

# East Leipsic to Maroe 69 kV Single Circuit

## General Information

Proposing entity name	COMPANY CONFIDENTIAL INFORMATION
Company proposal ID	COMPANY CONFIDENTIAL INFORMATION
PJM Proposal ID	608
Project title	East Leipsic to Maroe 69 kV Single Circuit
Project description	The Proposing Entity proposes to build a greenfield 69 kV station ('West Creek') near First Energy's Maroe 69 kV switch and add three 3000A, 40 kA, 69 kV CBs. Build a greenfield 10.4 miles (straightline) 69 kV single circuit line from West Creek to AEP's East Leipsic 69 kV station using 556 ACSR 26/7 (Dove) conductors. Add a 69 kV, 3000A, 40 kA CB at East Leipsic to terminate the new line. Replace existing 138/69 kV transformer T3 at East Leipsic with a new 130 MVA, 138/69 kV transformer and add a 69 kV, 3000A, 40 kA CB on the low side of this transformer. Replace existing cap bank at East Leipsic 138 kV with a 69.1 Mvar and add a capacitor switching circuit breaker. Proposed Ratings: 245792 to 270007: 102/142/129/160
Project in-service date	05/2025
Tie-line impact	Yes
Interregional project	No
Is the proposer offering a binding cap on capital costs?	Yes
Additional benefits	COMPANY CONFIDENTIAL INFORMATION

## Project Components

1. East Leipsic - West Creek Greenfield 69 kV Line
2. East Leipsic Station 69/138kV Upgrade
3. Greenfield West Creek Station

## Greenfield Transmission Line Component

Component title	East Leipsic - West Creek Greenfield 69 kV Line
Point A	East Leipsic
Point B	Maroe
Point C	

	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	856.000000	1190.000000
Winter (MVA)	1080.000000	1338.000000
Conductor size and type	556.5 KCM ACSR (26/7) "Dove"	
Nominal voltage	AC	
Nominal voltage	69	
Line construction type	Overhead	
General route description	Line is proposed to run along and existing railroad and then along county road 8.	
Terrain description	Flat rural	

Right-of-way width by segment

The new, greenfield East Leipsic - Maroe 69kV transmission line will require acquisition of approximately 13.35 miles of right-of-way, defined at 60' in width (30' on either side of centerline). The project will begin at AEP's existing East Leipsic Station, and will proceed in a general northern direction to a new station location within immediate proximity to First Energy's existing Maroe Station. Aside from anticipated labor associated with completing all necessary right-of-way acquisition support and non-environmental permitting work, no additional action is anticipated as part of this project at this time. A review of the project footprint identifies that right-of-way will be required across approximately one hundred and twenty-one (121) parcels. An initial, high-level analysis found that there are two public parcels impacted by this project. Land use types within the project footprint are predominantly agricultural, with a small number of both residential and industrial properties. The Proposing Entity's initial land acquisition step is to verify current ownership by an examination of title, current property tax status, as well as document any liens, and/or mortgages on each property. The Proposing Entity will also research the status of the subsurface estate, whether or not it is severed from the surface. Once ownership is established, the Proposing Entity negotiates with landowners for the necessary easements in order to support the project solution. The Proposing Entity will pay for any crop damage and/or physical damage to property resulting from the construction and/or maintenance of the transmission line. As part of the right-of-way process, good-faith negotiations must be made with all landowners when acquiring property rights. Negotiations will continue as long as practical to reach a voluntary agreement. If, and only if, it becomes evident that a voluntary agreement between the company and the property owner cannot be reached, and no other viable alternatives exist, the Proposing Entity may exercise the right of eminent domain to secure required property rights through condemnation proceedings.

Electrical transmission infrastructure crossings

Line crosses existing AEP transmission lines exiting East Leipsic station

Civil infrastructure/major waterway facility crossing plan

N/A

Environmental impacts

Environmental surveys were not conducted during scoping. However, based on the geographical area no major concerns are expected.

Tower characteristics

Steel single circuit monopoles

Construction responsibility

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Additional comments

**Component Cost Details - In Current Year \$**

Engineering & design

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Permitting / routing / siting

COMPANY CONFIDENTIAL INFORMATION

ROW / land acquisition

COMPANY CONFIDENTIAL INFORMATION

Materials & equipment	COMPANY CONFIDENTIAL INFORMATION
Construction & commissioning	COMPANY CONFIDENTIAL INFORMATION
Construction management	COMPANY CONFIDENTIAL INFORMATION
Overheads & miscellaneous costs	COMPANY CONFIDENTIAL INFORMATION
Contingency	COMPANY CONFIDENTIAL INFORMATION
Total component cost	\$17,546,539.84
Component cost (in-service year)	\$.00

### Substation Upgrade Component

Component title	East Leipsic Station 69/138kV Upgrade
Substation name	East Leipsic
Substation zone	205 - AEP
Substation upgrade scope	Qty. 1 – 138/69kV 130MVA transformer Qty. 2 – 69kV, 3000A, 40kA circuit breakers Qty. 6 – 69kV, 3000A disconnect switches Qty. 1 – 69kV, 28.7MVAR capacitor bank Qty. 1 – 69kV, 600A capacitor circuit switcher

### Transformer Information

	Name	Capacity (MVA)	
Transformer	138/69kV	130	
	<b>High Side</b>	<b>Low Side</b>	<b>Tertiary</b>
Voltage (kV)	138	69	
New equipment description	This scope involves expanding the existing 69kV portion of the yard to the south to allow for a new line position. In the expansion area a new 69kV box bay will be installed along with 2 new 69kV circuit breakers. The 138kV yard will have replacements of the existing XF#3 and existing capacitor bank, these items will be replaced in place.		
Substation assumptions	Expansion area property is able to be obtained.		

