

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of the Application of The Empire District)
Electric Company for Approval of Its Customer) File No. EO-2018-0092
Savings Plan)

In the Matter of the Propriety of the Rate Schedules for) File No. ER-2018-0228
Electric Service of The Empire District Electric Company)

NON-UNANIMOUS STIPULATION AND AGREEMENT

COME NOW The Empire District Electric Company (“EDE”), Midwest Energy Consumers Group (“MECG”); Staff of the Missouri Public Service Commission (“Staff”); Renew Missouri Advocates (“Renew Missouri”); and, Missouri Department of Economic Development – Division of Energy (“DE”) (collectively, the “Signatories”), by and through their respective counsel, and, for their Non-Unanimous Stipulation and Agreement (this “Stipulation”), respectfully state as follows to the Missouri Public Service Commission (“Commission”):

1. This Stipulation is being entered into solely for the purpose of settling all contested issues in the two cases captioned above except the issue specifically identified in paragraph 26. Unless otherwise explicitly provided herein, none of the Signatories shall be deemed to have approved or acquiesced in any ratemaking or procedural principle, including, without limitation, any method of cost of service or valuation determination or cost allocation, rate design, revenue recovery, or revenue-related methodology. Except as explicitly provided herein, none of the Signatories shall be prejudiced or bound in any manner by the terms of this Stipulation in this or any other proceeding.

2. This Stipulation has resulted from extensive negotiations among the parties, and

the terms herein are interdependent and non-severable. If the Commission does not approve this Stipulation unconditionally and without modification, or if the Commission approves the Stipulation with modifications or conditions to which a Signatory objects, then this Stipulation shall be void and none of the Signatories shall be bound by any of the agreements or provisions hereof.

3. This Stipulation is based on the unique circumstances presented by Empire to the Signatories. Except to the extent necessary to implement the terms of this Stipulation, this agreement shall not be construed to have precedential impact in any other Commission proceeding.

4. The non-utility Signatory Parties enter into this Stipulation in reliance upon information provided to them by Empire, and this Stipulation is explicitly predicated upon the representations made by Empire.

5. When approved by the Commission, this Stipulation shall constitute a binding agreement among the Signatories hereto. The Signatories shall cooperate in defending the validity and enforceability of this Stipulation and the operation of this agreement according to its terms.

6. In the event the Commission accepts the specific terms of this Stipulation without condition or modification, the Signatories waive their respective rights to seek rehearing pursuant to §536.500 and their respective rights to judicial review pursuant to §386.510. These waivers apply only to a Commission order approving this Stipulation without condition or modification issued in this proceeding and only to the issues that are resolved hereby. These waivers do not apply to any issues explicitly not addressed by this Stipulation.

7. The Signatories agree that any and all discussions, suggestions, or memoranda

reviewed or discussed, related to this Stipulation shall be privileged and shall not be subject to discovery, admissible in evidence, or in any way used, described or discussed.

8. This Stipulation contains the entire agreement of the Signatories concerning the issues addressed herein.

9. This Stipulation does not constitute a contract with the Commission. Acceptance of this Stipulation by the Commission shall not be deemed as constituting an agreement on the part of the Commission to forego the use of any discovery, investigatory powers or other statutory powers which the Commission presently has. Thus, nothing in this Stipulation is intended to impinge or restrict in any manner the exercise by the Commission of any statutory right, including the right to access information.

10. The Signatories request an order of the Commission approving this Stipulation to be effective June 30, 2018, or as soon thereafter as is practical.

11. This Stipulation (once approved by the Commission) will be deemed to have become effective as of the date the order of the Commission approving this Stipulation becomes effective, and will expire concurrent with the expiration of the market price protection mechanism described in Paragraph 17(c), except where otherwise specified in this Stipulation.

12. The Signatories agree that disputes related to the implementation and operation of this Stipulation may be taken to the Commission for resolution.

Provisions Stemming from File No. EO-2018-0092 (Customer Savings Plan)

13. **Planned Structure and Definitions.** EDE seeks to acquire strategically located wind generation, including related transmission interconnection assets, in or near Empire's service territory (the "Wind Projects") using federal tax incentives in conjunction with a tax equity structure. To create the tax equity structure, EDE and a tax equity partner will form a

holding company, which will be a direct subsidiary of The Empire District Electric Company (the “Wind Holdco”). EDE, via the Wind Holdco, will acquire a wind project company (“Wind Project Co.”) that owns the Wind Project. After approximately ten years of tax equity participation and EDE joint ownership of the Wind Project Co. (through the Wind Holdco), EDE has the right to purchase the tax equity partner’s ownership interest in the Wind Holdco, at which point EDE would wholly own the Wind Project Co.¹

14. **Acquisition of Wind Projects.** The Signatories recommend that any order of the Commission approving this Stipulation contain the following language:

