UNION ELECTRIC COMPANY ELECTRIC SERVICE

	MO.P.S.C. SCHEDULE NO.	6	_		2 nd	Revised	SHEET NO.	93
С	ANCELLING MO.P.S.C. SCHEDULE NO	6	_		1 st	Revised	SHEET NO	93
APPLYING TO _	MISS	OURI	SERVICE	AREA				

RIDER RESRAM

RENEWABLE ENERGY STANDARD RATE ADJUSTMENT MECHANISM

APPLICABILITY

This rider is applicable to all kilowatt-hours (kWh) of energy supplied to all customers served under all of the Company's Service Classifications.

Charges or credits passed through this rider reflect Missouri Renewable Energy Standard (section 393.1030 et. seq., RSMo.) ("RES") Compliance Costs, which consist of prudently incurred costs, both capital and expense, directly related to RES compliance which are not reflected in a regulatory asset arising under Section 393.1400.2, RSMo., and also reflect the pass-through of benefits received as a result of RES compliance to the extent those benefits are not passed through to customers in the Fuel Adjustment Rate under Rider FAC ("RESRAM Benefits"). RES Compliance Costs shall include solar rebates paid under Section 393.1670. The RES costs and benefits subject to inclusion in this rider are costs incurred related to new RES investments placed into service or RES compliance activities initiated on or after January 1, 2019.

The revised RESRAM Rate effective on the date of the rate schedules published as a result of a general rate proceeding shall reset the RESRAM Rate so that it excludes factor RRR, as defined below, except for any portion of RES Compliance Costs or RESRAM Benefits reflected in factor RRR that were not included in the revenue requirement established in that general rate proceeding.

The following items 1 to 3 apply to revised RESRAM rate schedules to adjust the RESRAM Rate other than when the RESRAM Rate is reset upon the effective date of rate schedules published as a result of a general rate proceeding or as a result of an offset adjustment being ordered:

- 1. Accumulation Period (AP): the historical calendar months during which RES Compliance Costs and RESRAM Benefits are incurred or received and for which overor under-recoveries of those costs/benefits (factor ROUR, defined below) are calculated and accumulated through the ROUR. The initial AP under this rider shall begin on the first day of the first month that begins on or after the date this rider becomes effective and shall end on July 31, 2019. Each subsequent AP shall begin on August 1st, and shall end on July 31st of the following year.
- 2. Recovery Period (RP): the calendar months during which the over-/under-recoveries (factor ROUR) of RES Compliance Costs and RESRAM Benefits from the immediately preceding AP shall be reflected in the RESRAM Rate, along with the actual RES Revenue Requirement (factor RRR, defined below), True-Up Amount (factor T, defined below), and the Ordered Adjustment (factor OA, defined below) for that RP. Each RP shall begin on the first day of February following each AP, and shall be in effect for one year until the next RP begins.
- 3. RESRAM Rate Adjustment Filings: The Company shall adjust its RESRAM Rate by filing a revised RESRAM Rate Schedule (1) no later than 60 days after the end of each AP to take effect on the first day of February following each AP, (2) concurrent with rate schedules effectuating a general rate proceeding as applicable to reset the RESRAM Rate and to update Base Amount unless otherwise ordered, and (3) in compliance with any Commission order as applicable to incorporate an Required Offset Amount ("ROA") as the result of a Commission order.

DATE OF ISSUE	August 23, 2019	DATE EFFECTIVE _	September 22, 2019
ISSUED BY	Michael Moehn	President	St. Louis, Missouri
	NAME OF OFFICER	TITLE	ADDRESS

ELECTRIC SERVICE

MO.P.S.C. SCHEDULE N	06	Original	SHEET NO. 93.1
CANCELLING MO.P.S.C. SCHEDULE N	0		SHEET NO.
APPLYING TO M	ISSOURI SERVICE AREA		

RIDER RESRAM

RENEWABLE ENERGY STANDARD RATE ADJUSTMENT MECHANISM

RESRAM RATE DETERMINATION

Application of the RESRAM Rate, net of benefits received from RES compliance other than the RESRAM Benefits, shall not generate an annual amount of revenue that exceeds the one percent (1%) retail rate impact limitation as provided in the RES and 4 CSR 240-20.100(5), and any applicable successor Commission Rule. Any amounts otherwise recoverable under this rider but for the retail rate impact limitation shall be deferred to a regulatory asset, at a carrying cost each month equal to the Company's monthly Short-Term Borrowing Rate to be recovered in a subsequent RP or reflected in the revenue requirement established in the Company's next general rate proceeding, if not already fully recovered.

