BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

In the Matter of the Complaint by Oak Tree Energy LLC against NorthWestern Energy for refusing to enter into a Purchase Power Agreement	EL 11-006 **NorthWestern Energy's Application for Reconsideration of Findings and Conclusions in Final Order Issued on February 21, 2013**

Introduction

COMES NOW, NorthWestern Corporation, d/b/a NorthWestern Energy ("NorthWestern" or "NWE") and applies to the Public Utilities Commission ("Commission") for reconsideration of certain findings and conclusions made by the Commission in its Final Decision and Order; Notice of Entry dated the 21st of February, 2013 in this docket ("Final Order"). Specifically, NorthWestern requests that the Commission reconsider the following findings and conclusions:

> 23. The Commission finds that Oak Tree is entitled to capacity credit for the facility's output commencing with the Project's coming on line with the capacity value equal to 20% of the Project's net-of-losses capacity of 18.915 MW. The 20% value is the appropriate percentage since NWE is a member of the Midwest Reliability Organization (MRO), and as of the LEO date of February 25, 2011, the MRO accredited wind energy facilities at 20% of their capacity. ("Finding 23")
>
> 30. The Commission finds that the introduction of these inputs into the model developed by Mr. Rounds yields the resulting levelized and non-levelized avoided cost values set forth on the spreadsheet attached hereto as Exhibit A and incorporated herein by reference. ("Finding 30")
>
> 31. The Commission finds that the levelized avoided cost values are the appropriate values to use because they will produce a stable price that will better enable Oak Tree to finance the Project. The Commission accordingly finds that NWE's avoided cost for the Oak Tree Project is $53.31/MW if production begins in 2013 and $55.34/MWh if production begins in 2014 as set forth on the "levelized" columns of Exhibit A. ("Finding 31")

7. Oak Tree is entitled to capacity credit for the facility's output commencing with the Project's coming on line with the capacity value equal to 20% of the Project's net-of-losses capacity of 18.915 MW. The 20% value is the appropriate percentage since NWE is a member of the Midwest Reliability Organization (MRO), and as of the LEO date of February 25, 2011, the MRO accredited wind energy facilities at 20% of their capacity. ("Conclusion 7")

8. Levelized avoided cost values are the appropriate values to use because they will produce a stable price that will better enable Oak Tree to finance the Project. NWE's avoided cost for the Oak Tree Project is $53.31/MW if production begins in 2013 and $55.34/MWh if production begins in 2014 as set forth on the "levelized" columns of Exhibit A. ("Conclusion 31")

Each of these findings and conclusions is in error because the Commission misapprehended the evidence before it, misapplied its adopted model, or used an improper calculation method. These errors all relate to Exhibit A attached to the Final Order which was presented to the Commission on January 22, 2013, and which NorthWestern has had no opportunity to address prior to this Application for Reconsideration.

Argument

A. The Commission improperly calculated the levelized value of the annual avoided costs.

The Commission calculated two series of annual avoided cost values as shown in Exhibit A, columns labeled "Beginning in2013 – Rounded Actual ($/MWh)" and "Beginning in 2014 – Rounded Actual ($/MWh)." These two series of values are in the table below:

Year	Beginning in 2013 Rounded Actual ($/MWh)	Beginning in 2014 Rounded Actual ($/MWh)
2013	35.18	
2014	37.00	37.00
2015	38.69	38.69
2016	41.03	41.03
2017	43.69	43.69
2018	45.40	45.40
2019	46.17	46.17

Year	Beginning in 2013 Rounded Actual ($/MWh)	Beginning in 2014 Rounded Actual ($/MWh)
2020	47.47	47.47
2021	49.01	49.01
2022	50.52	50.52
2023	52.15	52.15
2024	53.61	53.61
2025	55.54	55.54
2026	58.89	58.89
2027	63.01	63.01
2028	65.85	65.85
2029	67.82	67.82
2030	69.73	69.73
2031	71.49	71.49
2032	73.94	73.94
2033		75.79

The Commission determined that the levelized values for these two series are $53.31/MWh and $55.24/MWh, respectively. These levelized costs represent the simple average of each series rather than the net present value. By failing to levelize the streams on a net present value basis, the Commission has adopted a rate that ignores the time value of money, requires NorthWestern's customers to provide an interest-free loan to Oak Tree, and violates PURPA's requirement of customer indifference. Using a 7.86% discount rate, the levelized values of these series decrease $4.81/MWh to $48.50/MWh and $4.89/MWH to $50.45/MWh.