- a. EDE, through its ownership in Wind Holdco(s), is authorized to enter into purchase agreement(s) for a nameplate capacity of up to 600 MW of Wind Projects that meet the following criteria: (i) are located within the Southwest Power Pool footprint with energy and capacity deliverable to the EDE service territory; (ii) ****_____****; and, (iii) without regard to K.S.A 66-1245. Furthermore, EDE agrees that the Wind Project(s) shall be operated in accordance with applicable Southwest Power Pool Integrated Marketplace (“SPP IM”) rules and in a manner that is not detrimental to EDE’s customers.
- b. Any such purchase agreement(s) shall include a requirement that before EDE, or its designated affiliate, is obligated to purchase a Wind Project, an engineer must confirm in a written report, to be provided to EDE, that the Wind Project has achieved mechanical completion, and there is a reasonable likelihood the Wind Project will satisfy the in-service criteria provided for in paragraph 17(a)

¹ There may be multiple tax equity partners, and thus multiple Wind Holdco(s), as well as multiple Wind Project Co(s).

and be timely placed in-service, including a reasonable likelihood that the turbines will meet or exceed the guaranteed power curve for such turbines to be included in the turbine supply agreement(s) with Wind Project Co(s).

- c. EDE shall file a notice in Case No. EO-2018-0092 and provide copies of each purchase agreement to the Signatories within 30 days of execution.
- d. So long as EDE's acquisition of the Wind Projects meet the criteria of this Stipulation, the Signatories agree EDE should be authorized to record its capital investment to acquire the Wind Projects as utility plant in service subject to audit in EDE's next general rate case.
- e. The Signatories agree to not contest, and recommend that the Commission find, that given the information presented in Case No. EO-2018-0092, and considering that EDE must make decisions prospectively, rather than in reliance on hindsight, the decision to acquire up to 600 MWs of Wind Projects under the terms of this Stipulation is reasonable. The Signatories recognize that this Stipulation does not preclude the Commission and the Signatories from reviewing the reasonableness of the costs of the Wind Projects in a general rate proceeding following the date when the Wind Projects are fully operational and used for service.
- f. **Depreciation Rates.**
 - i. EDE shall record its depreciable wind assets in FERC Account 341 through 346 and utilize a composite 3.33% depreciation rate for all Wind Project asset accounts beginning when the assets are placed in-service and continuing until such time as depreciation rates may be

changed by order of the Commission. Any other assets that do not qualify for FERC Accounts 341 through 346 shall utilize the currently authorized depreciation rate established in Case No. ER-2016-0023, beginning with such time as the assets are placed in-service and continuing until such time as depreciation terms may be changed by order of the Commission.

- ii. EDE shall consider the Wind Projects as a part of its next depreciation study, if it has enough information concerning the Wind Projects to include them in the depreciation study.

15. In any EDE general rate case(s) that first provide for the inclusion of a Wind Project in rates, the Signatories shall recommend a true-up period that ends no later than five (5) months prior to the operation of law date. Further, in such general rate case(s), the Signatories shall recommend that (i) EDE's equity percentage for purposes of establishing its capital structure should be in a range of 47%-53%; (ii) its debt cost should be reasonable for an electrical corporation with a BBB credit rating with a cost of debt imputed only for any debt issued during a period in which EDE carried a credit rating below BBB; and, (iii) the initial tax equity investment at the time of acquisition shall not be used as debt or equity for purposes of calculating the regulatory capital structure.

16. **Future Regulatory Reviews.**

- a. EDE agrees that for any of the Wind Projects physically located in the state of Missouri, and for any Wind Projects which are located outside of the state of Missouri for which a Certificate of Convenience and Necessity ("CCN") is required by Commission regulations, EDE shall file a request

for a CCN with respect to its interest in the Wind Projects, consistent with Commission Rule 4 CSR 240-3.105,² before authorizing construction of the facilities. The Signatories agree to not contest the need for the Wind Projects and to make good faith efforts to process the CCN application(s) and request a Commission order within 120 days of filing such an application(s), including any CCN application that is filed before an order is received in this docket. Empire agrees in such CCN cases to provide responses to data requests on a more expedited schedule than provided by Commission regulations.

- b. If EDE plans to utilize financing in association with acquisition of the Wind Projects that encumbers its franchise, works or system necessary or useful in the performance of its duties to the public, as described by Section 393.190, RSMo, it shall request such authorization. The Signatories shall make a good faith effort to process the application and request a Commission order within 120 days of filing such an application, including any such application that is filed before an order is received in this docket. Empire agrees in such a financing case to provide responses to data requests on a more expedited schedule than provided by Commission regulations.

17. Customer Protections.

- a. Within sixty days after Wind Project(s) purchase agreements have been executed, EDE shall draft and propose to the Signatories, a set of

² References herein to specific Commission rules are expressly intended by the Signatories to include successor rules with substantially the same content and language, however renumbered or reorganized.

in-service criteria for the Wind Project(s). The draft proposal shall utilize criteria established for the Spearville II Wind Energy Facility, Case No. ER-2010-0355 as a starting point.³ The Signatories shall use good faith efforts to agree to a set of criteria and file in this Case No. EO-2018-0092 within 120 days after the Company executes such purchase agreements.