For each RESRAM Rate adjustment filing, the RESRAM Rate is calculated as:

RESRAM Rate = TRR_{RATE} + ROA

Where:

 $\text{TRR}_{\text{RATE}} = \text{The minimum:}$ of the rate determined by dividing TRR by S_{RP} , and the rate reflected in RAC.

TRR = Total RESRAM Recoveries

TRR = ROUR + RRR + T + OA

 S_{RP} = Estimated recovery period sales in kWh.

RAC = Rate Adjustment Cap.

ROA = Required Offset Amount

ROA = DA / DPE

- DA = Disallowance Amount an amount ordered by the Commission to be disallowed during a subsequent general rate proceeding or prudence review under this rider that was previously reflected in a RESRAM rate.
- DPE = Disallowance Period Energy the energy projected to be sold in the six (6) months beginning with the first billing month following the promulgation of a RESRAM Rate that includes a DA.

DATE OF ISSUE	December 13, 2018	DATE EFFECTIVE	January 1, 2019
ISSUED BY	Michael Moehn	President	St. Louis, Missouri
·	NAME OF OFFICER	TITLE	ADDRESS

ELECTRIC SERVICE

	MO.P.S.C. SCHEDULE NO6			Original	SHEET NO.	93.2
C	ANCELLING MO.P.S.C. SCHEDULE NO.				SHEET NO.	
APPLYING TO	MISSOURI	SERVICE	AREA			

RIDER RESRAM

RENEWABLE ENERGY STANDARD RATE ADJUSTMENT MECHANISM

ROUR = RES Over/Under Recovery

ROUR = ARC - RCR + I

ARC = Actual RES Costs

The actual RES Compliance Costs and RESRAM Benefits incurred or received during the recently completed AP, including monthly adjustments to rate base included in the MBAs and the RBAs for accumulated depreciation and accumulated deferred income taxes.

- - I = Interest applicable to the following:
 - (i) the difference between RCR and ARC for each month of each AP;
 - (ii) Ordered Adjustments ("OA"), if any;
 - (iii) adjustments due to a required offset amount ("ROA");

Interest shall be calculated monthly at the Short-Term Borrowing Rate, applied to the month-end balance of items (i) through (iv) in the preceding sentence.

RRR = RESRAM Revenue Requirement: An amount equal to the revenue requirement associated with all RES Compliance Costs net of RESRAM Benefits that are not reflected in the revenue requirement that was established in the Company's last general rate proceeding. The RRR shall consist of (1) the capital costs associated with investments in renewable energy resources used to comply with the RES that have been placed into service on the Company's books as of the end of each AP, except the 85% of the return and depreciation on such investments which is reflected in a mechanism authorized under Section 393.1400; and (2)the non-capital RES Compliance Costs and RESRAM Benefits reflected on the Company's books during that AP except to the extent those costs and benefits are addressed under the company's Rider FAC, on an annualized basis for the first AP which may be less than twelve months in length, or if the asset to which the costs and benefits relate was only in service for a portion of the AP. Notwithstanding the previous sentence, if a wind generation asset used for RES compliance ceases to earn Production Tax Credits during an AP, an adjustment necessary to offset the annual impact of those Production Tax Credits as reflected in rates established in a general rate proceeding shall be included.

DATE OF ISSUE _	December 13, 2018	DATE EFFECTIVE	January 1, 2019
ISSUED BY	Michael Moehn	President	St. Louis, Missouri
	NAME OF OFFICER	TITLE	ADDRESS

ELECTRIC SERVICE

	MO.P.S.C. SCHEDULE NO6			Original	SHEET NO.	93.3
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APPLYING TO	MISSOURI	SERVICE	AREA			

