CED could not commit to deliver power from the Aurora County Wind Project.

Staff contends that the mere fact that the respective avoided cost proposals were too far apart by April 4, 2016, does not in itself establish an LEO. In this case, CED did not establish that guarantee of deliverability. When taking the evidence as a whole, CED has not met its burden to establish that a LEO was established by April 4, 2016 for the Aurora County Wind Project or for the Davison County Wind Project.

B. POWERSIMM SHOULD BE USED FOR DETERMINING NORTHWESTERN'S AVOIDED COST.

NorthWestern utilized PowerSimm to model generation and power purchases that the QFs caused the company to avoid. NorthWestern then calculated its avoided costs based on the results of the PowerSimm model. In order to demonstrate that NorthWestern's avoided cost estimate is inaccurate, CED used PROMOD to model NorthWestern's avoided cost and then requested the Commission to approve the avoided cost rate as produced by PROMOD. Ultimately, Staff supports the use of PowerSimm to calculate NorthWestern's avoided cost.

While it is acknowledged that there are differences between PowerSimm and PROMOD, Staff will not go into detail in this brief about the pros and cons of each model. What is clear is that input assumptions drive model outputs and, therefore, models are only as good as the input assumptions used (which are discussed later on in this brief). When considering which model should be used to calculate NorthWestern's avoided cost, Staff focused on whether or not NorthWestern used PowerSimm as a tool to discriminate against CED's projects. Staff concluded that NorthWestern's use of PowerSimm is not discriminatory to CED.

Staff rationalizes its conclusion that PowerSimm is not discriminatory to CED based on the fact that NorthWestern uses PowerSimm to model all new electric energy resources, including company-owned, power purchase agreements, and QFs, for inclusion in NorthWestern's portfolios (NWE Exhibit 2, 4:14-16). By using the same model for all resource procurement decisions, NorthWestern is not discriminating against QFs. It is illogical to think that each utility should be required to purchase, train its employees on, and then compute its avoided costs using a certain model preferred by a project developer.

South Dakota does not require a specific model that every investor owned utility in the state must use for resource planning or avoided cost calculation. Therefore, it is left to each utility to determine what model works best for the company. If the utility used one model for setting its avoided cost to be paid to QFs and another model for resource planning, Staff would be more receptive to the argument that the utility is discriminating against the QF and Staff would then require the utility to thoroughly justify its decision to use different models. However, this is clearly not the situation before the Commission in this case.

What the avoided cost rate produced by PROMOD did do was challenge the reasonableness of NorthWestern's offered avoided cost rate. Upon review of the PowerSimm model and NorthWestern's methods used to calculate the company's avoided cost, Staff found that NorthWestern's approach was reasonable. (Staff Exhibit 2, 26:14-18).

C. NORTHWESTERN'S GAS AND ELECTRICITY FORECAST SHOULD BE USED.

During the course of this proceeding, the Commission has heard argument from CED why Ventyx's gas and electric forecasts should be used in determining NorthWestern's avoided cost. Specifically, CED opines that in this case the Ventyx forecasts are appropriate for computing NorthWestern's avoided cost due to the fact that its forecasts are independent, properly reflects supply and demand fundamentals, and is widely used in the industry (CED Exhibit 2, 29-30). Staff disagrees with CED that Ventyx forecasts should be used in this case and supports NorthWestern's forecasts.

1) Both NorthWestern's and CED's gas and electricity price forecasts are independent.

CED recommends that the NorthWestern's avoided cost be developed using the Ventyx Reference Case forecast (CED Exhibit 2, 3). Beyond the fact that using the Ventyx Reference Case forecast from fall of 2015 results in a higher avoided cost for NorthWestern, CED argues that the Ventyx forecasts are independent (Id.). Staff does not refute that the Ventyx forecasts can be considered as being independent. However, NorthWestern's forecast is also independent.