- b. EDE agrees that should there be any offset received by EDE, through a decreased purchase price for the Wind Projects or otherwise, for reasons including, but not limited to, a determination that the Wind Projects are not eligible to receive 100% of the Federal Production Tax Credits (“PTCs”) for the actual output from the Wind Projects, then the benefit to EDE of such remedy shall flow back to customers. Any remedy consisting of monetary damages that do not immediately flow back to customers shall be booked as a regulatory liability for consideration in a future rate case.
- c. The Signatories agree that a market price protection mechanism, as further described in Appendix A, shall be implemented. In general terms, that mechanism seeks to provide for the sharing of risk between customers and shareholders associated with the possibility of reduced market prices and wind production. Such mechanism reflects the possibility that all Wind Projects may not be included in EDE rates in the same rate case. As such, the mechanism shall go into effect on the

³ See True-Up Direct Testimony of Noumvi G. Ghomsi, filed February 22, 2011, Case No. ER-2010-0355.

first day of the month after the effective date of rates in which a Wind Project is first placed into rates and shall remain in effect for 10 years following the effective date of rates resulting from the first general rate case in which all Wind Projects are included in rates.

- d. EDE agrees that it shall not file tariffs seeking to implement a general rate case prior to April 1, 2019.

18. **Tax Equity.**

- a. EDE, through its ownership in Wind Holdco(s), is authorized to contract with tax equity partner(s) for financing of the Wind Projects (a tax equity agreement) so long as consistent with the following parameters:

	Sponsor (Empire)	Tax Equity Partner(s)
Approximate Initial Capital Contribution	** _____ **	** _____ **
Approximate Expected Return	As determined in future rate cases	** _____ **
Partnership taxable income allocations		
Years 1 to 10 (flip date⁴)	1%	99%
Thereafter	90%-95%	5%-10%
PTC Allocation		
Years 1 to 10	1%	99%
Partnership cash distributions		
Years 1 to 5	100%	0%
Years 6 to 10 (flip date)	75%-50%	25%-50%
Thereafter	90%-95%	5%-10%
Contingent contributions		
Years 1 to 10	None	0% to 2% of Wind Project capital cost per year. Based on actual production in excess of a threshold
Purchase Option	After the flip date, the Class B Members will have an option to purchase all of the Class A Interests, for 100% of their fair market value	None
Creditworthiness	N/A	A-/A3 or better

⁴ The “flip date” is the date at which the tax equity partner(s) has achieved its expected return, scheduled to be approximately 10 years from the commencement of commercial operations.

- b. EDE, through its ownership in Wind Holdco(s), shall enter into any such tax equity agreements with a tax equity partner before the Notice to Proceed with Construction is issued for each Wind Project.
- c. In association with the tax equity agreement, EDE is further authorized to enter into fixed price hedging agreement(s) with Wind Project Co(s). whereby EDE will pay to or receive from the Wind Project Co. the difference between the market price and a fixed hedge price and receive all Renewable Energy Credits from the Wind Project Co. to the extent necessary to secure tax equity financing for the Wind Project Co(s).
- d. EDE shall file a notice in Case No. EO-2018-0092 and provide copies of each tax equity agreement to the Signatories within 30 days of execution of those documents.
- e. In the event that EDE, through its ownership in Wind Holdco(s), enters into a tax equity agreement that does not meet any of the parameters set forth in the table above, EDE must provide explanation in its Notice identified above as to why any alternate terms are reasonable and in the public interest.

19. **Asbury.**

- a. The Signatories agree that Asbury shall not be retired at this time. However, the Signatories acknowledge that neither this Stipulation nor an order approving such Stipulation mandate the retirement of Asbury and that its future operations shall be determined at the discretion of management.

- b. The Signatories agree to not contest, and recommend that the Commission find, that the decision to comply with the Environmental Protection Agency's coal combustion residuals rules and effluent limitation guidelines (the "CCR Investment") for Asbury, under the terms of this Stipulation, is reasonable, given the information presented in Case No. EO-2018-0092, and considering that EDE must make decisions prospectively, rather than in reliance on hindsight. In the event that Asbury is subsequently retired prior to the full depreciation of the CCR Investment, the Signatories agree that in future general rate cases they shall not object to EDE's recovery of the return on at its weighted average costs of capital and return of the net CCR Investment.
- c. The Signatories agree to not contest, based on an allegation that Asbury should have been retired: (i) the sufficiency of the financial performance of Asbury unless it is not bid into the SPP IM in accordance with applicable SPP IM rules; (ii) the recovery of operations and maintenance expense during the period of Asbury's continued operation; or; (iii) the need for fuel cost recovery. The Signatories recognize that this Stipulation does not preclude the Commission and the Signatories from reviewing the reasonableness of the costs of the items listed in this paragraph in a future general rate proceeding.
- d. Asbury's continued operation may be considered in EDE's future

Electric Utility Resource Planning filings pursuant to 4 CSR 240-22, or in any future general rate case.