In Order 69, FERC stated, with respect to levelized payments, "So long as the total payment over the duration of the contract term does not exceed the estimated avoided costs, nothing in these rules would prohibit a State regulatory authority or a non-regulated electric utility from approving such an arrangement." *Small Power Product and Cogeneration Facilities; Regulations Implementing Section 210 of the Public Utility Regulatory Policies Act of 1978*, 45 Fed. Reg 12,224 (February 25, 1980). Both NorthWestern and Oak Tree recognized that Order 69 requires

levelized costs to be calculated on a net present value basis. *See, e.g. Testimony of Bleau LaFave, Exhibit 1*, p. 153 (filed November 21, 2012) (applying a 7.86% discount rate to calculate levelized cost of energy); *Additional Testimony of J. Richard Lauckhart ("Lauckhart Additional Testimony"), Attachment 2*, Sheet "LevelizedAvoidedCost," Cell D26 (filed November 21, 2012) (applying an 8% discount rate to calculate "20 Year Levelized Avoided Cost).

At a minimum, the Commission should reconsider and reduce its determination of NorthWestern's levelized avoided cost for Oak Tree to $48.50/MWh if the project begins production in 2013 and to $50.45/MWh if the project begins production in 2014 based on a 7.86% discount rate.

B. The Commission erred in calculating the capacity payment and the capacity value.

The Commission misapprehended the evidence in two important ways, both of which led the Commission to establish a higher capacity value than is warranted. First, the Commission overstated the capacity cost by beginning the escalation too early. Second, the Commission mistakenly concluded that on February 25, 2011, the Midwest Reliability Organization ("MRO") accredited wind energy facilities at 20% of their rated capacity.

1. The Commission should not have begun escalation of the capacity cost until 2015.

The evidence in the docket is that as of the date of the LEO, a counterparty had offered to provide capacity to NorthWestern at $36.00/kW-year for 2013 and 2014. *Transcript – December 5 - 6, 2012* 211:12-13. This evidence appears to be the source of the Commission's determination of Oak Tree's capacity value in Exhibit A. However, in Exhibit A, the Commission began escalating the cost of capacity in 2014 rather than 2015. If the Commission had not prematurely escalated

the cost of capacity, the total cost of capacity over the 20-year contract would have been $264,204 less for production beginning in 2013 and $287,587 less for production beginning in 2014.

2. The MRO did not accredit wind facilities at 20% of rated capacity on February 25, 2011.

There is no credible evidence that the MRO accredited wind facilities at 20% of their rated capacity on February 25, 2011; in fact, beginning in 2010, MRO credited wind facilities with 8% of their rated capacity for summer and 20% of their rated capacity for winter.

In J. Richard Lauckhart's affidavit attached to the Complaint, he stated, "The avoided capacity value is quite small in comparison to the avoided energy value because only 20% of the 19.5 MW of Oak Tree Wind nameplate capacity is **assumed** to count toward peak needs." *Complaint Exhibit 11* at ¶ 7.a (emphasis added). When asked in discovery to explain how that percentage was derived, Oak Tree responded, "The 20% is presented as an estimate of what MISO/MAPP will allow a wind plant nameplate capacity to count toward peak load needs." *Response to NorthWestern Data Request 1-21(a).* In the Direct Testimony of J. Richard Lauckhart ("*Lauckhart Direct*"), filed on December 16, 2011, Mr. Lauckhart stated, "First, it is assumed the Midwest Reliability Organization (MRO) will only allow 20% of the nameplate rating of the wind plant to count toward NorthWestern's Resource Adequacy Need." *Lauckhart Direct*, p. 6. He also stated:

> MRO studies and reports have stated this in the past. This subject continues to be discussed and may change in the future. Some reliability organizations are modifying their rules so that each wind plant will be counted differently toward meeting peak based on historical performance of that particular wind plant on peak load hours. Some wind plants may be counted at more than 20% and some at less than 20%. For my calculations, I have assumed that the Oak Tree wind plant will be allowed to count 20% of nameplate capacity toward peak loads.

Lauckhart Direct, pp. 6-7. Mr. Lauckhart did not provide reference to or copies of any MRO studies or reports. At the March 21-22 hearing, Mr. Lauckhart again stated, "I'm assuming they would only count 20 percent." *March 21-22 Transcript,* 115:3. In the *Laukhart Additional Testimony,* Mr. Laukhart repeatedly said that Oak Tree counted 20% toward capacity, but did not say that MRO allowed a wind plant to count 20%. In his *Responsive Testimony*, filed November 28, 2012, Mr. Lauckhart justified a 20% capacity credit by referencing the *Lauckhart Direct* and mentioning unspecified earlier MRO studies and reports. *Responsive Testimony of J. Richard Lauckhart*, p. 10.