NorthWestern used the Intercontinental Exchange (ICE) forward market prices, for both natural gas and electricity, and then escalated those values at the Energy Information Administration (EIA) 2016 Annual Energy Outlook (AEO) escalation rate for natural gas (NWE

Exhibit 2, 8-9). Staff questions how this approach cannot be considered independent since NorthWestern does not set the futures market prices, which the markets set, nor does NorthWestern set EIA's long term escalation rate, which EIA's modelling predicts.

Given that NorthWestern did not participate in setting ICE future's prices nor the EIA's natural gas growth rate, CED's position that its price forecasts are better due to the independence of Ventyx should not be given much weight.

2) ICE near term futures prices are reasonable to use.

CED's main point of contention with using ICE future prices is that the electricity price futures are not a valid representation of future prices since there is zero reported trading volume underlying the futures contracts (CED Exhibit 3, 3:15-17). NorthWestern supports the validity of the ICE futures by stating that companies use those values for mark to market (when making valuations of a company), are regulated by the Commodity Futures Trading Commission and Dodd-Frank, and that the ICE futures market prices more closely aligned with actual market prices in 2016 than the Ventyx Forecast (T 197:22-198:9 and 245:10-19).

Besides the fact that NorthWestern uses the same method of developing natural gas and electricity price forecasts for resource planning, NorthWestern offers additional support that using ICE futures is reasonable. On the other hand, CED's only support that using futures is not reasonable is that there is zero trading volume. During cross examination by Chairperson Fiegen, CED witness Mr. Schiffman stated "[a]nd essentially if you look at the forward prices and use those say on a back cast basis, look at what they were forecasting and then look at how generated or dispatching or look at actual market activity, they don't match up" (T 108:20-24).

Beyond this statement, Mr. Schiffman introduced no evidence into the record demonstrating, through the use of a back cast, that this is in fact the case.

Given the information submitted in the record, the ICE near term futures are reasonable to use for developing the natural gas and electricity price forecasts.

3) Ventyx's fall 2015 reference case gas and electricity price forecasts are based on assumptions that inflate gas and electricity prices.

CED argues that the Ventyx forecast is better than NorthWestern's method using ICE near term futures and escalating at EIA's AEO 2016 escalation rate because Ventyx captures fundamental changes in supply and demand in the gas and electric markets. However, all forecasted prices are heavily dependent on assumptions of what the future may hold, as agreed to by CED's witness Roger Schiffman in the following line of questioning:

> Q: And would you agree that each consulting firm may have a different prediction of the future gas prices released on the same day, if the forecast were released on the same day?
>
> Schiffman: Yes. They are different. Some—it just depends on the assumptions and really what they anticipate in terms of growth and demand from natural gas for industrial purposes for export and for electricity. (T 83:24-84:7)

During Ms. Maini's review of the Ventyx input assumptions that CED was able to provide to Staff, Staff witness Maini identified some assumptions that raised some red flags and required additional vetting. Those assumptions included a high load growth for the SPP Dakotas (T

329:13-330:14) a large amount of new natural gas generation added to SPP Dakotas (T 330:17-23), and a low amount of new wind generation in SPP (T 331:5-10). Ms. Maini, summarizes her concern with the high load growth and large amount of gas generation by stating "[s]o if you overestimate load growth and you, you know, overestimate natural gas fired generation, you are going to have more and more reliance on natural gas, which if you over predicted that, your prices are all of a sudden going to, you know, be obnoxiously high, for lack of a better way of putting it." (T 330:24-331:4). Transitioning to her concerns with the low amount of new wind additions Ventyx used for SPP, Ms. Maini summarizes her concern by stating "[s]o if you under predict the wind generation, you are over predicting the power prices again." (T 331:15-17)

In order to understand if CED's witness Mr. Schiffman vetted Ventyx's input assumptions, Staff questioned Mr. Schiffman during cross examination on a few of the input assumptions that raised red flags for Staff witness Ms. Maini. In response to Staff's questioning, Mr. Schiffman simply stated that he relied on Ventyx's assumptions "because I wanted to have the independence of the Ventyx reference case forecast" (T 86:13-14). While Staff appreciates the effort of Mr. Schiffman to maintain independence in his modelling, Staff believes that it is critically important to vet and validate input assumptions in fundamental models in order to verify that those assumptions are properly capturing the conditions that are currently occurring.

