SPP-MISO Interregional Planning Stakeholder Advisory Committee

2024-25 CSP Study Results

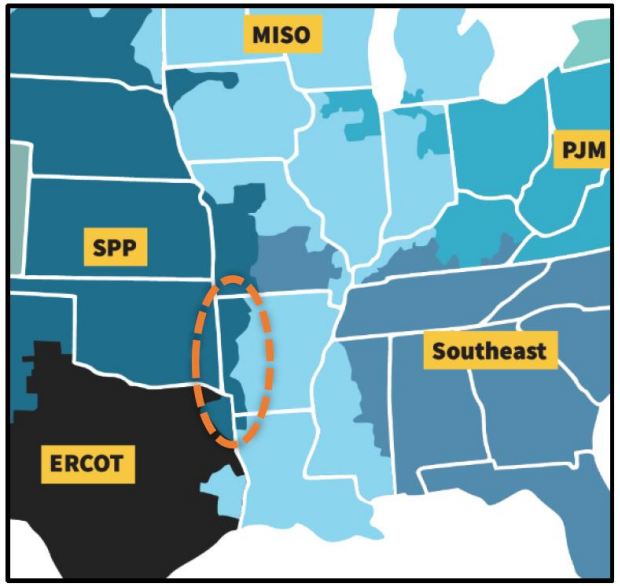
March 6, 2026

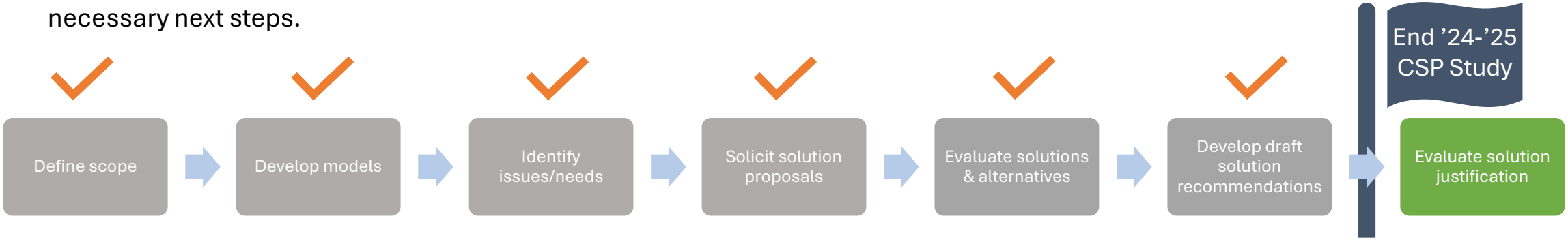
2024-25 CSP Study Results

a. Study Results & Draft Report
b. Solution Proposals
c. Stakeholder Feedback
d. Timeline & Next Steps

CSP Study Key Takeaways

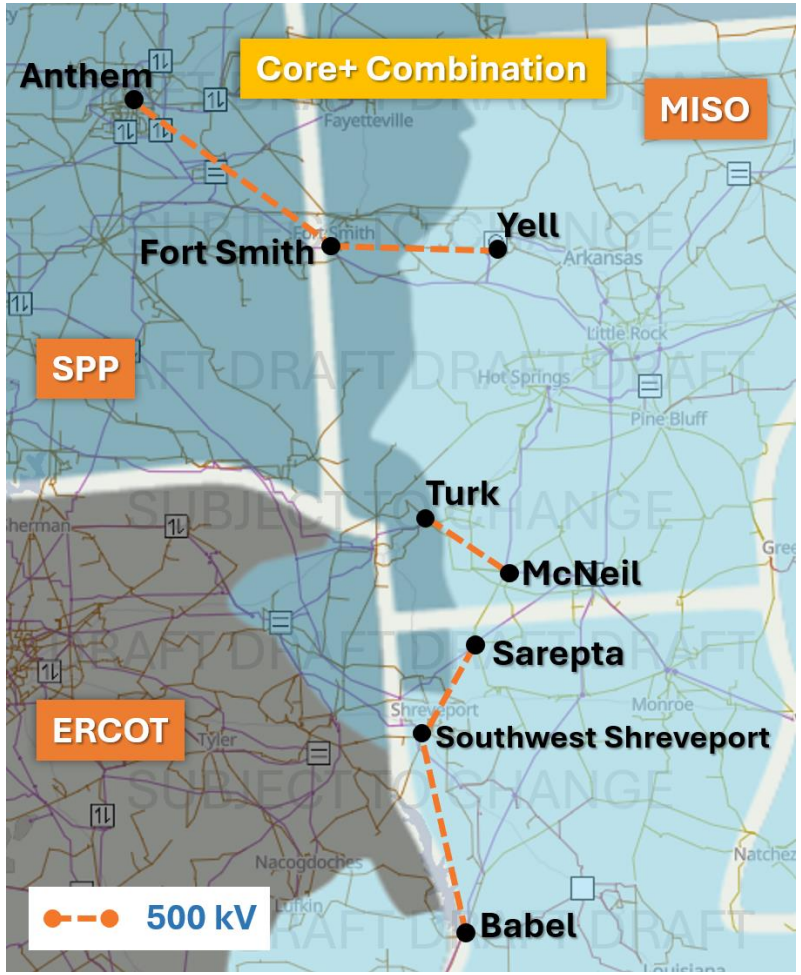
- MISO and SPP completed screening analyses of alternative solution combinations using updated models that reflect 2025 approved transmission, recently planned large loads and new resource additions.
- The analysis identified potential opportunities to address reliability, economic, and transfer considerations across three corridors along the southern seam. Multiple combinations were evaluated, and draft recommendations are being presented for discussion today.
- Stakeholder input will inform refinement of the draft recommendations and the CSP study report, both of which were posted with today's meeting materials.
- Following stakeholder feedback, the RTOs will evaluate solution justification and necessary next steps.