Nowhere does Mr. Laukhart acknowledge that MRO changed its method of crediting wind capacity in 2010. The March 10, 2010 minutes of MRO's Resource Assessment Committee (attached as Attachment 1) indicated the MRO would use 8% of nameplate capacity in its 2010 Long Term Reliability Assessment and Summer Assessment. *Attachment 1*, pp. 5-6. More importantly, the North American ("NERC") 2010 Long-Term Reliability Assessment ("2010 LTRA"), stated:

> The nameplate capacity of the Existing variable generation for the MRO Region is approximately 7,540 MW for 2010 Summer. The variable resources for the MRO-US subregion projected to be available at peak times are 570 MW, based on 8 percent of nameplate capacity for summer peak. . . . The 8 percent for summer peak and 20 percent for winter peak of nameplate wind generation is used for the MRO-US Planning Authorities when determining capacity credits of variable generation.

2010 LTRA, p. 82 (cover and pp. 80-91 attached as Attachment 2).

Clearly, giving Oak Tree capacity value of 20% is not supported by credible evidence. Representatives of NorthWestern supplied considerable testimony that Mr. Lauckhart's assumptions were not correct. Although these representatives' testimony focused primarily on MISO methods, they also testified as to MRO-MAPP determinations. NorthWestern continues to assert that the best approach would be to set the price for capacity for the contract period and the

method for determining the actual capacity provided in Oak Tree each year and that PURPA regulations only require the price to be set at the creation of an LEO. However, if the Commission wants to determine a capacity credit for Oak Tree, it should be no more than 14%, which is the average of the MRO Summer and Winter credit amounts.

Using a 14% capacity credit, beginning the escalation of capacity costs in 2015, and applying a discount rate of 7.86%, the levelized values of the avoided costs decrease an additional $1.03/MWh for 2013 projects and $1.11/MWH for 2014 projects.

C. The Commission erred in applying average load growth projections to increase peak load.

Commission staff witness Brian Rounds calculated NorthWestern's avoided cost using annual prices from EIA, adjusted those prices to match block prices in an EIPC model, and calculated NorthWestern's load shape using the EIPC MISO West load shape (collectively "*Rounds Model*"). The EIPC model calculates block loads based on peak load or demand. The EIPC model inherently assumes a static relationship between peak load and total load. As Mr. Rounds testified, the *Rounds Model* is based on demand growth. *Transcript – December 5-6, 256:7-8.* Neither the EIPC model nor *Rounds Model* effectively accounts for demand growth rates that differ from total load growth rates. However, if the growth rates are different, the integrity of the model requires that demand growth rates be used.

The evidence before the Commission establishes that while NorthWestern's average load grows at 2.25% annually, its peak load grows at only 1% annually. As indicated in the NorthWestern Energy – South Dakota Ten-year Biennial Plan, Exhibit OT-10, p. 9, under the section of Projected Electrical Demand, NorthWestern's demand growth averages about 2 MW per year. Although NorthWestern's total load has increased by 2.25% per year during the past ten

years, its peak load has increased by 1% during the same period. Exhibit A demonstrates that the final calculation used by the Commission to calculate the avoided costs incorrectly escalates the peak load by 2.25%.

By escalating all of the blocks in *Rounds Model* by the total load growth rate of 2.25% instead of the proper peak load growth rate of 1%, the Commission overestimates the amount of energy NorthWestern customers will need to purchase during peak blocks at the peak prices. This results in an artificially high avoided cost of energy. As an example, in Block 1, modeling NorthWestern's historic demand load growth of 1% predicts a peak load of 377 MW in 2035. Exhibit A, which uses the total load growth of 2.25%, predicts a peak load of 528 MW in 2035. This 151 MW difference was building each year, and cost was calculated at the highest price. For a contract starting in 2013, there is an additional 1,218 MW in Block 1 than is reflected in NorthWestern's historic demand growth. The price differential between Block 1 and Block 2 is $3.21 per MW and most of the energy was actually accumulated in the lower costs blocks. The tables below demonstrate the differences between *Rounds Model* and Exhibit A. Exhibit A uses a load shape different from *Rounds Model*. Although the load shape used by the Commission appears to match NorthWestern's load shape more closely, NorthWestern is not able to verify the origin of the load shape or the validity of using this load shape to *Rounds Model*.