Staff's ultimate position on the use of fundamentals based forecasts is nicely summarized by Ms. Maini as follows:

> "So, you know, I guess overall all I'm trying to say here is that these models, fundamentals models, are used in the industry, they're used a lot, but one has to really vet the input assumptions

> and really check reasonability, validate the results, compare to current conditions. If you don't do that, then at least for me, from my perspective, I wouldn't find that model to be valid, if it's not being validated and checked for reasonableness." (T 331:18-332:1).

4) No gas or electric price forecast will be perfect and thus the Commission should focus on using a forecast that is internally consistent and non-discriminatory to the QF.

All parties in this case have recited that the determination of avoided costs must be non-discriminatory to the QF. Since NorthWestern's avoided cost is based on modelling where gas and electric price forecasts are main factors in the modelling, those forecasts should be non-discriminatory to the QF. As such, the logical question would be: what is a gas and electricity forecast that is non-discriminatory to the QF?

A non-discriminatory gas and electric price forecast is one that uses the same method that the utility uses when developing forecasts for its own resource planning. It appears that even CED's witness Mr. Schiffman agrees with this. When summarizing FERC's guidelines to states for determining a utility's avoided cost, Mr. Schiffman states "the avoided capacity and energy costs used to calculate QF purchase rates must be internally consistent." (CED Exhibit 2, 5).

Staff focused its review on whether the utility is discriminating against a QF by applying input assumptions different than how it evaluates the acquisition of future resources in its own planning (Staff Exhibit 2, 17:5-11). As stated by NorthWestern's witness, Mr. Lafave, "NorthWestern uses this method in the evaluation of all of NorthWestern's planning and

portfolio decisions." (NWE Exhibit 1, 12:20-21). Since NorthWestern uses the same method of developing future price curves for its own resource planning, Staff argues that NorthWestern's natural gas and electric price curves should be used in this case. Not only does this not discriminate against the QF by being internally consistent, but it also prevents a QF from shopping around to find an independent consultant that produces a price forecast that is beneficial to the QF and detrimental to NorthWestern's ratepayers.

Ultimately, Staff witness Miaini testified that "NorthWestern's approach of using near term price expectations with long term escalations using publicly available data from the Energy Information Administration's (EIA) Annual Energy Outlook is reasonable." (Staff Exhibit 2, 13:3-6). Staff posits that using NorthWestern's gas and electricity price forecasts are internally consistent with the company's resource planning, is non-discriminatory to the QF, and should be used when calculating the company's avoided cost.

D. THE COMMISSION SHOULD ACCEPT NORTHWESTERN'S METHODOLOGY TO CALCULATE AVOIDED ENERGY COSTS

CED argues NorthWestern's methodology to calculate avoided energy costs results in NorthWestern paying less than its full avoided cost. CED believes NorthWestern's methodology violates PURPA because NorthWestern does not pay qualifying facilities market price when NorthWestern is long on energy. NorthWestern's avoided cost calculation values long energy differently based on whether the generation at the marginal unit can be backed down. If generation at the marginal unit ***can*** be backed down, the avoided energy cost is the variable cost of the marginal unit ("Situation 2"). If generation at the marginal unit ***cannot*** be backed down, the avoided energy cost is zero ("Situation 3" or "minimum generation events").