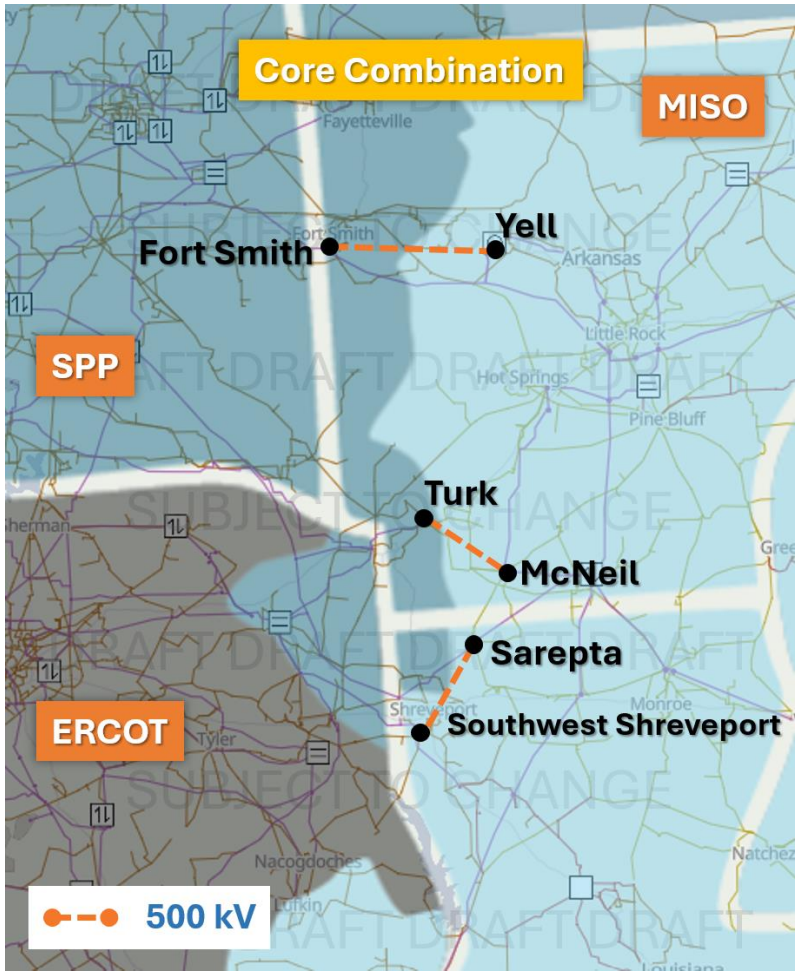


MISO website: Interregional Meetings > Related Documents
SPP website: SPP Documents & Filings > Reference Documents

Draft Portfolio Recommendations



- The CSP study resulted in two potential transmission combinations identified by MISO and SPP for the study focus area.
- Core+ combination expands on Core combination by adding northern and southern extensions that tie into recently approved SPP and MISO transmission projects.
- The RTOs are requesting stakeholder input on both combinations to help determine the recommended project set.