RIDER RESRAM

RENEWABLE ENERGY STANDARD RATE ADJUSTMENT MECHANISM

- T = True-Up Amount: An amount calculated at the end of each AP reflecting the difference between (1) the revenues billed for the first 6 months of the then-effective RP and projected to be billed for the second 6 months of the RP and (2) the revenues authorized for collection through this rider during the first 6 months of the then-effective RP and projected to be collected during the second 6 months of the RP, excluding amounts of authorized and actual revenues associated with factor RRR, resulting from the difference in forecasted RP total kWh usage, and actual total kWh usage from the RP. Forecasted amounts shall be trued-up with actual amounts in the next applicable calculation.
- OA = Ordered Adjustment: The amount of any adjustment to the TRR ordered by the Commission not reflected as an ROA.
- MBA = Monthly Base Amount: Is one-twelfth of the Base Amount. The Base Amount is the revenue requirement associated with RES Compliance Costs and RESRAM Benefits reflected in the revenue requirement established in the applicable general rate proceedings. At the conclusion of each general rate proceeding, unless otherwise ordered, the Base Amount shall be published on a replacement sheet for Sheet 93.4.
- RBA = RESRAM Base Amount: is the sum of the monthly RESRAM Revenue Requirements (which is one-twelfth of the applicable factor RRR) for each month in the AP. Each month's RESRAM Revenue Requirement is associated with the amount reflected in RRR used to determine the RESRAM Rate that is in effect for that month.
- RAC = Rate Adjustment Cap: applies to the RESRAM rate and shall apply so long as the rate caps provided for by Section 393.1655, RSMo. are in effect, and shall be calculated by multiplying the baseline rate as determined under Section 393.1655.4 by the 2.85% CAGR compounded for the amount of time that has passed since the effective date of rate schedules published to effectuate the Commission's Order that approved the Stipulation and Agreement that resolved File No. ER-2016-0179, and subtracting the then-current FAR under Rider FAC and the average base rate determined from the most recent general rate proceeding as calculated pursuant to Section 393.1655.
- "Short-Term Borrowing Rate" = A rate applied monthly that is equal to the weighted average interest rate paid on the Company's short-term debt.

The RESRAM Rates applicable to customer bills shall be rounded to the nearest 0.00001 cents, to be charged on a cents/kWh basis for each applicable kWh billed.

PRUDENCE REVIEWS:

A prudence review shall be conducted no less frequently than every twenty-four (24) months. RES Compliance Costs which are determined by the Commission to have been imprudently incurred or incurred in violation of the terms of this rider shall be credited to customers through factor DA with interest using factor I. RES Compliance Costs included in the revenue requirement in a general rate proceeding shall not be subject to further prudence review hereunder.

DATE OF ISSUE	December 13, 2018	DATE EFFECTIVE	January 1, 2019
ISSUED BY	Michael Moehn NAME OF OFFICER	President TITLE	St. Louis, Missouri ADDRESS

ELECTRIC SERVICE

	MO.P.S.C. SCHEDULE NO.	6	_		$3^{\rm rd}$	Revised	SHEET NO.	93.4
	CANCELLING MO.P.S.C. SCHEDULE NO	6	-		2 nd	Revised	SHEET NO.	93.4
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RIDER RESRAM

RENEWABLE ENERGY STANDARD RATE ADJUSTMENT MECHANISM

RESRAM Rate Schedule

Accumulation Period Ending:		07/31/20
1. Actual RES Costs Incurred in AP (ARC)		\$4,076,407
2. RES Expenses Recovered in AP (RCR)	=	\$3,617,421
=(RBA + sum of monthly MBAs)		
3. RES Over/Under Recovery (ROUR)=	=	\$458,986
3.1 Interest	+	\$33,817
3.2(Over)/Under Recovered Costs (ARC-RCR)	+	\$492,803
4. RES Revenue Requirement (RRR)	+	\$4,076,407
5. True-Up (T)	+	\$542,350
6. Ordered Adjustment (OA)	±	\$0
7. Total RESRAM Recoveries(TRR)=(ROUR+RRR+T+OA)	=	\$5,111,561
8. Estimated Recovery Period Sales (S_{RP})	÷	30,730,452,570 kWh
9. TRR _{RATE} = MIN of((TRR/S _{RP}),(RAC))	=	\$0.00017/kWh
10. RESRAM _{RATE} = $TRR_{RATE} + ROA^{1}$	=	\$0.00017/kWh
11. Required Offset Amount (ROA)	+	\$0.00000/kWh
$12.\mathtt{RESRAM_{RATE}}$ (applicable for the first 6		
months if ROA is greater than \$0.00000)	=	\$0.00017/kWh

^{*}A negative RESRAM Rate represents a per kWh credit that would be applied to a customer's bill.

Recovery Period for Above RESRAM Rate

February 1, 2021 to January 31, 2022

Current RBA = \$4,076,407

Base Amount File No. ER-2019-0335 = \$0.00

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 $^{^1}$ If ROA is equal \$0.00000, The RESRAM_RATE stated in this Line 10 shall apply for the entire Recovery Period. If ROA is greater than \$0.00000, the RESRAM_RATE shall be the value shown on line 12 for the first 6 months and, thereafter, the value shown on Line 10.

DATE OF ISSUE	September 29,	2020 DATE EFFECTIVE	February 1, 2021
ISSUED BY	Martin J. Lyons	Chairman & President	St. Louis, Missouri
	NAME OF OFFICER	TITLE	ADDRESS