NorthWestern's payment for Situation 2 is consistent with the Commission's ruling in Docket EL11-006:

> …the Commission finds that the "hybrid method" or combination method employed by NWE of using forecasted avoided incremental baseload costs for energy supplied to NWE from such resources and projected market prices for energy supplied to NWE from such resources most closely matches NWE's actual avoided costs. NWE is a vertically integrated utility that generates most of its energy at this time from its own baseload generation resources. To the extent that NWE is supplying all energy in an hour from its own baseload generation, the only costs NWE can avoid in that hour are the variable baseload generating costs that will be avoided by backing down its costliest baseload generator.[2]

As a vertically integrated utility company, NorthWestern does not rely on the market for all of its purchases. NorthWestern's customers are currently paying retail rates that recover significant generation resource investments. These investments in generation limit NorthWestern's customers' exposure to market price risk by capping the cost of energy at the variable cost of NorthWestern's owned generation facilities. (Staff Exhibit 1, 11:12-19) CED's avoided cost methodology does not appropriately model avoided costs for a vertically integrated utility by using market price in hours when NorthWestern's owned generation establishes a lower avoided cost. This results in CED overestimating NorthWestern's true avoided cost.

[2] Id.

NorthWestern's proposed zero payment for Situation 3 has never been ruled on by this Commission. In addition, the FERC has not issued any orders that address NorthWestern's interpretation of FERC Order 69 for Situation 3. Without a definitive ruling from the FERC for Situation 3, the Commission needs to interpret the facts and circumstances of this docket and issue a decision consistent with the FERC's implementation regulations for PURPA.

FERC Order 69 clearly lays out how much a utility should pay for energy and capacity if the power is not required to meet the utility's total system load:

> A qualifying facility may seek to have a utility purchase more energy or capacity than the utility requires to meet its total system load. In such a case, while the utility is legally obligated to purchase any energy or capacity provided by a qualifying facility, *the purchase rate should only include payment for energy or capacity which the utility can use to meet its total system load*. These rules impose no requirement on the purchasing utility to deliver unusable energy or capacity to another utility for subsequent sale.[3] {*Emphasis Added}*

If the energy cannot be used to serve NorthWestern's system load, NorthWestern should not have to include any payment in its purchase rate. In addition, FERC specifically stated that there are no requirements on NorthWestern to sell energy into the market for another utility.

This interpretation of FERC Order 69 is critical to ensure the rate for purchase is just and reasonable to the electric consumer of NorthWestern and in the public interest. Consider the

[3] FERC Order 69, 45 Fed. Reg. 12219, Feb. 25, 1980

scenario where 50 additional qualifying facilities, each approximately 20 MWs, wanted to sell its energy and capacity to NorthWestern and its 305 MW system. Under CED's proposal, NorthWestern would be required to pay market prices for another 1,000 MWs of energy which would primarily be sold into the SPP market rather than used to serve its approximate 300 MW retail system. NorthWestern's customers would ultimately become the guarantor of a market forecast for a significant amount of power it cannot use. A regulated public utility's primary purpose is to serve its customer's energy needs, not a wholesale power market. The policy of guaranteeing market prices for energy that cannot be used to serve NorthWestern's subjects NorthWestern's customers to a level of market risk that is not in the public interest. A proper interpretation of FERC Order 69 protects customers from this risk.

Although FERC regulations do not allow light loading curtailments, FERC has indicated that light loading periods such as Situation 3 should be taken into account when determining rates for long term agreements. The FERC recognizes the need for minimum generation adjustments in purchase rates in lieu of economic curtailments:

> In other words, Order No. 69 described the purpose of section 292.304(f)(1) as remedying scenarios where a utility's avoided costs determined at the time of delivery would fluctuate dramatically and yield negative avoided costs – in that scenario, an electric utility need not purchase. But Order No. 69, in acknowledging the fact that parties may negotiate with light loading periods and other kinds of fluctuations in mind, did not say that section 292.304(f)(1)'s relieving an electric utility from its obligation to purchase was tied to *whether rates had expressly*

taken into account light loading periods. In Entergy Services, the Commission reiterated that these conditions often are incorporated into PPAs. Idaho Wind Partners 1, LLC. Docket No. EL12-74-001. 143 FERC P 61,248 at P12 (June 20, 2013).

