

THE EMPIRE DISTRICT ELECTRIC COMPANY

P.S.C. Mo. No. 5 Sec. 4 8th Revised Sheet No. 17

Canceling P.S.C. Mo. No. 5 Sec. 4 7th Revised Sheet No. 17

For ALL TERRITORY

FUEL & PURCHASE POWER ADJUSTMENT CLAUSE RIDER FAC For service on and after April 1, 2013
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The two six-month accumulation periods, the two six-month recovery periods and filing dates are set forth in the following table:

<u>Accumulation Periods</u>	<u>Filing Dates</u>	<u>Recovery Periods</u>
September – February	By April 1	June – November
March – August	By October 1	December – May

The Company will make a Fuel Adjustment Rate (“FAR”) filing by each Filing Date. The new FAR rates for which a filing is made will be applicable starting with the Recovery Period that begins following the Filing Date. All FAR filings shall be accompanied by detailed workpapers supporting the filing in an electronic format with all formulas intact.

DEFINITIONS

**ACCUMULATION PERIOD:**

The six calendar months during which the actual costs and revenues subject to this rider will be accumulated for the purpose of determining the FAR.

**RECOVERY PERIOD:**

The billing months during which a FAR is applied to retail customer usage on a per kilowatt-hour (kWh) basis.

**BASE ENERGY COST AND REVENUES:**

Base energy cost are ordered by the Commission in the last rate case consistent with the costs and revenues included in the calculation of the Fuel and Purchase Power Adjustment (“FPA”).

**BASE FACTOR (“BF”):**

The base factor is the base energy cost divided by net generation kWh determined by the Commission in the last general rate case. BF = \$0.02831 per kWh for each accumulation period.

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For ALL TERRITORY

FUEL & PURCHASE POWER ADJUSTMENT CLAUSE RIDER FAC For service on and after April 1, 2013
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APPLICATION

FUEL & PURCHASE POWER ADJUSTMENT

$$FPA = \{[(FC + PP + E - OSSR - REC - B) * J] * 0.95\} + T + I + P$$

Where:

FC = Fuel Costs Incurred to Support Sales:

The following costs reflected in Federal Energy Regulatory Commission (FERC) Accounts 501 and 506: coal commodity and railroad transportation, switching and demurrage charges, applicable taxes, natural gas costs, alternative fuels (i.e. tires, bio-fuel and landfill gas), fuel additives, Btu adjustments assessed by coal suppliers, quality adjustments assessed by coal suppliers, fuel hedging costs, fuel adjustments included in commodity and transportation costs, broker commissions and fees associated with price hedges, oil costs, propane costs, combustion product disposal revenues and expenses, consumable costs related to Air Quality Control Systems (AQCS) operation, such as ammonia, lime, limestone, power activated carbon, urea, sodium bicarbonate, and trona and settlement proceeds, insurance recoveries, subrogation recoveries for increased fuel expenses in Account 501.

The following costs reflected in FERC Accounts 547 and 548: natural gas generation costs related to commodity, oil, transportation, storage, fuel losses, hedging costs for natural gas, oil, and natural gas used to cross-hedge purchased power, fuel additives, and settlement proceeds, insurance recoveries, subrogation recoveries for increased fuel expenses, broker commissions and fees.

PP = Purchased Power Costs:

The following costs or revenues reflected in FERC Account 555: purchased power costs, purchased power demand costs associated with purchased power contracts with a duration of one year or less, settlements, insurance recoveries, and subrogation recoveries for purchased power expenses, virtual energy charges, generating unit price adjustments, load/export charges, energy position charges, ancillary services including penalty and distribution charges, broker commissions, fees and margins and SPP energy market charges.(see Note A. below)

E = Net Emission Costs:

The following costs and revenues reflected in FERC Accounts 509, 411.8 and 411.9 (or any other account FERC may designate for emissions expense in the future): emission allowance costs offset by revenues from the sale of emission allowances including any associated hedging costs, broker commissions, fees, commodity based services and margins.

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FUEL & PURCHASE POWER ADJUSTMENT CLAUSE RIDER FAC For service on and after April 1, 2013
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OSSR = Revenue from Off-System Sales:

The following revenues or costs reflected in FERC Account 447: all revenues from off-system sales but excluding revenues from full and partial requirements sales to municipalities that are associated with Empire, and SPP energy market revenues. (see Note A. below)

REC = Renewable Energy Credit revenue:

Revenues reflected in FERC Account 456 from the sale of Renewable Energy Credits that are not needed to meet the Renewable Energy Standard.

HEDGING COSTS:

Hedging costs are defined as realized losses and costs (including broker commission fees and margins) minus realized gains associated with mitigating volatility in the Company's cost of fuel, fuel additives, fuel transportation, emission allowances and purchased power costs, including but not limited to, the Company's use of derivatives whether over-the-counter or exchanged traded including, without limitation, futures or forward contracts, puts, calls, caps, floors, collars and swaps.

