Harrison-Obetz-Marion Road 138kV Line Rebuild

General Information

Proposing entity name	AEPSCT
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	Yes
Company proposal ID	AEP_Q
PJM Proposal ID	515
Project title	Harrison-Obetz-Marion Road 138kV Line Rebuild
Project description	Rebuild 7.28 miles on the Harrison Extension 138kV line asset part of the Harrison-Obetz-Marion Road 138kV Circuit. Reconductor approximately 3.2 miles of 636 ACSR 26/7 conductor on the Bixby-Marion Road 138kV line asset also part of the Harrison-Obetz-Marion Road 138kV circuit. Replace 795 KCM ACSR station conductors at Obetz 138kV Station
Email	jmperez@aep.com
Project in-service date	11/2029
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	

Project Components

1. Harrison-Obetz 138kV Circuit
2. Obetz-Marion Road 138kV Circuit
3. Obetz Station

Transmission Line Upgrade Component

Component title	Harrison-Obetz 138kV Circuit
Project description	Rebuild approximately 4.5 miles from Harrison station to Obetz station.
Impacted transmission line	Harrison-Obetz-Marion 138kV Line
Point A	Harrison Station
Point B	Obetz Station
Point C	
Terrain description	Flat and urban with some industrial areas
Existing Line Physical Characteristics	
Operating voltage	138
Conductor size and type	636 ACSR 26/7 Grossbeak
Hardware plan description	Hardware will be replaced along the way
Tower line characteristics	The section from Harrison to Obetz consists mostly of wood H frame structures originally installed in 1950.

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	138.000000	138.000000
	Normal ratings	Emergency ratings
Summer (MVA)	257.000000	360.000000
Winter (MVA)	325.000000	404.000000
Conductor size and type	795 ACSR Drake	
Shield wire size and type	7#8 Alumoweld AW7 Shield Wire & OPGW	

Rebuild line length	4.5 miles
Rebuild portion description	Approximately 4.5 miles will be rebuilt under this component from Harrison station all the way to Obetz station.
Right of way	Plan includes supplementing/augmenting approximately 50% of our existing easements.
Construction responsibility	AEP
Benefits/Comments	This proposal rebuilds an aging asset with 1950's wood structures with a modern and resilient steel design.
Component Cost Details - In Current Year $	
Engineering & design	Detailed cost breakdown
Permitting / routing / siting	Detailed cost breakdown
ROW / land acquisition	Detailed cost breakdown
Materials & equipment	Detailed cost breakdown
Construction & commissioning	Detailed cost breakdown
Construction management	Detailed cost breakdown
Overheads & miscellaneous costs	Detailed cost breakdown
Contingency	Detailed cost breakdown
Total component cost	$14,202,481.29
Component cost (in-service year)	$14,202,481.29

Transmission Line Upgrade Component

Component title	Obetz-Marion Road 138kV Circuit
Project description	Rebuild approximately 2.8 miles from Obetz station to structure 21 of the Bixby-Marion Road 138kV Line asset. Reconductor approximately 3.2 miles from structure 21 of the Bixby-Marion Road 138kV Line asset to Marion Road.
Impacted transmission line	Harrison-Obetz-Marion Road 138kV

Point A	Obetz Station
Point B	Structure 21 of the Bixby-Marion Road 138kV Line Asset
Point C	Marion Road Station
Terrain description	Flat and urban with some industrial areas.
Existing Line Physical Characteristics	
Operating voltage	138
Conductor size and type	636 ACSR 26/7
Hardware plan description	Hardware will be replaced as necessary to accommodate new conductor.
Tower line characteristics	The portion of the circuit from Obetz to structure 21 of the Bixby-Marion Road 138kV line asset consists of mostly wood H frames installed in 1950. From structure 21 to Marion Road station it is a mix of double circuit lattice structures and steel poles originally constructed in 1976.

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	138.000000	138.000000
	Normal ratings	Emergency ratings
Summer (MVA)	291.000000	353.000000
Winter (MVA)	368.000000	373.000000

Conductor size and type	477 ACSS Hawk
Shield wire size and type	7#8 Alumoweld AW 7 & OPGW
Rebuild line length	6 miles (see breakdown below)
Rebuild portion description	Of the total 6 miles, 2.8 miles will be fully rebuilt while 3.2 miles will be reconductored.
Right of way	Proposal includes augmenting/supplementing 50% of our existing easements.

Construction responsibility	AEP
Benefits/Comments	This proposal rebuilds an aging asset with 1950's wood structures with a modern and resilient steel design.

Component Cost Details - In Current Year $

Engineering & design	Detailed cost breakdown
Permitting / routing / siting	Detailed cost breakdown
ROW / land acquisition	Detailed cost breakdown
Materials & equipment	Detailed cost breakdown
Construction & commissioning	Detailed cost breakdown
Construction management	Detailed cost breakdown
Overheads & miscellaneous costs	Detailed cost breakdown
Contingency	Detailed cost breakdown
Total component cost	$21,303,721.93
Component cost (in-service year)	$21,303,721.93

Substation Upgrade Component

Component title	Obetz Station
Project description	Replace 795 KCM ACSR Bus Conductors at Obetz Station
Substation name	Obetz Station
Substation zone	205
Substation upgrade scope	Replace 795 KCM ACSR Bus Conductors at Obetz Station

Transformer Information

None

New equipment description	1272 KCM AAC 61 Str Bus conductors
Substation assumptions	The station structures are adequate and only replacing the bus conductor will be needed.
Real-estate description	N/A
Construction responsibility	AEP
Benefits/Comments	
Component Cost Details - In Current Year $	
Engineering & design	Detailed cost breakdown
Permitting / routing / siting	Detailed cost breakdown
ROW / land acquisition	Detailed cost breakdown
Materials & equipment	Detailed cost breakdown
Construction & commissioning	Detailed cost breakdown
Construction management	Detailed cost breakdown
Overheads & miscellaneous costs	Detailed cost breakdown
Contingency	Detailed cost breakdown
Total component cost	$238,304.70
Component cost (in-service year)	$238,304.70

Congestion Drivers

None

Existing Flowgates

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-GD-S190	243522	05HARRISON	243550	05OBETZ	1	138	205	Generation Deliverability	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-IPD-S187	243522	05HARRISON	243550	05OBETZ	1	138	205	Individual Plant Deliverability	Included
2025W1-GD-S229	243550	05OBETZ	243539	05MARION RD	1	138	205	Generation Deliverability	Included
2025W1-GD-S207	243550	05OBETZ	243539	05MARION RD	1	138	205	Generation Deliverability	Included
2025W1-GD-S183	243522	05HARRISON	243550	05OBETZ	1	138	205	Generation Deliverability	Included
2025W1-IPD-S169	243522	05HARRISON	243550	05OBETZ	1	138	205	Individual Plant Deliverability	Included
2025W1-GD-S406	243522	05HARRISON	243550	05OBETZ	1	138	205	Generation Deliverability	Included
2025W1-GD-S205	243522	05HARRISON	243550	05OBETZ	1	138	205	Generation Deliverability	Included

New Flowgates

None

Financial Information

Capital spend start date	03/2026
Construction start date	10/2028
Project Duration (In Months)	44

Additional Comments

None