Many avoided cost rates are calculated on an average or composite basis, and already reflect the variations in the value of the purchase in the lower overall rate. In such circumstances, the utility is already compensated, through the lower rate it generally pays for unscheduled QF energy, for any periods during which it purchases unscheduled QF energy even though that energy's value is lower than the true avoided cost. On the other hand, for avoided cost rates that are determined in real-time, such avoided costs adjust to reflect the low (or zero or negative) value of the unscheduled QF energy, allowing the QF to make its own curtailment decisions. In neither case is the utility authorized to curtail the QF purchase unilaterally. *Entergy Servs., Inc.*, Nos. ER05–1065–011, OA07–32–008, 137 FERC P 61, 199, at P 56 (Dec. 15, 2011).

In addition, in Docket F-3365, the Commission has already ruled on purchase rates for capacity credits when capacity costs cannot be avoided, and the same principles can be applied to energy costs:

> The capacity credits to be included in any purchase rates, whether contractual or otherwise, should be based on capacity actually avoided, and if the purchase does not enable a utility to avoid capacity costs, capacity credits should not be allowed.[4]
>
> The Commission does not read the FERC's rules to permit a utility to pay capacity costs where none are avoided. To do so would have the effect of requiring the utility to pay twice for the same capacity and would thus impose added and unnecessary costs on the utility's other customers, contrary to clear congressional and FERC intent.[5]

In a minimum generation event, NorthWestern does not avoid any costs (Staff Exhibit 2, 19:19). Similar to capacity costs, it would also be contrary to congressional and FERC intent to require utilities to pay energy costs when none are avoided.

CED argues that NorthWestern's avoided cost modeling of Situation 2 and Situation 3 is discriminatory and violates PURPA because NorthWestern receives more favorable rate recovery for its own supply resources through retail rates than it is modeling for qualifying facilities. CED's assertion is based on NorthWestern's ability to sell excess energy to the wholesale market during its normal course of business and pass along gains and losses to customers. However, CED's argument is without merit because the Commission evaluates and ensures NorthWestern's internal resources are used and useful for its customers, and generation resources that are primarily used for market sales would not be included in rates for cost

[4] See SD PUC Docket F-3365, *Decision and Order,* pg. 17
[5] Id., pg. 18

recovery. See SDCL Chapter 49-34A. Interested parties to NorthWestern's rate proceedings can request that the utility model generation resource additions without market sales as a dispatch option to see if the resource decision is still prudent. With the must purchase obligation under PURPA, it is imperative to scrutinize the qualified facilities ability to serve NorthWestern's system in a similar fashion that is done for NorthWestern's internal resource additions.

In NorthWestern's response to Commissioner Nelson's request submitted on May 3rd, NorthWestern asserted that the avoided cost of energy would increase by approximately $1.24 per MWh to $30.87 per MWh for all energy delivered when NorthWestern was not forecasted to be in a minimum generation event. Commissioner Nelson alluded to the possibility of NorthWestern selling CED's delivered power to market at the as available locational marginal price during minimum generation events, and provide payment of $30.87 per MWh for all other electricity delivered. This alternative would violate PURPA. Under 18 CFR 292.304(d), each qualifying facility shall have the option either:

(1) To provide energy as the qualifying facility determines such energy to be available for such purchases, in which case the rates for such purchases shall be based on the purchasing utility's avoided costs calculated at the time of delivery; or

(2) To provide energy or capacity pursuant to a legally enforceable obligation for the delivery of energy or capacity over a specified term, in which case the rates for such purchases shall, at the option of the qualifying facility exercised prior to the beginning of the specified term, be based on either:

(i) The avoided costs calculated at the time of delivery; or

(ii) The avoided costs calculated at the time the obligation is incurred.