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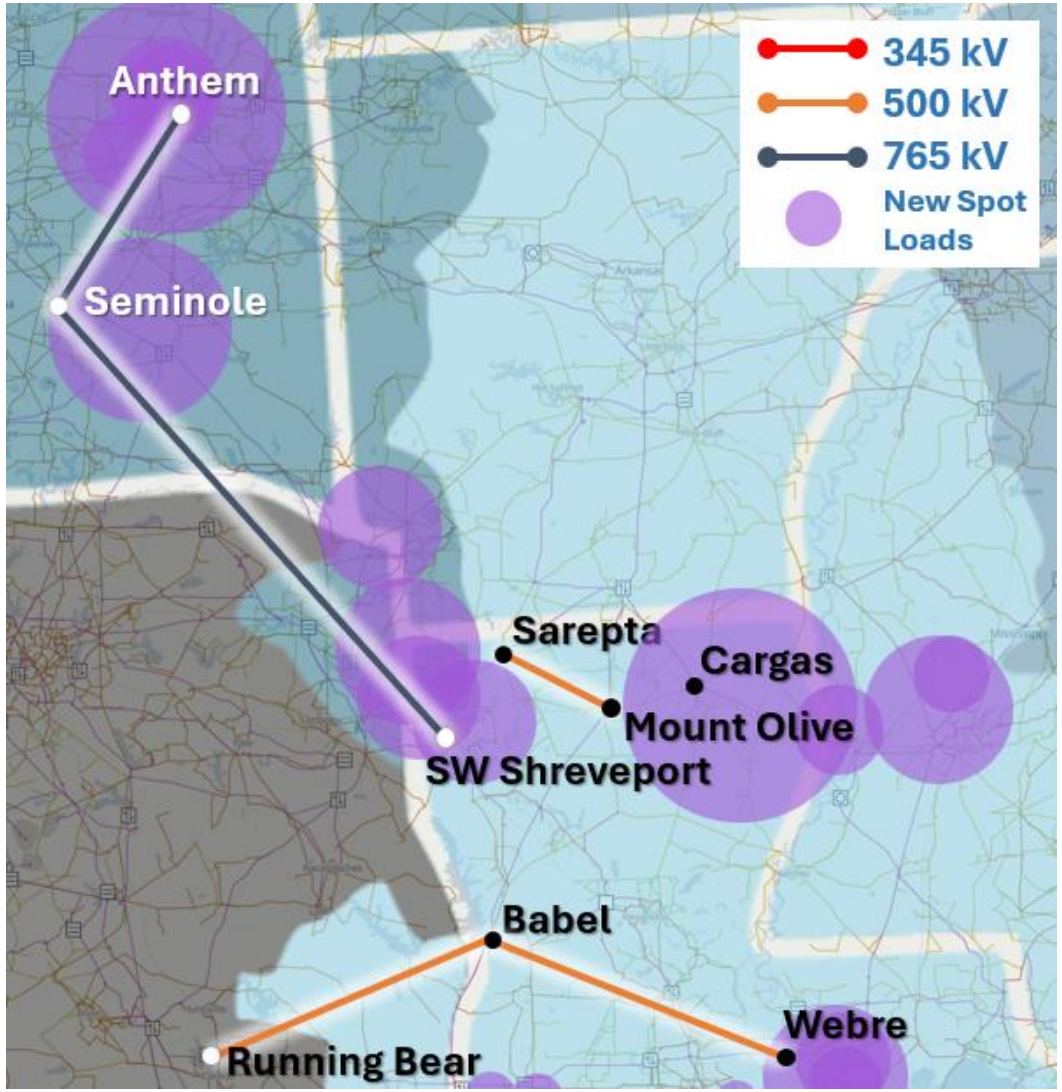
CSP Study Models

Updated CSP Blended Models
Year 10 & 15

- **MISO & SPP ‘25 Transmission**
- **ERAS Generation & Large Loads**
- **MISO ‘23 + ‘24 Transmission**
- **MISO F2A + SPP Future 2 Models**