20. **Non-Residential Access to Renewable Energy and Credits.** The Signatories agree that in its first general rate case after the Wind Projects are placed in-service, EDE shall propose a tariff which implements a program by which non-residential customers may be assigned a portion of Renewable Energy Credits received from the Wind Projects.

21. **Auditing, Inspection of Books and Records.** Staff, the Office of the Public Counsel (“OPC”), and the Signatories shall have the authority to review, inspect and audit books, accounts and other records held by EDE, Liberty Utilities Service Corp., Wind Holdco(s), and Wind Project Co(s), for the purposes of ensuring compliance with Commission Rule 4 CSR 240-20.015 and this Stipulation, and making findings available to the Commission. EDE shall make all such books, accounts, and other records available for inspection at one or more locations in Missouri. This provision is not intended to restrict or limit the existing powers of the Staff, OPC, or any Signatory to review, inspect and audit.

22. **Affiliate Agreements.**

- a. The Signatories recommend that EDE be granted a variance, pursuant to Commission Rule 4 CSR 240-20.015(10), from Commission Rule 4 CSR 240-20.015(2)(A), and (3), as to the following arrangements between EDE and affiliates necessary to own and operate the Wind Projects so that goods and services provided under these contracts may be priced in the same manner that they are currently priced by Liberty Utilities Service Corp. (“Service Corp.”), to include both direct and indirect costs:

Asset Management Agreement: Under this agreement, employees of Service Corp. that provide services to Empire will provide all asset management services to the Wind Project Co., including (a) management of all agreements for the Wind Project Co.; (b) management of energy/financial reporting; (c)

management of all banking/financing agreements; (d) management of all landowner/local tax/municipal issues; (e) management of all government permits/regulatory issues including NERC/FERC; (f) management of all reporting for lenders/investors; (g) project management services; (h) optimization of performance of the wind farm; (i) obtaining insurance and other professional services necessary for the wind farm, and; (j) state/federal regulatory management/reporting services for the Wind Project Co.

Balance of Plant Operations and Maintenance Agreement: Under this agreement, employees of Service Corp. that provide services to Empire will provide the balance of plant O&M services to the Wind Project Co. including operations and maintenance services for the main substation and collection system and access for road maintenance.

Energy Services Agreement: Under this agreement, employees of Service Corp. that provide services to Empire will provide energy management services to the Wind Project Co. including: (a) acting as the market participant; (b) daily/periodic scheduling services for the wind farm; (c) managing all hedge agreements, and; (d) representing the wind farm in SPP activities.

- b. The Signatories recommend that EDE be granted a variance, to the extent necessary pursuant to Commission Rule 4 CSR 240-20.015(10), from Commission Rule 4 CSR 240-20.015(2)(A), and (3), as to the fixed price hedging agreement(s) with Wind Project Co(s) described in paragraph 18.c. above.

23. **Most Favored Nations Clause.** Within ten (10) days after EDE receives final orders from the public utility commissions in Arkansas, Kansas, and Oklahoma⁵ granting approval for the acquisition of the Wind Projects in conjunction with tax equity partners, EDE shall submit copies of the Orders in Case No. EO-2018-0092. Upon agreement of the Signatories, any concessions or conditions concerning matters within the scope of Case No. EO-2018-0092 favorable to customers shall be appended to this Stipulation and inure to the benefit of EDE's Missouri customers. If unanimous consent is not obtained from all Signatories, any

⁵ The Signatories acknowledge that they have received and reviewed the Joint Stipulation and Settlement Agreement filed on April 2, 2018, in Oklahoma Corporation Commission Cause No. PUD 201700471. Therefore the Signatories agree that as to Oklahoma, this provision is only relevant to the extent there are material revisions to that Joint Stipulation.

Signatory may request that the Commission extend any concessions and/or conditions, or comparable value to such concessions and/or conditions, to Missouri customers. This section shall not apply to any conditions surrounding location preferences of any of the proposed wind farms, the treatment of benefits associated with the Tax Cuts and Jobs Act of 2017, the length of any rate moratorium, or the magnitude of EDE's maximum exposure under the market protection provision described in Section 18(c) and Appendix A.

Provisions Stemming from File No. ER-2018-0228 (Tax Rate Reduction - EDE)

24. **Tax Reform.** EDE shall file revised retail tariff sheets in an appropriate timeframe that would allow such tariffs to take effect October 1, 2018. The tariffs shall reflect a reduction in base rate revenue as the result of the implementation of the Tax Cuts and Jobs Act of 2017. The reduction in the annual revenue requirement represents the calculated revenue requirement utilized in current base rates utilizing a federal corporate income tax rate of 35%, compared to a recalculated revenue requirement using the reduced federal corporate income tax rate of 21%. The attached **Appendix B** displays the annual reduction, along with the revised annual revenue requirement as well as the allocation of the reduced revenue requirement to the individual rate classes.

25. **Excess ADIT.** EDE shall establish a regulatory liability to account for the tax savings associated with excess Accumulated Deferred Income Taxes ("ADIT").