CED requests to provide energy and capacity pursuant to a legally enforceable obligation and have the avoided costs calculated at the time the obligation is incurred. The qualifying facility selects the option, and CED did not elect the time of delivery option that is being considered. In addition, PURPA allows the calculation to be made at the time of the obligation or time of delivery, not a combination of the two options. 18 CFR 292.304(d)(2) would need to be written with "and" rather than "or" underlined above in order to facilitate the alternative being considered. It would be unlawful for the commission to select a payment option that is not allowed under federal regulations, nor selected by CED as its preferred option.

E. THE AVOIDED CAPACITY COST SHOULD BE ESTABLISHED ON THE COST OF A SIMPLE CYCLE PEAKING PLANT AND SPP'S METHOD FOR DETERMINING ACCREDITED CAPACITY FOR A WIND FARM.

Throughout the course of the this proceeding, it was demonstrated that NorthWestern is projected to need additional capacity beginning in 2019 (NWE Exhibit 1, 15:17-20; CED Exhibit 2, 39; and Staff Exhibit 2, 28:5-6). Given this, CED's projects should receive an avoided capacity payment beginning in 2019. The amount of the capacity payment is an area of dispute between CED and NorthWestern. Staff's position on this issue is a blend of CED's and NorthWestern's avoided capacity cost proposals.

In order to calculate avoided capacity costs, one must determine the correct cost per MW (or kW) of capacity avoided and then the amount of capacity the QFs will cause NorthWestern to avoid. For the former, Staff agrees with CED that the avoided capacity cost should be based on the cost of new entry of a simple cycle peaking plant (Staff Exhibit 2, 28:6-8). For the latter, Staff agrees with NorthWestern that SPP's method for determining accredited capacity should be

applied to CED's QFs in order to set the amount of capacity to receive a payment (Staff Exhibit 2, 28:10-16).

In short, the avoided capacity cost should be established on the cost of a simple cycle peaking plant and SPP's method for determining accredited capacity for a wind farm. Since SPP's method may change the capacity amount for CED's wind projects, the avoided capacity cost should not be converted into a $/MWh amount but rather be submitted to CED as a fixed amount on a monthly basis (Staff Exhibit 2, 28:17-20).

F. THE COMMISSION SHOULD REQUIRE CED TO PAY THE INTERCONNECTION COSTS USING A LEVELIZED RATE OVER THE LENGTH OF THE CONTRACT.

CED argues that NorthWestern's proposal to charge CED $2.84 per MWh for interconnection costs violates PURPA because it is discriminatory. CED asserts that this policy unfairly discriminates against qualifying facilities because a merchant generator that seeks interconnection on NorthWestern's transmission system would not be required to pay network upgrade costs.

Merchant generators pay for the incremental network upgrade costs up front, but are then reimbursed the entire amount once the project achieves commercial operation. The refund is reflected as a transmission service credit against the transmission service charge. Instead of paying incremental network upgrade costs, merchant generators pay embedded network upgrade costs of the system through the transmission service charge.

CED requested interconnections to NorthWestern's system in the middle of the distribution lines for all three facilities, which will require construction of a new substation for each project.

At this time, NorthWestern is not avoiding any costs as there is no system benefit associated with these network upgrades. It is also worth noting that the two qualifying facilities already selling electricity to NorthWestern have interconnected at an existing substation, and did not require a new substation.

Per 18 CFR 292.306, the Commission may assess interconnection costs against the qualifying facility on a non-discriminatory basis. NorthWestern's interconnection cost assessment is not discriminatory because a merchant generator would be subject to the transmission service charge to recover the costs for network upgrades, whereas CED's qualifying facilities are not subject to the transmission service charge. (ET, 277:3-16). Since CED is not paying the transmission service charge, a charge needs to be levied in order to recover costs associated with the network upgrades that do not allow NorthWestern to avoid any costs. NorthWestern's proposed interconnection cost assessment is consistent with cost causation principles and sends the appropriate price signals to qualified facilities to prudently plan interconnections to NorthWestern's system.