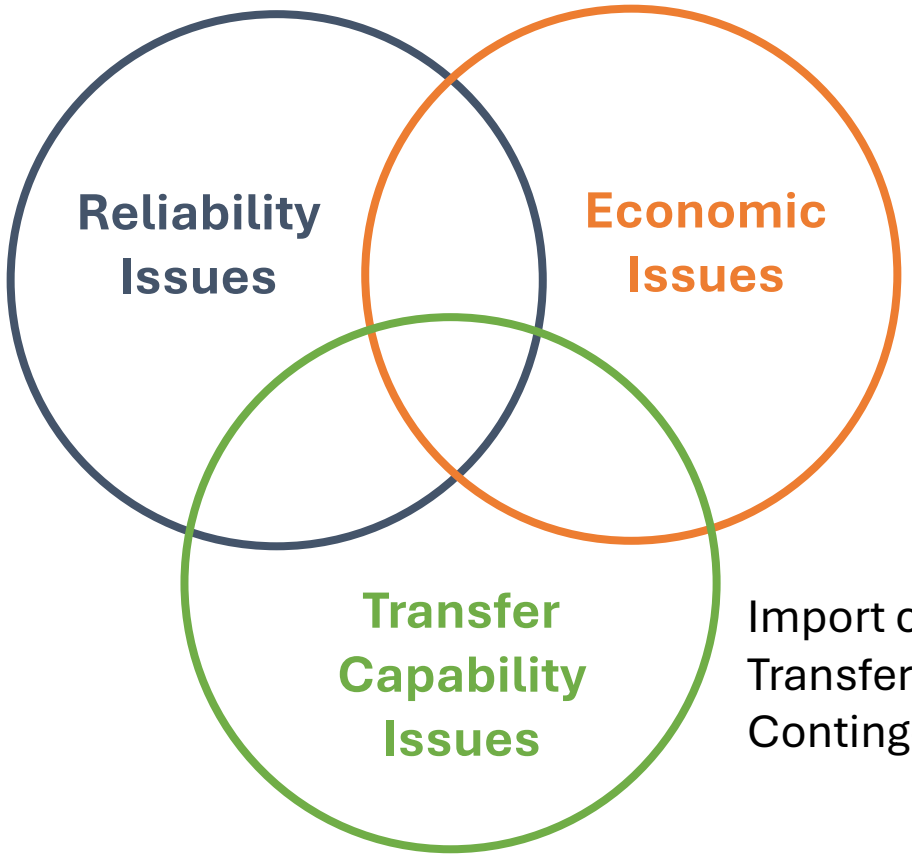


Map illustrates most impactful recently approved transmission and spot loads that were included in the model.

Find all modeling data posted on MISO Sharefile and SPP Globalscape.

Issue Evaluation Lenses

Net issues resolved
Thermal overloads
Operational performance



Congestion patterns
Shadow prices
Binding hours

Import capability limits
Transfer constraints
Contingency analysis

Issue Results

Relevant Reliability Issues Summary

		Yr 10 – Max. Thermal Loading (%)			Yr 15 – Max. Thermal Loading (%)		
Monitored Facility	**RTO**	**SUM**	**WIN**	**LL**	**SUM**	**WIN**	**LL**
[AEPW] Tulsa N 345 kV – [AEPW] Anthem 345 kV	SPP	▲	-	▲	▲	-	▲
[AEPW] Pittsburg 345 kV – [OKGE] Seminole 345 kV	SPP	▲	-	-	▲	-	-
[OKGE] FT Smith 161 kV – [OKGE) Arklahoma 161 kV	SPP	●	-	-	▲	-	-
[EES] Patmos West 115 kV – [AEPW] Fulton 115 kV	Tie Line	■	▲	-	■	▲	-
[EES] Lewisville 115 kV – [EES] Patmos West 115 kV	MISO	■	▲	-	■	▲	-
[EES] Harvey Couch 115 kV – [EES] Lewisville 115 kV	MISO	▲	▲	-	▲	▲	-
[AEPW] Diana 345 kV – [AEPW] SW Shreveport 345 kV	SPP	●	-	-	●	-	-
[AEPW] Noram 138 kV – [AEPW] Longwood 138 kV	SPP	▲	-	-	▲	-	-
[AEPW] Lieberman 138 kV – [AEPW] Jefferson IPC 138 kV	SPP	▲	-	-	▲	-	-

- No Violation | ● 90-100% | ▲ 100-150% | ■ > 150%

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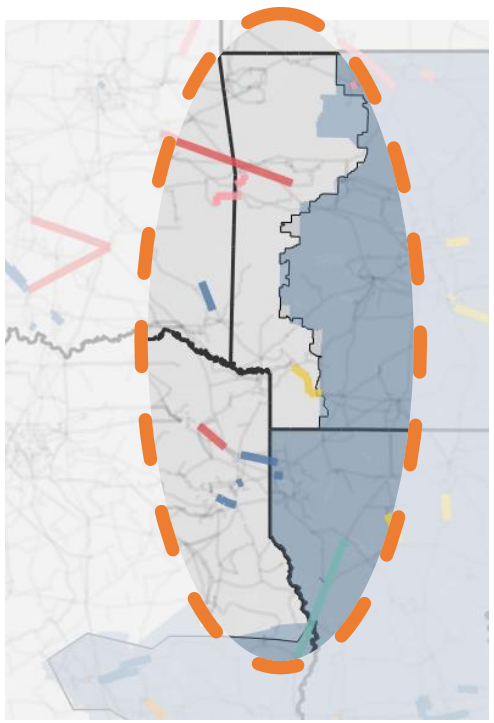
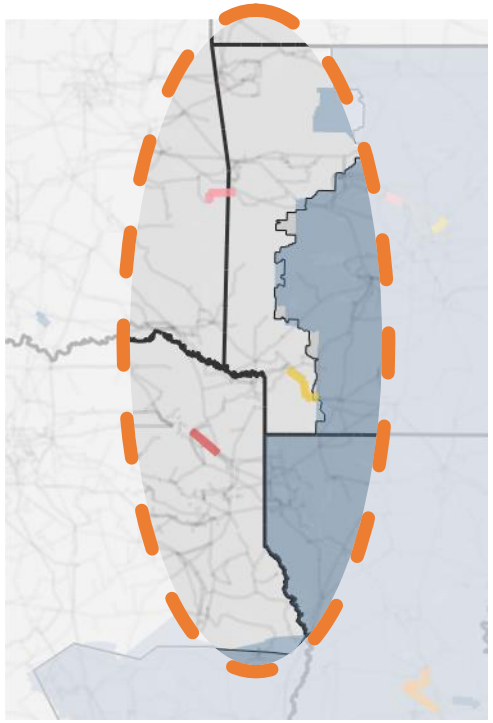
Reliability Base Case Issues (2034)