- a. EDE will record a regulatory liability for the difference between the excess ADIT balances included in current rates, which was calculated using the 35% federal corporate income taxes, versus the now lower federal corporate income tax rate of 21%.
- b. EDE is in the early stages of evaluating the cost and ability to use the Average

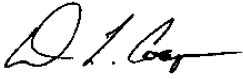
Rate Assumption Method (“ARAM”) as a method for computing and normalizing excess ADIT. If EDE determines that it is unable to use the ARAM, EDE shall notify the Signatories within thirty (30) days of such determination. EDE shall provide testimony and support in its next general rate case of its proposed methodology in dealing with the balances.

- c. The calculation of the Regulatory Liability of excess ADIT will begin as of January 1, 2018.
- d. The Signatories intend to appropriately reflect excess ADIT in future customer rates using a methodology consistent with the tax normalization requirements specified by IRS normalization principles. The Signatories agree that, in the event the IRS asserts that the terms of this Stipulation create a violation of normalization requirements, this Stipulation shall be amended to cure and prevent any normalization violation.

26. The only issue remaining in File No. ER-2018-0228 is the design of rates to flow back to customers the annual revenue requirement reduction provided for above in paragraph 24.

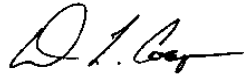
WHEREFORE, the Signatories respectfully request the Commission to issue an order approving this Stipulation and Agreement and authorizing the Company to take such other

actions as are necessary to implement the terms hereof.

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CERTIFICATE OF SERVICE

I hereby certify that the above and foregoing document was filed in EFIS on this 24th day of April, 2018, with notice of the same being sent to all counsel of record.



Market Protection Provision

1. Introduction

The Market Protection Provision will allow for a creation of a regulatory liability or asset as required to compensate customers for any harm created by the Wind Projects during the Guarantee Period. The amortization or depreciation of the regulatory asset or liability during Empire's rate cases will adjust Empire's rates to flow money in the appropriate direction. This document will discuss how to calculate the regulatory asset or liability.

2. Definitions

ASV = Annual Sharing Value = $AWV_Net * Sharing\ Percentage$ (row 27 excel)

ASV_Sum = sum of all prior years ASV inclusive of current year (row 29 excel)

AWV = Annual Wind Value (row 16 of excel)

AWV_Net = Annual Wind Value outside of dead band (row 25 excel)

Guarantee = maximum exposure to the negative that the Company is exposed over the life of the guarantee. The Guarantee will be a fixed positive value of \$35,000,000 Missouri jurisdictional in cell B7 excel which will be converted to a Company level guarantee in cell B7 excel using the Missouri Jurisdictional Factor in cell C7 excel.

Guarantee Period = Begins at the first day of the month after the first Wind Project is placed into rates and will run until the end of the 10th full year (120 months) after the last Wind Project is entered into rates.

LDB = Lower Dead Band = -\$2,000,000 (cell B11 excel)

Missouri Reg_Input = the jurisdictional percentage of the Reg_Input amount. The actual percentage will be based on the prior rate case's jurisdictional allocation ratios. (row 48 excel)

PPA_Replacement = value associated with replacing the existing wind PPAs during the period of the guarantee, as shown on Exhibit C (row 15 excel)

Reg_Inputs = amount added to a regulatory liability (negative number) or the amount added to a regulatory asset (positive number) (row 46 excel)

Reg_Input pre-limit = the calculated Reg_Input before the upper limit is placed on it to prevent an overpayment to the Company (row 41 excel)

Sharing Percentage = 50% (cell B16)

SPP\$ = Southwest Power Pool revenues for the Wind Projects (row 13 excel)

UDB = Upper Dead Band = \$2,000,000 (cell B10)

Wind Projects = the up to 600 MW of new wind projects procured by Empire.

WRR = Wind Revenue Requirement = sum of operation and maintenance, labor, tax equity payments / (credits), property taxes, return on and of, income taxes for the new Wind Projects (row 14 excel, as calculated in Exhibit B).

3. Calculations

Exhibit A – Market Protection Provision Flow Chart can be used to help walk through the calculations required to determine the amount of the regulatory asset or liability. Exhibit B – Wind Data spreadsheet shows an example for calculation of the wind costs (WRR). Exhibit C – PPA Replacement value, shows the amount of benefit associated by year with the existing wind power purchase agreements. Exhibit D – Regulatory Asset Example spreadsheet, shows one example of the calculations for the regulatory asset.

Calculate AWW:

On an annual basis, the Annual Wind Value (AWV) will be calculated based on the SPP market revenues earned by the Wind Projects (SSP\$) less the Wind Projects costs (WRR) plus the value associated with avoiding the replacement of the existing wind power purchase agreements (PPA_Replacement). This is shown in Exhibit D row 16.

The SPP Revenue is based on the SPP invoice for total revenue earned by the Wind Projects.