G. THE COMMISSION SHOULD NOT INCLUDE CARBON COSTS IN THE AVOIDED COST

In CED's direct testimony, CED requested to reflect a carbon cost component in the avoided cost of $11.63 per MWh (CED Exhibit 2, 38-39). CED witness Schiffman stated that given the Clean Power Plans rules developed by the Environmental Protection Agency, it is appropriate to reflect a carbon cost component in the avoided cost (CED Exhibit 2, 38). NorthWestern argued it would not be appropriate to arbitrarily include an unknown carbon cost that NorthWestern customers may or may not avoid in the future (NWE Exhibit1, BJL-21-22).

PURPA requires that avoided costs should be calculated based on costs actually avoided. In the absence of known laws or enforceable regulations that impose a cost for carbon, it is difficult to predict the actual impact carbon costs would have on NorthWestern's avoided cost (Staff Exhibit 1, 20). If the Commission were to include carbon costs in the avoided cost calculation without NorthWestern actually incurring any costs associated with the regulation of CO_2 emissions, the purchase rate would exceed NorthWestern's actual avoided cost. NorthWestern's customers would therefore be harmed by unjust and unreasonable rates.

In Docket EL11-006, the Commission found that the inclusion of carbon costs in the avoided cost calculations was unjustifiably speculative at that time.[6] Carbon costs are still too speculative today to warrant inclusion in the avoided cost calculation. One needs to look no further than the status of the Clean Power Plan to see the uncertainty surrounding the potential impact of carbon regulation on the cost of electricity. During this approximately year-long proceeding, the Clean Power Plan implementation remains stayed pending judicial review, and the election of President Trump has significantly changed the U.S.'s approach to carbon regulation. The Clean Power Plan is unlikely to ever be enforced in its current form.

In CED's opening post-hearing brief, CED reduced its avoided cost estimate from $60.70 (Complaint, pg. 8, item 19) to $49.07 (Opening Post-Hearing Brief, pg. 30) by excluding its estimated CO_2 compliance cost of $11.63 (Complaint, pg. 8, item 19) from its request. Commission Staff agrees with CED's modified position that estimated carbon costs should not be included the avoided cost calculation.

III. CONCLUSION

[6] See Docket EL11-006, *Amended Final Decision and Order,* Findings of Fact 16.

At the time of its initial request, the Petitioner produced a total "all in" avoided cost of $60.70/MWH for its three wind energy projects. An avoided carbon costs accounted for approximately $11.63/MWH of its initial calculation. If one takes a step back and looks at the reasonableness of the request, there starts to be some questions raised. Adding carbon costs is not something that is common practice at this Commission nor has it been done before. When looking at how the requested $60.70/MWH compares to current market prices, as well as other PPA pricing offers for other wind projects, the reasonableness of the request comes into question. In the absence of any proper validation to the inputs and corresponding output, CED's request is unreasonable on its face.

When taking the evidence as a whole, the Commission should determine that CED did not establish that a LEO existed for all three wind projects by April 4, 2016. Instead, due to lack of site control, the lack of permits necessary to construct and deliver the Energy produced, a LEO was not established for the Aurora County Wind Project until November 21, 2016 and a LEO has not yet been established for the Davison County Wind Project. The Commission should use PowerSimm to determine NorthWestern's Avoided Costs as well as NorthWestern's gas and electricity forecasts and NorthWestern's methodology to calculate avoided energy costs. For the reasons explained previously, the Commission should not include carbon costs and should require CED to pay for the interconnection costs using a levelized rate over the length of the contract.

RESPECTFULLY SUBMITTED THIS 7th Day of June 2017.

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