Note A. Should FERC require any item covered by factors FC, PP, E, REC or OSSR to be recorded in an account different than the FERC accounts listed in such factors, such items shall nevertheless be included in factor FC, PP, E, REC or OSSR. In the month that the Company begins to record items in a different account, the Company will file with the Commission the previous account number, the new account number and what costs or revenues that flow through this Rider FAC are to be recorded in the account.

B = Net base energy cost is calculated as follows:

$$B = (S_{AP} * \$0.02831)$$

$S_{AP}$  = Actual net system input at the generation level for the accumulation period.

For ALL TERRITORY

FUEL & PURCHASE POWER ADJUSTMENT CLAUSE  
 RIDER FAC  
 For service on and after April 1, 2013

J =  $\frac{\text{Missouri retail kWh sales}}{\text{Total system kWh sales}}$

Where Total system kWh sales includes sales to municipalities that are associated with Empire and excludes off-system sales.

T = True-up of over/under recovery of FAC balance from prior recovery period as included in the deferred energy cost balancing account. Adjustments by Commission order pursuant to any prudence review shall also be placed in the FPA for collection unless a separate refund is ordered by the Commission.

I = Interest applicable to (i) the difference between Total energy cost (FC + PP + E – OSSR – REC) and Net base energy costs (“B”) multiplied by the Missouri energy ratio (“J”) for all kWh of energy supplied during an AP until those costs have been recovered; (ii) refunds due to prudence reviews (“P”), if any; and (iii) all under- or over-recovery balances created through operation of this FAC, as determined in the true-up filings (“T”) provided for herein. Interest shall be calculated monthly at a rate equal to the weighted average interest paid on the Company’s short-term debt, applied to the month-end balance of items (i) through (iii) in the preceding sentence.

P = Prudence disallowance amount, if any, as defined below.

FUEL ADJUSTMENT RATE

The FAR is the result of dividing the FPA by estimated recovery period  $S_{RP}$  kWh, rounded to the nearest \$0.00000. The FAR shall be adjusted to reflect the differences in line losses that occur at primary and secondary voltage by multiplying the average cost at the generator by 1.0466 and 1.0662, respectively. Any FAR authorized by the Commission shall be billed based upon customers’ energy usage on and after the authorized effective date of the FAR. The formula for the FPA is displayed below.

$$FAR = \frac{FPA}{S_{RP}}$$

Where:

$S_{RP}$  = Forecasted Missouri NSI kWh for the recovery period.

= Forecasted total system NSI \*  $\frac{\text{Forecasted Missouri retail kWh sales}}{\text{Forecasted total system kWh sales}}$

Where Forecasted total system NSI kWh sales includes sales to municipalities that are associated with Empire and excludes off-system sales.

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FUEL & PURCHASE POWER ADJUSTMENT CLAUSE  
RIDER FAC  
For service on and after April 1, 2013

PRUDENCE REVIEW

Prudence reviews of the costs subject to this FAC shall occur no less frequently than every eighteen months, and any such costs which are determined by the Commission to have been imprudently incurred or incurred in violation of the terms of this rider shall be returned to customers. Adjustments by Commission order, if any, pursuant to any prudence review shall be included in the FAR calculation in P above unless a separate refund is ordered by the Commission. Interest on the prudence adjustment will be included in I above.

TRUE-UP OF FPA

In conjunction with an adjustment to its FAR, the Company will make a true-up filing with an adjustment to its FAC on the first Filing Date that occurs after completion of each Recovery Period. The true-up adjustment shall be the difference between the FPA revenues billed and the FPA revenues authorized for collection during the true-up recovery period, i.e. the true-up adjustment. Any true-up adjustments or refunds shall be reflected in item T above and shall include interest calculated as provided for in item I above.

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DATE OF ISSUE February 28, 2013  
ISSUED BY Kelly S. Walters, Vice President, Joplin, MO

DATE EFFECTIVE April 1, 2013

THE EMPIRE DISTRICT ELECTRIC COMPANY

P.S.C. Mo. No. 5 Sec. 4 5th Revised Sheet No. 17e

Canceling P.S.C. Mo. No. 5 Sec. 4 4th Revised Sheet No. 17e

For ALL TERRITORY

FUEL & PURCHASE POWER ADJUSTMENT CLAUSE  
 RIDER FAC  
 For service on and after April 1, 2013