The Wind Revenue Requirement is calculated by:

- i) Adding the total labor, operation and maintenance costs required to operate the Wind Projects.
- ii) Adding the payments to tax equity, less the payments received from tax equity.
- iii) Adding the proforma calculation costs for the Wind Projects based on the methodology in Exhibit B for the following:
 - a. Enter the actual net capital cost for the Wind Projects, inclusive of transmission costs.
 - b. Calculate the straight line depreciation based on the listed schedules for each capital expenditure.
 - c. Calculate the accumulated depreciation
 - d. Calculate the net rate base amount.
 - e. Calculate the Return on Equity by multiplying the authorized equity capital percentage by the net rate base and by the authorized equity return percentage.
 - f. Calculate the cost of debt by multiplying the authorized debt capital percentage by the net rate base and by the debt cost percentage.
 - g. Calculate the Income tax payable for the Wind Projects by dividing the return on equity amount in dollars by one minus the composite tax rate then multiple that quotient by the return on equity in dollars.
 - h. Calculate the property taxes as 0.86% multiplied by the net rate base amount.
- iv) The depreciation, return on equity, cost of debt, income tax payable and property tax proforma calculations will be added to the totals in i) and ii) to produce the Wind Revenue Requirement.

Dead Band:

Apply the dead band to the AWV on an annual basis (rows 20 – 25 of Exhibit D) to determine the Annual Wind Value net of dead band (AWV_Net).

Sharing Provision:

Apply the 50% sharing factor to the AWV_Net to determine the Annual Sharing Value (ASV).

Adjustment periods:

At each rate case, after all Wind Projects have been placed into rates, and at the end of the Guarantee Period, the accumulated value of the Wind Projects will be looked at to determine if a regulatory asset or liability need to be created.

The ASV will be summed for all years from the start of the Guarantee to the end of the current period to calculate the Annual Sharing Value Sum (ASV_Sum, row 33 of Exhibit D). The ASV_Sum will be adjusted to account for all prior values that created a regulatory asset or liability (ASV_Sum – all prior Reg Inputs, row 35 of Exhibit D). This will then be compared against the maximum Guarantee to ensure that the Guarantee is not exceeded. This will determine the amount of the regulatory liability prior to the upper limit (Reg_Input pre-limit, row 41 in Exhibit D). If the amount of the Reg_Input pre-limit would result in an overpayment to Empire, then it will be reduced to ensure that Empire can dig out of a regulatory liability but not be ahead over the entire period. This value is the Reg_Input, shown in row 46 of Exhibit D.

The last step is to apply the Missouri jurisdictional adjustment to the Reg_Input to determine the amount that will apply in the Missouri rate adjustments.

Non-Adjustment Periods:

In years where there is not an adjustment period, then the ASV is recorded and no further action is required until the following year.

Exhibit A – Market Protection Provision Flow Chart
(see atatched)

Exhibit B – Wind Data Spreadsheet

			Q4 only											
			2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	
Capital Costs	\$													
Transmission			81											
Wind Projects			429											
Tax Equity Buy Out														
Maintenance Capital														
Maintenance Capital														
Depreciation	\$	years												
Transmission		40	1	2	2	2	2	2	2	2	2	2	2	
Wind Projects		30	4	14	14	14	14	14	14	14	14	14	14	
Maintenance Capital		20												
Maintenance Capital		17												
Maintenance Capital		12												
Accumulated Depreciation	\$		4	20	37	53	69	86	102	118	135	151	167	
Rate Base	\$		506	489	473	457	440	424	408	391	375	359	343	
Return on Equity	%equity	rate	6	25	24	23	22	22	21	20	19	18	17	
	51%	10%												
Cost of Debt	%debt	rate	2	10	9	9	9	8	8	8	7	7	7	
	49%	4%												
Income Tax Payable	tax rate		2	8	8	7	7	7	7	6	6	6	5	
	23.90%													
Property Tax Estimate	rate		1	4	4	4	4	4	4	3	3	3	3	
	0.86%													
Carrying Charge			16	63	61	60	58	57	55	54	52	50	49	

Fixed O&M	\$		2	14	14	21	22	25	27	28	29	30	33
Tax Equity expense (credit)	\$		0	(2)	(13)	(13)	(13)	(12)	(7)	(8)	(8)	(8)	(10)
TOTAL WIND REVENUE REQUIREMENT			18	75	63	68	67	70	75	74	74	73	72
Guarantee Years				1	2	3	4	5	6	7	8	9	10

Exhibit C – PPA Replacement Value

				2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Elk River		GWh		560	563	565	566	539	0	0	0	0	0
Meridian Way		GWh		308	311	312	313	311	309	308	304	0	0
Guarantee Period				1	2	3	4	5	6	7	8	9	10
Number of PPA replacement GWh replaced by New Wind during Guarantee Period													
	3,415	GWh											
Allocated Benefit of PPA replacement GWh				0	0	0	0	0	563	564	568	872	872
Reduction in Revenue Requirement from PPA replacement													
				0	0	0	0	0	17,092,657	16,847,739	16,768,478	25,584,936	25,288,474