Real-estate description  
Construction responsibility COMPANY CONFIDENTIAL INFORMATION

Additional comments

**Component Cost Details - In Current Year \$**

Engineering & design COMPANY CONFIDENTIAL INFORMATION

Permitting / routing / siting COMPANY CONFIDENTIAL INFORMATION

ROW / land acquisition COMPANY CONFIDENTIAL INFORMATION

Materials & equipment COMPANY CONFIDENTIAL INFORMATION

Construction & commissioning COMPANY CONFIDENTIAL INFORMATION

Construction management COMPANY CONFIDENTIAL INFORMATION

Overheads & miscellaneous costs COMPANY CONFIDENTIAL INFORMATION

Contingency COMPANY CONFIDENTIAL INFORMATION

Total component cost \$4,338,327.40

Component cost (in-service year) \$.00

**Greenfield Substation Component**

Component title Greenfield West Creek Station

Substation name West Creek

Substation description This scope involves building a new three circuit breaker single bus station. A single bay 69 kV box bay will be installed and three circuit breakers will be installed (one per line). Each new line will have line relaying potentials installed as well.

Nominal voltage AC

Nominal voltage 69

## Transformer Information

None

Major equipment description	"Qty. 3 – 69kV, 3000A, 40kA circuit breakers Qty. 12 – 69kV CCVTs Qty. 1 – 69kV Power PT "	
	<b>Normal ratings</b>	<b>Emergency ratings</b>
Summer (MVA)	0.000000	0.000000
Winter (MVA)	0.000000	0.000000
Environmental assessment	Environmental assessment was not completed during the scoping window. However, the geographic area does not present any major environmental concerns.	
Outreach plan	Outreach activities will be conducted to present this new 138kV project to public. Ohio Power Siting Board regulatory approval will also be required.	
Land acquisition plan	New property is required. 2 acres will be needed. AEP will review several land options for feasibility.	
Construction responsibility	COMPANY CONFIDENTIAL INFORMATION	
Additional comments		
<b>Component Cost Details - In Current Year \$</b>		
Engineering & design	COMPANY CONFIDENTIAL INFORMATION	
Permitting / routing / siting	COMPANY CONFIDENTIAL INFORMATION	
ROW / land acquisition	COMPANY CONFIDENTIAL INFORMATION	
Materials & equipment	COMPANY CONFIDENTIAL INFORMATION	
Construction & commissioning	COMPANY CONFIDENTIAL INFORMATION	
Construction management	COMPANY CONFIDENTIAL INFORMATION	
Overheads & miscellaneous costs	COMPANY CONFIDENTIAL INFORMATION	
Contingency	COMPANY CONFIDENTIAL INFORMATION	

Total component cost \$3,272,491.20

Component cost (in-service year) \$.00

## Congestion Drivers

None

## Existing Flowgates

FG #	From Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type
AEP-T63	245743	05E OTTAWA	245805	05LEIPSIC	1	69	205	FERC 715 Thermal
AEP-T64	245805	05LEIPSIC	245806	05DSCHLERT	1	69	205	FERC 715 Thermal
AEP-T65	245806	05DSCHLERT	245810	05NLEIP SW	1	69	205	FERC 715 Thermal
AEP-T66	245792	05E.LEIPSC	245810	05NLEIP SW	1	69	205	FERC 715 Thermal
AEP-T67	242993	05E.LEIPSIC2	245792	05E.LEIPSC	1	138/69	205	FERC 715 Thermal
AEP-T68	245757	05MCCOMB OP	245770	05NEW LIBR	1	35	205	FERC 715 Thermal
AEP-T69	245730	05CAIRO	245740	05E LIMA	1	69	205	FERC 715 Thermal
AEP-T70	245743	05E OTTAWA	245805	05LEIPSIC	1	69	205	FERC 715 Thermal
AEP-T71	245743	05E OTTAWA	245805	05LEIPSIC	1	69	205	FERC 715 Thermal
AEP-T72	245743	05E OTTAWA	245805	05LEIPSIC	1	69	205	FERC 715 Thermal
AEP-T73	245743	05E OTTAWA	245805	05LEIPSIC	1	69	205	FERC 715 Thermal

## New Flowgates

None

## Financial Information

Capital spend start date 03/2021

Construction start date 09/2023

Project Duration (In Months) 50

## Cost Containment Commitment

Cost cap (in current year)

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Cost cap (in-service year)

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### Components covered by cost containment

1. East Leipsic - West Creek Greenfield 69 kV Line - Transource
2. Greenfield West Creek Station - Transource

### Cost elements covered by cost containment

Engineering & design

Yes

Permitting / routing / siting

Yes

ROW / land acquisition

Yes

Materials & equipment

Yes

Construction & commissioning

Yes

Construction management

Yes

Overheads & miscellaneous costs

Yes

Taxes

Yes

AFUDC

Yes

Escalation

Yes

Additional Information

COMPANY CONFIDENTIAL INFORMATION

Is the proposer offering a binding cap on ROE?

Yes

Would this ROE cap apply to the determination of AFUDC?

Yes

Would the proposer seek to increase the proposed ROE if FERC finds that a higher ROE would not be unreasonable?

No



Engineering & design	Yes
Permitting / routing / siting	Yes
ROW / land acquisition	Yes
Materials & equipment	Yes
Construction & commissioning	Yes
Construction management	Yes
Overheads & miscellaneous costs	Yes
Taxes	Yes
AFUDC	Yes
Escalation	Yes
Additional Information	COMPANY CONFIDENTIAL INFORMATION
Is the proposer offering a Debt to Equity Ratio cap?	COMPANY CONFIDENTIAL INFORMATION

**Additional comments**

None