Facilities with a thermal loading of >90% considering NERC P0, P1, P2, and P7

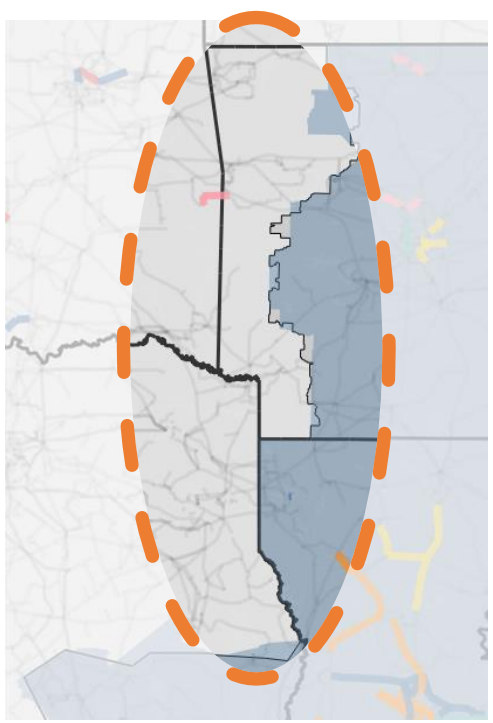
Summer



Winter



Light Load



Maps include monitored facilities with a thermal violation (> 90%) for any of the following:
Base case or NERC P1, P2, or P7

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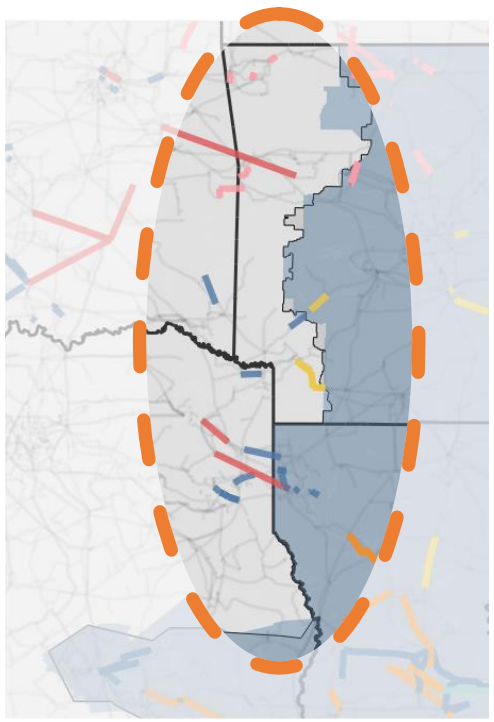
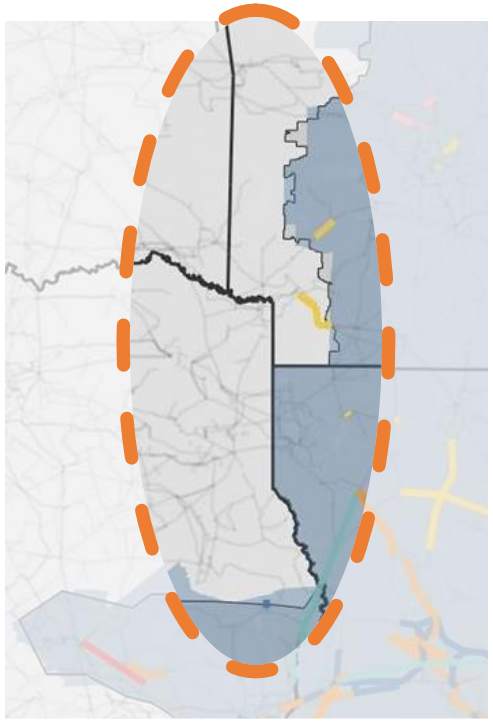
Reliability Base Case Issues (2039)