	Accumulation Period Ending		Aug 31, 2014
1	Total Energy Cost (TEC) = (FC+PP+E-OSSR-REC)		77,536,319
2	Net Base Energy Cost (B)	-	74,979,148
	2.1 Base Factor (BF)		0.02831
	2.2 Accumulation Period NSI (S <sub>AP</sub> )		2,648,504,000
3	(TEC-B)		2,557,171
4	Missouri Energy Ratio (J)	*	82.01%
5	(TEC-B)*J		2,097,060
6	Fuel Cost Recovery	*	95.00%
7	(TEC-B)*J*0.95		1,992,207
8	True-Up Amount (T)	+	220,997
9	Prudence Adjustment Amount (P)	+	
10	Interest (I)	+	7,875
11	Fuel and Purchased Power Adjustment (FPA)	=	2,221,079
12	Forecasted Missouri NSI (S <sub>RP</sub> )	÷	2,188,895,865
13	Current Period Fuel Adjustment Rate (FAR) to be applied Beginning 12-01-2014	=	0.00101
14	Current Period FAR <sub>PRIM</sub> = FAR x VAF <sub>PRIM</sub>		0.00106
15	Current Period FAR <sub>SEC</sub> = FAR x VAF <sub>SEC</sub>		0.00108
16	VAF <sub>PRIM</sub> = 1.0466		1.0466
17	VAF <sub>SEC</sub> = 1.0622		1.0622

DATE OF ISSUE October 1, 2014  
 ISSUED BY Kelly S. Walters, Vice President, Joplin, MO

DATE EFFECTIVE December 1, 2014

THE EMPIRE DISTRICT ELECTRIC COMPANY

P.S.C. Mo. No. 5 Sec. 4 2nd Revised Sheet No. 17f

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THE EMPIRE DISTRICT ELECTRIC COMPANY

P.S.C. Mo. No. 5 Sec. 4 1st Revised Sheet No. 17h

Canceling P.S.C. Mo. No. 5 Sec. 4 Original Sheet No. 17h

For ALL TERRITORY

FUEL ADJUSTMENT CLAUSE  
 SCHEDULE FAC  
 For service on and after June 15, 2011 and prior to April 1, 2013.

The two six-month accumulation periods, the two six-month recovery periods and filing dates will be as follows:

<u>ACCUMULATION PERIOD</u>	<u>RECOVERY PERIOD</u>	<u>ACCUMULATION PERIOD</u>	<u>RECOVERY PERIOD</u>
SEPTEMBER	JUNE	MARCH	DECEMBER
OCTOBER	JULY	APRIL	JANUARY
NOVEMBER	AUGUST	MAY	FEBRUARY
DECEMBER	SEPTEMBER	JUNE	MARCH
JANUARY	OCTOBER	JULY	APRIL
FEBRUARY	NOVEMBER	AUGUST	MAY
Filing date:	April 1 <sup>st</sup>		October 1 <sup>st</sup>

The Company will make a Cost Adjustment Factor (“CAF”) filing by each Filing Date. The new CAF rates for which the filing is made will be applicable starting with the recovery period that begins following the Filing Date. All CAF filings shall be accompanied by detailed workpapers supporting the filing in an electronic format with all formulas intact.

**DEFINITIONS**

**ACCUMULATION PERIOD:**

The six calendar months during which the actual costs subject to this rider will be accumulated for purposes of determining the CAF.

**RECOVERY PERIOD:**

The billing months during which CAF is applied to retail customer billings on a per kilowatt-hour (kWh) basis.

**BASE ENERGY COST:**

Base Energy Cost in this FAC are calculated using the costs included in the revenue requirement upon which Empire’s general rates are set for fuel including the costs associated with the Company’s fuel hedging program; purchased power energy charges, including applicable transmission fees; Southwest Power Pool variable costs, Air Quality Control System consumables, such as anhydrous ammonia, limestone, and powder activated carbon, and emission allowance costs, but not purchased power demand costs as off-set by off-system sales revenue, any emission allowance revenues, and renewable energy credit revenues in the accumulation period.

**BASE ENERGY COST PER kWh:**

Base energy cost per kWh at the generator, established in the most recent base rate case. The base energy cost per kWh is \$0.02823 for each accumulation period.

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For ALL TERRITORY

FUEL ADJUSTMENT CLAUSE SCHEDULE FAC For service on and after June 15, 2011 and prior to April 1, 2013.
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**APPLICATION**

**FUEL ADJUSTMENT CLAUSE**

The average price per kWh of electricity generated or purchased will be adjusted subject to application of the FAC, and approved by the Public Service Commission. The price will reflect 95 percent of the accumulation period costs either above or below base costs specified below for:

1. Fuel and AQCS consumables consumed in Company electric generating plants;
2. Purchased energy (excluding demand);
3. Off-system sales revenue;
4. Emission allowance costs and revenues; and
5. Renewable energy credit revenues.