Exhibit D – Regulatory Asset Example

Row Number													
3	Changes related to Wind Value												
4	P75	Wind Production											
5	Low	Market Prices											
6													
7	35,000,000	85%	Missouri Portion										
8	41,176,471	million	Guarantee Cap										
9	50%		Sharing outside of Dead Band - (dead band adjusted on the Wind Guarantee)										
10	2,000,000	annually	Upper Dead Band										
11	(2,000,000)	annually	Lower Dead Band										
12			Years	1	2	3	4	5	6	7	8	9	10
13			SPP Market Revenue	52,712,415	56,002,898	58,097,183	60,537,390	62,416,997	64,520,656	66,699,312	69,042,961	70,576,645	73,523,080
14			Wind Revenue Requirement	74,767,542	63,620,934	68,953,533	67,684,336	70,466,254	75,825,853	74,730,280	74,129,562	73,157,485	72,673,847
15			PPA Replacement Value	0	0	0	0	0	17,092,657	16,847,739	16,768,478	25,584,936	25,288,474
16			Annual Wind Value (AWV)	(22,055,127)	(7,618,036)	(10,856,350)	(7,146,946)	(8,049,257)	5,787,460	8,816,770	11,681,877	23,004,096	26,137,708
17													
18			Accumulative (AWV)	(22,055,127)	(29,673,163)	(40,529,513)	(47,676,459)	(55,725,716)	(49,938,257)	(41,121,486)	(29,439,609)	(6,435,513)	19,702,194
19													
20			Is AWV inside of Dead Band?	No	No	No	No	No	No	No	No	No	No
21			If Yes										
22			if no and greater than 0						3,787,460	6,816,770	9,681,877	21,004,096	24,137,708
23			if no and less than 0	(20,055,127)	(5,618,036)	(8,856,350)	(5,146,946)	(6,049,257)					
24													
25			AWV_Net	(20,055,127)	(5,618,036)	(8,856,350)	(5,146,946)	(6,049,257)	3,787,460	6,816,770	9,681,877	21,004,096	24,137,708
26													
27			Annual Sharing Value (ASV)	(10,027,563)	(2,809,018)	(4,428,175)	(2,573,473)	(3,024,629)	1,893,730	3,408,385	4,840,938	10,502,048	12,068,854
28													
29			ASV_Sum	(10,027,563)	(12,836,581)	(17,264,756)	(19,838,229)	(22,862,858)	(20,969,128)	(17,560,743)	(12,719,805)	(2,217,757)	9,851,097
30													
31			Year of Rate Case	0	0	0	1	0	0	1	0	0	1
32													
33			ASV_Sum				(19,838,229)			(17,560,743)			9,851,097
34													
35			ASV_Sum - all prior Reg Inputs				(19,838,229)			2,277,486			27,411,840
36													
37			Is ASV_Sum < -Guarantee				No			No			No
38			if yes; Guarantee - all prior Reg Inputs										
39			if no; ASV_Sum - all prior Reg Inputs				(19,838,229)			2,277,486			27,411,840
40													
41			Reg_Input pre-limit	0	0	0	(19,838,229)	0	0	2,277,486	0	0	27,411,840
42													
43			Is Reg_Input too high?	No	No	No	No	No	No	No	No	No	Yes
44			if Yes, Reg_Input =										17,560,743
45			if No, Reg_Input =	0	0	0	(19,838,229)	0	0	2,277,486	0	0	
46			Reg_Input	0	0	0	(19,838,229)	0	0	2,277,486	0	0	17,560,743
47													
48			Missouri Reg_Input	0	0	0	(16,862,495)	0	0	1,935,864	14,926,632		