Facilities with a thermal loading of >90% considering NERC P0, P1, P2, and P7

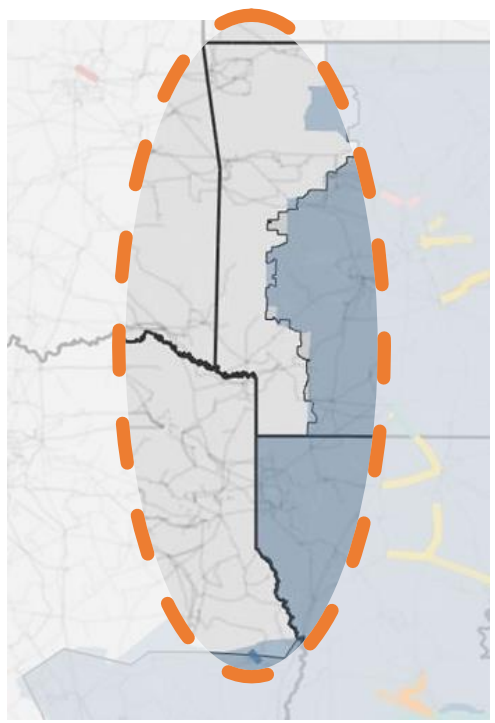
Summer



Winter



Light Load



Maps include monitored facilities with a thermal violation (> 90%) for any of the following:
Base case or NERC P1, P2, or P7

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Issue Results

Transfer Results Summary (2034)

SPP ↔ MISO (South) Transfer Scenarios – Transfer Limits (reference / base case)

SPP Import

Case	Monitored Facility	Voltage (kV)	RTO	Limit (MW)
Summer	[EES] ANO 500 kV – [OKGE] Ft. Smith 500 kV	345	SPP	2,164
Winter	[EES] ANO 500 kV – [OKGE] Ft. Smith 500 kV	500	Tie Line	6,313
Light Load	[EES] Babel 500 kV – [AEPW] Layfield 500 kV	500	Tie Line	6,853

ANO – Arkansas Nuclear One

MISO Import

Case	Monitored Facility	Voltage (kV)	RTO	Limit (MW)
Summer	[AEPW] Diana 345 kV – [AEPW] SW Shreveport 345 kV	345	SPP	1,060
Winter	[CLEC] Dolhill 345 kV – [CLEC] Dolhill 230 kV	345 / 230	MISO	4,458
Light Load	[EES] Longwood 345 kV – [AEPW] Sarepta 345 kV	345	Tie Line	3,638

Note: Monitored Facilities – Base Case or P1

Issue Results

Transfer Results Summary (2039)

SPP ↔ MISO (South) Transfer Scenarios – Transfer Limits (reference / base case)

SPP Import

Case	Monitored Facility	Voltage (kV)	RTO	Limit (MW)
Summer	[EES] ANO – [OKGE] Ft. Smith	500	Tie Line	1,313
Winter	[EES] ANO – [OKGE] Ft. Smith	500	Tie Line	6,039
Light Load	[EES] ANO – [OKGE] Ft. Smith	500	Tie Line	9,312

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MISO Import

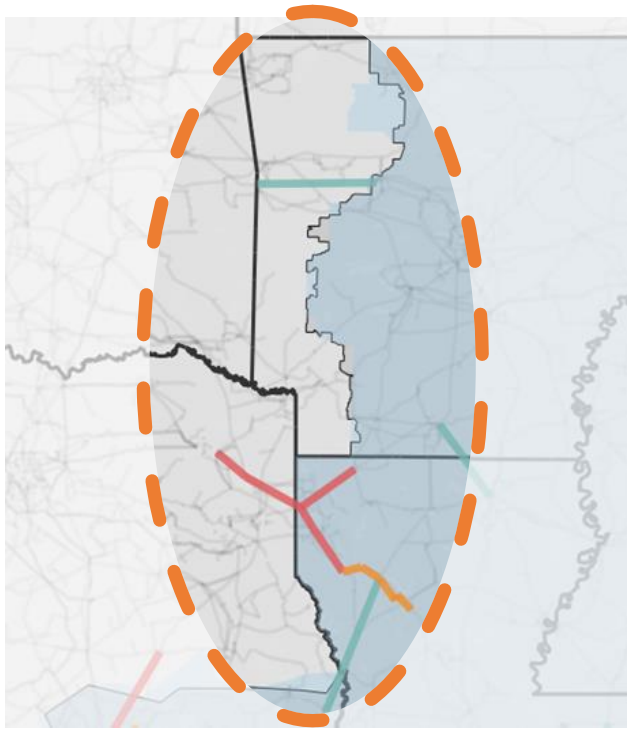
Case	Monitored Facility	Voltage (kV)	RTO	Limit (MW)
Summer	[CLEC] Dolet Hills – [CLEC] Dolet Hills	345 / 230	SPP	3,005
Winter	[EES] Longwood – [AEPW] Sarepta	345	Tie Line	4,215
Light Load	[CLEC] Dolet Hills – [CLEC] Dolet Hills	345 / 230	SPP	4,048