Brian Round's Load Shape

NWE Load Shape 2012-2035

	Season	Summer										Shoulder					Winter					
	Hours	10	25	75	100	200	300	400	500	800	1262	25	200	600	900	1203	25	100	400	700	935	
NEEM Region	Year	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	B20	
MISO_W	2011	1.000	1.058	1.017	0.958	0.906	0.837	0.785	0.702	0.634	0.533	0.735	0.706	0.686	0.638	0.542	0.868	0.798	0.771	0.708	0.545	Total MWh
NWE	2012	313	331	318	299	283	262	245	219	198	167	230	221	215	200	170	271	249	241	221	170	1,781,167
	2013	315	334	321	302	286	264	247	221	200	168	232	223	216	201	171	274	252	243	223	172	1,797,020
	2014	318	337	324	305	288	266	250	223	202	170	234	225	218	203	173	276	254	245	225	173	1,813,013
	2015	321	340	327	307	291	269	252	225	203	171	236	227	220	205	174	279	256	247	227	175	1,829,149
	2016	324	343	329	310	293	271	254	227	205	173	238	229	222	207	176	281	258	250	229	176	1,845,429
	2017	327	346	332	313	296	274	256	229	207	174	240	231	224	209	177	284	261	252	231	178	1,861,853
	2018	330	349	335	316	299	276	259	231	209	176	242	233	226	210	179	286	263	254	233	180	1,878,423
	2019	333	352	338	319	301	279	261	234	211	177	245	235	228	212	180	289	265	256	235	181	1,895,141
	2020	336	355	341	321	304	281	263	236	213	179	247	237	230	214	182	291	268	259	238	183	1,912,008
	2021	339	358	344	324	307	283	266	238	215	180	249	239	232	216	184	294	270	261	240	184	1,929,025
	2022	341	361	347	327	309	286	268	240	216	182	251	241	234	218	185	296	272	263	241	186	1,944,071
	2023	344	364	350	329	311	288	270	241	218	183	253	243	236	219	186	298	274	265	243	187	1,959,235
	2024	347	367	353	332	314	290	272	243	220	185	255	245	238	221	188	301	277	267	245	189	1,974,517
	2025	349	370	355	334	316	292	274	245	221	186	257	247	240	223	189	303	279	269	247	190	1,989,918
	2026	352	372	358	337	319	295	276	247	223	188	259	249	242	225	191	305	281	271	249	192	2,005,440
	2027	355	375	361	340	321	297	278	249	225	189	261	251	243	226	192	308	283	273	251	193	2,021,082
	2028	357	378	364	342	324	299	281	251	227	190	263	252	245	228	194	310	285	276	253	195	2,036,847
	2029	360	381	366	345	326	302	283	253	228	192	265	254	247	230	195	313	288	278	255	196	2,052,734
	2030	363	384	369	348	329	304	285	255	230	193	267	256	249	232	197	315	290	280	257	198	2,068,745
	2031	366	387	372	350	331	306	287	257	232	195	269	258	251	234	198	317	292	282	259	199	2,084,882
	2032	369	390	375	353	334	309	289	259	234	196	271	260	253	235	200	320	294	284	261	201	2,101,144
	2033	372	393	378	356	337	311	292	261	235	198	273	262	255	237	202	322	297	286	263	202	2,117,533
	2034	375	396	381	359	339	314	294	263	237	200	275	265	257	239	203	325	299	289	265	204	2,134,049
	2035	377	399	384	361	342	316	296	265	239	201	278	267	259	241	205	327	301	291	267	206	2,150,695