Row Number														
3	Changes related to Wind Value													
4	P50	Wind Production												
5	Mid	Market Prices												
6														
7	35,000,000	85%	Missouri Portion											
8	41,176,471	million	Guarantee Cap											
9	50%		Sharing outside of Dead Band - (dead band adjusted on the Wind Guarantee)											
10	2,000,000	annually	Upper Dead Band											
11	(2,000,000)	annually	Lower Dead Band											
12			Years	1	2	3	4	5	6	7	8	9	10	
13			SPP Market Revenue	64,847,000	69,950,000	73,165,000	76,639,000	79,532,000	82,182,000	85,920,000	89,759,000	92,944,000	97,510,000	
14			Wind Revenue Requirement	74,614,505	62,819,416	68,151,327	66,855,238	69,723,149	75,372,060	74,250,970	73,656,881	72,665,792	72,064,703	
15			PPA Replacement Value	0	0	0	0	0	17,092,657	16,847,739	16,768,478	25,584,936	25,288,474	
16			Annual Wind Value (AWV)	(9,767,505)	7,130,584	5,013,673	9,783,762	9,808,851	23,902,597	28,516,768	32,870,596	45,863,144	50,733,771	
17														
18			Accumulative (AWV)	(9,767,505)	(2,636,921)	2,376,752	12,160,514	21,969,365	45,871,962	74,388,730	107,259,327	153,122,470	203,856,241	
19														
20			Is AWV inside of Dead Band?	No	No	No	No	No	No	No	No	No	No	
21			If Yes											
22			if no and greater than 0		5,130,584	3,013,673	7,783,762	7,808,851	21,902,597	26,516,768	30,870,596	43,863,144	48,733,771	
23			if no and less than 0	(7,767,505)										
24														
25			AWV_Net	(7,767,505)	5,130,584	3,013,673	7,783,762	7,808,851	21,902,597	26,516,768	30,870,596	43,863,144	48,733,771	
26														
27			Annual Sharing Value (ASV)	(3,883,753)	2,565,292	1,506,836	3,891,881	3,904,426	10,951,299	13,258,384	15,435,298	21,931,572	24,366,885	
28														
29			ASV_Sum	(3,883,753)	(1,318,461)	188,376	4,080,257	7,984,682	18,935,981	32,194,365	47,629,663	69,561,235	93,928,121	
30														
31			Year of Rate Case	0	1	0	0	0	1	0	0	0	1	
32														
33			ASV_Sum		(1,318,461)				18,935,981				93,928,121	
34														
35			ASV_Sum - all prior Reg Inputs		(1,318,461)				20,254,442				93,928,121	
36														
37			Is ASV_Sum < -Guarantee		No				No				No	
38			if yes; Guarantee - all prior Reg Inputs											
39			if no; ASV_Sum - all prior Reg Inputs		(1,318,461)				20,254,442				93,928,121	
40														
41			Reg_Input pre-limit	0	(1,318,461)	0	0	0	20,254,442	0	0	0	93,928,121	
42														
43			Is Reg_Input too high?	No	No	No	No	No	Yes	No	No	No	Yes	
44			if Yes, Reg_Input =						1,318,461				0	
45			if No, Reg_Input =	0	(1,318,461)	10	0	0	0	0	0	0	0	
46			Reg_Input	0	(1,318,461)		0	0	1,318,461	0	0	0	0	
47														
48			Missouri Reg_Input	0	(1,120,692)	0	0	0	1,120,692	MMP-D03 Page 28				0

Row Number													
3	Changes related to Wind Value												
4	P75	Wind Production											
5	High	Market Prices											
6													
7	35,000,000	85%	Missouri Portion										
8	41,176,471	million	Guarantee Cap										
9	50%		Sharing outside of Dead Band - (dead band adjusted on the Wind Guarantee)										
10	2,000,000	annually	Upper Dead Band										
11	(2,000,000)	annually	Lower Dead Band										
12			Years	1	2	3	4	5	6	7	8	9	10
13			SPP Market Revenue	73,484,644	79,237,834	83,166,727	87,959,020	91,654,486	96,556,462	100,739,407	106,471,972	112,801,699	119,909,518
14			Wind Revenue Requirement	74,767,542	63,620,934	68,953,533	67,684,336	70,466,254	75,825,853	74,730,280	74,129,562	73,157,485	72,673,847
15			PPA Replacement Value	0	0	0	0	0	17,092,657	16,847,739	16,768,478	25,584,936	25,288,474
16			Annual Wind Value (AWV)	(1,282,897)	15,616,900	14,213,194	20,274,684	21,188,232	37,823,266	42,856,865	49,110,888	65,229,151	72,524,145
17													
18			Accumulative (AWV)	(1,282,897)	14,334,003	28,547,197	48,821,881	70,010,113	107,833,379	150,690,244	199,801,133	265,030,283	337,554,428
19													
20			Is AWV inside of Dead Band?	Yes	No	No	No	No	No	No	No	No	No
21													

Row Number													
3	Changes related to Wind Value												
4	P95	Wind Production											
5	Low	Market Prices											
6													
7	35,000,000	85%	Missouri Portion										
8	41,176,471	million	Guarantee Cap										
9	50%		Sharing outside of Dead Band - (dead band adjusted on the Wind Guarantee)										
10	2,000,000	annually	Upper Dead Band										
11	(2,000,000)	annually	Lower Dead Band										
12			Years	1	2	3	4	5	6	7	8	9	10
13			SPP Market Revenue	47,647,909	50,622,249	52,515,319	54,721,076	56,420,094	58,321,637	60,290,972	62,409,448	63,795,779	66,459,126
14			Wind Revenue Requirement	74,905,659	64,344,313	69,677,533	68,432,607	71,136,915	76,235,406	75,162,863	74,556,161	73,601,243	73,223,606
15			PPA Replacement Value	0	0	0	0	0	17,092,657	16,847,739	16,768,478	25,584,936	25,288,474
16			Annual Wind Value (AWV)	(27,257,750)	(13,722,064)	(17,162,214)	(13,711,531)	(14,716,821)	(821,112)	1,975,848	4,621,765	15,779,472	18,523,995
17													
18			Accumulative (AWV)	(27,257,750)	(40,979,813)	(58,142,027)	(71,853,557)	(86,570,379)	(87,391,491)	(85,415,642)	(80,793,877)	(65,014,406)	(46,490,411)
19													
20			Is AWV inside of Dead Band?	No	No	No	No	No	Yes	Yes	No	No	No
21													