Note: Monitored Facilities – Base Case or P1

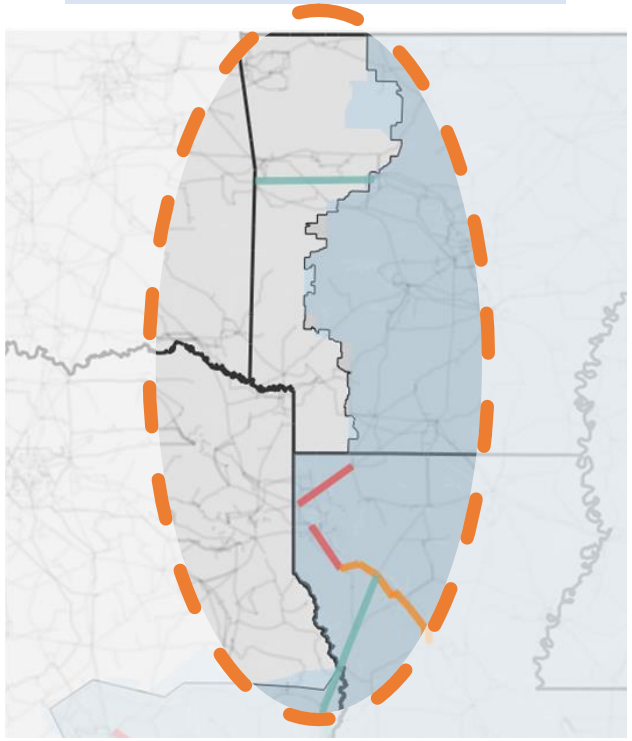
Transfer Issues – SPP Import (2034)

Top 6 limiting facilities of MISO South ↔ SPP South transfer scenarios

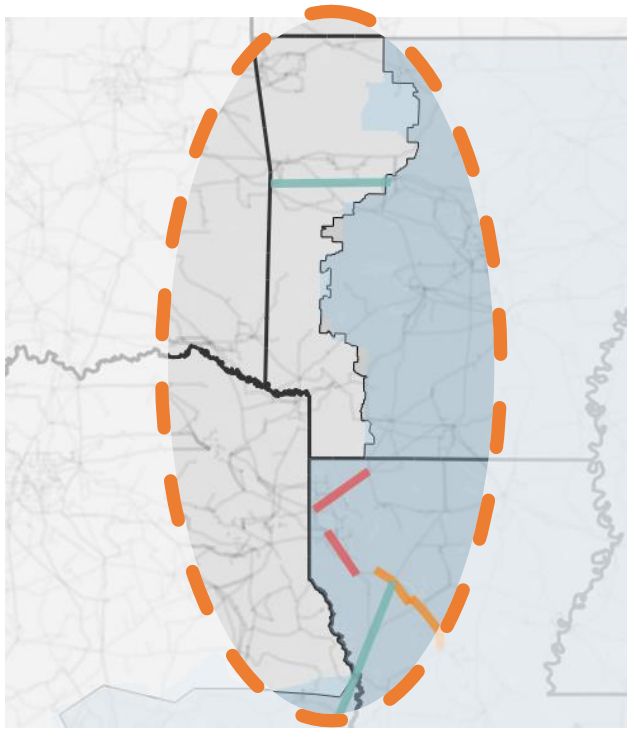
SPP Import (Summer)

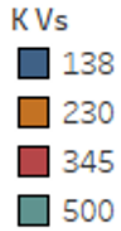


SPP Import (Winter)



SPP Import (Light Load)



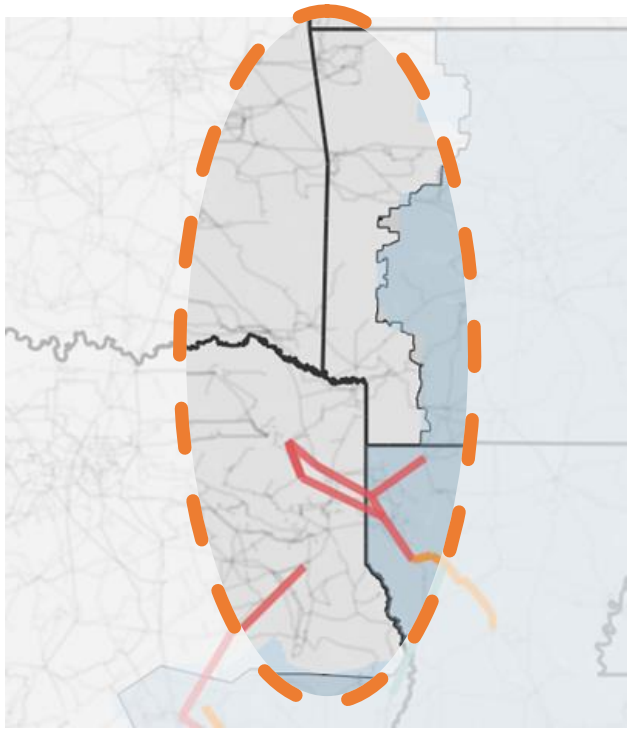


Notes:
Facilities shown are the top 6 limiting facilities of incremental transfers between SPP-S and MISO-S for Summer and Winter scenarios
Summarized preliminary transfer results represent limits or violations on monitored facilities for NERC P0 (base case) or P1 events
Additional contingencies such as NERC P2 and P7 will be evaluated to ensure resolving an identified issue is a robust solution