Exhibit A's Load Shape

NWE Load Shape 2012-2035

	Season	Summer										Shoulder					Winter					
	Hours	10	25	75	100	200	300	400	500	800	1262	25	200	600	900	1203	25	100	400	700	935	
NEEM Regior	Year	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	B20	
NW into EIPI	2011	1.000	0.964	0.915	0.874	0.831	0.766	0.692	0.619	0.557	0.443	0.801	0.715	0.635	0.565	0.455	0.878	0.830	0.775	0.707	0.598	Total MWh
		3165	7628	21719	27662	52601	72730	87605	97955	141030	176941	6338	45259	120584	160937	173238	6947	26269	98113	156633	176961	1,660,314
NWE	2012	316	305	290	277	263	242	219	196	176	140	254	226	201	179	144	278	263	245	224	189	1,660,314
	2013	324	312	296	283	269	248	224	200	180	143	259	231	205	183	147	284	269	251	229	194	1,697,671
	2014	331	319	303	289	275	253	229	205	184	147	265	237	210	187	151	291	275	256	234	198	1,735,869
	2015	338	326	310	296	281	259	234	209	188	150	271	242	215	191	154	297	281	262	239	202	1,774,926
	2016	346	333	317	302	287	265	239	214	193	153	277	247	220	195	157	304	287	268	245	207	1,814,862
	2017	354	341	324	309	294	271	245	219	197	157	283	253	225	200	161	311	294	274	250	212	1,855,696
	2018	362	349	331	316	301	277	250	224	201	160	290	259	230	204	165	318	300	280	256	216	1,897,449
	2019	370	357	338	323	307	283	256	229	206	164	296	264	235	209	168	325	307	287	261	221	1,940,142
	2020	378	365	346	331	314	290	262	234	211	168	303	270	240	214	172	332	314	293	267	226	1,983,795
	2021	387	373	354	338	321	296	268	239	215	171	310	276	246	218	176	339	321	300	273	231	2,028,430
	2022	395	381	362	346	329	303	274	245	220	175	317	283	251	223	180	347	328	306	280	236	2,074,070
	2023	404	390	370	353	336	310	280	250	225	179	324	289	257	228	184	355	336	313	286	242	2,120,737
	2024	413	398	378	361	343	317	286	256	230	183	331	296	262	234	188	363	343	320	292	247	2,168,453
	2025	423	407	387	369	351	324	292	262	235	187	339	302	268	239	192	371	351	328	299	253	2,217,243
	2026	432	417	395	378	359	331	299	268	241	191	346	309	274	244	197	379	359	335	306	258	2,267,131
	2027	442	426	404	386	367	338	306	274	246	196	354	316	281	250	201	388	367	342	312	264	2,318,142
	2028	452	436	413	395	375	346	313	280	252	200	362	323	287	255	206	397	375	350	319	270	2,370,300
	2029	462	445	423	404	384	354	320	286	257	205	370	330	293	261	210	406	383	358	327	276	2,423,632
	2030	472	455	432	413	393	362	327	292	263	209	378	338	300	267	215	415	392	366	334	282	2,478,163
	2031	483	466	442	422	401	370	334	299	269	214	387	345	307	273	220	424	401	374	341	289	2,533,922
	2032	494	476	452	432	410	378	342	306	275	219	396	353	314	279	225	434	410	383	349	295	2,590,935
	2033	505	487	462	441	420	387	349	313	281	224	405	361	321	285	230	443	419	391	357	302	2,649,231
	2034	516	498	472	451	429	396	357	320	288	229	414	369	328	292	235	453	429	400	365	309	2,708,839
	2035	528	509	483	461	439	404	365	327	294	234	423	378	335	298	240	464	438	409	373	316	2,769,788

If the Commission were to use Exhibit A with NorthWestern's actual 1% peak load growth, the average avoided costs, without discounting to present value, would decrease $3.26/MWh for 2013 projects and $3.63/MWh for 2014 projects.

As further evidence to support the use of *Rounds Model* at Mr. Rounds's recommend demand growth, NorthWestern directly compared the Exhibit A's model, *Rounds Model*, and

NorthWestern's model, with common inputs where possible. Specifically NorthWestern used the following:

- All models
  - Mr. Rounds's energy price forecast
  - Exhibit A's unadjusted capacity costs
  - Simple average of years' costs
- Exhibit A model & NorthWestern's model
  - 1% demand growth rate
- *Rounds Model*
  - EIPC demand growth
- NorthWestern's model
  - 2.5% total load growth

Without any of the capacity related adjustments discussed in section B above, all three models yield 20 year levelized pricing for 2013 projects and 2014 projects that are less than $2 of each other as shown in the table below:

20 Year Levelized Cost (Growth adjusted Only)	2013	2014
Exhibit A Model	$50.05	$51.71
Rounds Model	$48.63	$50.12
NorthWestern's Model	$48.17	$50.18

Conclusion

Finally, NorthWestern directly compared all three models using a discount rate of 7.86%, the capacity corrections described in section B, and the inputs described in section C. With all corrections described in this Application, the avoided cost associated with Oak Tree is as follows:

20 Year Levelized Cost (All Adjustments)	2013	2014
Exhibit A Model	$44.85	$46.40
Rounds Model	$43.87	$45.26
NorthWestern's Model	$45.15	$47.23

NorthWestern respectfully requests that the Commission reconsider and modify the Final Order to provide Oak Tree a contract rate of $45.15/MWh if the project is operational 2013 and $47.23/MWh if it is operation in 2014.

Dated at Sioux Falls, South Dakota, this 20th day of March, 2013.

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