It will also include:

6. An adjustment for the prior recovery period's over/under recovery of FAC Costs;
7. Interest at a rate equal to the Company's short-term interest rate will be applied to the average monthly deferred electric energy costs and will be accumulated during the accumulation period. Deferred electric energy cost shall be determined monthly. The monthly deferred amount may be negative or positive during the accumulation period.

The formula and components are displayed below.

$$FAC = \{[(F + P + E - O - R - B) * J] * 0.95\} + C + I$$

Where:

- F = Actual total cost of fuel - FERC Accounts 501 & 547 (excluding fixed pipeline reservation charges and fixed pipeline storage charges), and AQCS consumables – FERC Account 506.2.
- P = Actual total system cost of purchased energy - FERC Account 555 (excluding purchase power demand charges).
- E = Actual total system net emission allowance cost and revenues - FERC Accounts 509 & 254.103.
- O = Actual total system off-system sales revenue.
- B = Base energy cost is calculated as follows:

1. For each accumulation period  $B = (NSI \text{ kWh} * \$0.02823)$

NSI = Actual net system input at the generation level for the accumulation period.

THE EMPIRE DISTRICT ELECTRIC COMPANY

P.S.C. Mo. No. 5 Sec. 4 1st Revised Sheet No. 17j

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For ALL TERRITORY

FUEL ADJUSTMENT CLAUSE  
SCHEDULE FAC  
For service on and after June 15, 2011 and prior to April 1, 2013.

R = Renewable energy credit revenues.

J = Missouri energy ratio calculated as follows:

$$\text{Missouri energy ratio} = \frac{\text{Missouri retail kWh sales}}{\text{Total system kWh sales}}$$

Where Total system kWh sales excludes off-system sales.

C = True-up of over/under recovery of FAC balance from prior recovery period as included in the deferred energy cost balancing account. This factor will reflect any modifications made due to prudence reviews.

I = Interest.

COST ADJUSTMENT FACTOR

The CAF is the result of dividing the FAC by estimated recovery period Missouri net system input (NSI) kWh, rounded to the nearest \$.00000. The CAF shall be adjusted to reflect the differences in line losses that occur at primary and above voltage and secondary voltage by multiplying the average cost at the generator by 1.0502 and 1.0686, respectively. Any CAF authorized by the Commission shall be billed based upon customers' energy usage on and after the authorized effective date of the CAF. The formula and components are displayed below.

$$\text{CAF} = \frac{\text{FAC}}{\text{S}}$$

Where:

S = Forecasted Missouri NSI kWh for the recovery period. Missouri NSI kWh is calculated as:

$$\text{Missouri NSI} = \text{Forecasted NSI} * \frac{\text{Forecasted Missouri retail kWh sales}}{\text{Forecasted total system kWh sales}}$$

Where Forecasted Total System kWh Sales excludes off-system sales.

PRUDENCE REVIEW

There shall be a periodic review of fuel and energy costs subject to the FAC and a comparison of the FAC revenue collected. Prudence reviews shall occur no less frequently than at eighteen (18) month intervals.

TRUE-UP OF FAC

After completion of each recovery period, the Company will make a true-up filing in conjunction with an adjustment to its FAC on the first Filing Date that occurs after completion of each recovery period. The true-up adjustment shall be the difference between the revenues billed in the recovery period to the costs authorized for collection in the recovery period, i.e. the true-up adjustment. Any true-up adjustments or refunds shall be reflected in item C above and shall include interest calculated as provided for in item I above.

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For ALL TERRITORY

FUEL ADJUSTMENT CLAUSE  
SCHEDULE FAC  
For service on and after June 15, 2011 and prior to April 1, 2013.

ACCUMULATION PERIOD ENDING, (Feb 28, 2013)

1.	Total energy cost (F + P + E – O - R)	\$70,581,445
2.	Base energy cost (B)	\$71,948,220
3.	Missouri energy ratio (J)	0.8245
4.	Fuel cost recovery [(F + P + E – O - R) – B] * J * 0.95	\$(1,040,454)
5.	Adj for over/under recovery for the recovery period ending 11-30-2012 (C)	\$(1,026,324)
6.	Interest (I)	\$(17,262)
7.	Fuel Adjustment Clause (FAC)	\$(2,084,040)
8.	Forecasted Missouri NSI for the recovery period (S)	2,247,709,242
9.	Cost Adjustment Factor (CAF) to be applied to bills beginning 06-01-2013	\$(0.00093) / kWh
10.	CAF - Primary and above (Line 9 x Primary Expansion Factor)	\$(0.00097) / kWh
11.	CAF - Secondary (Line 9 x Secondary Expansion Factor)	\$(0.00099) / kWh
	Primary Expansion Factor = 1.0502	
	Secondary Expansion Factor = 1.0686	