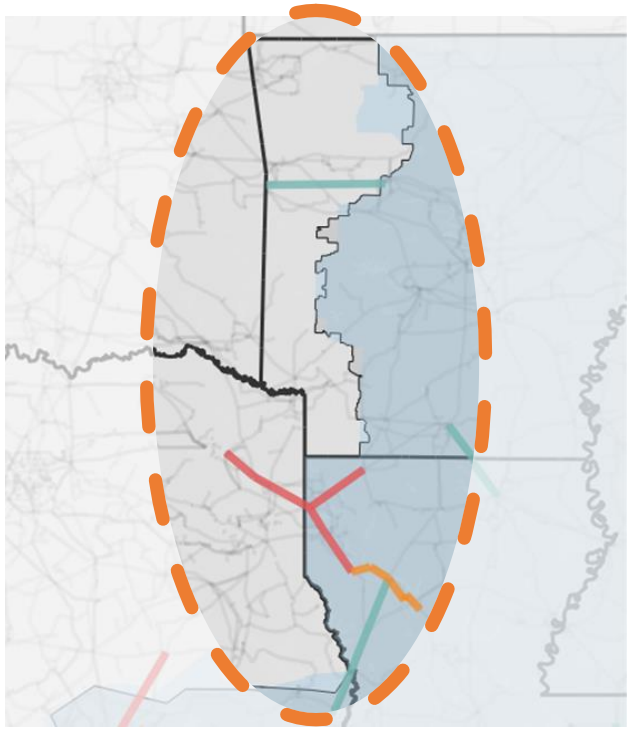
Transfer Issues – MISO Import (2034)

Top 6 limiting facilities of MISO South ↔ SPP South transfer scenarios

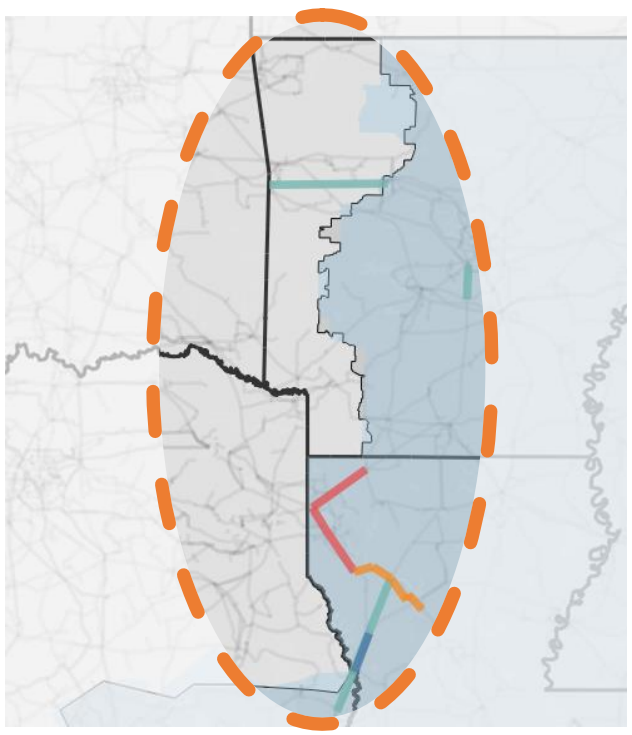
MISO Import (Summer)



MISO Import (Winter)



MISO Import (Light Load)



KVs
- 138
- 230
- 345
- 500

Notes:
Facilities shown are the top 6 limiting facilities of incremental transfers between SPP-S and MISO-S for Summer and Winter scenarios
Summarized preliminary transfer results represent limits or violations on monitored facilities for NERC P0 (base case) or P1 events
Additional contingencies such as NERC P2 and P7 will be evaluated to ensure resolving an identified issue is a robust solution

Economic Results

Issue Results

Top Congested Flowgates

(Ranked by sum of congestion measure for 2034 & 2039)

TOP 5 MISO SOUTH FLOWGATES		
Flowgate	**Area**	**Congestion Measure***
HARRISON EAST – OMAHA 161 kV	EES-ARK	$417,093
MORRILTON EAST – GLEASON 161 kV	EES-ARK	$412,124
REED – DUMAS 115 kV	EES-ARK	$405,026
BUNCH GULLY – COLONIAL ORANGE 138 kV	EES-TX	$377,421
WALNUT RIDGE TRANSFORMER 161/115 kV	EES-ARK	$312,062

- With the incorporation of new large loads and ERAS generation, additional flowgates were identified through contingency analysis to ensure we capture new congestion from additions.
- Flowgate analysis was conducted to determine the top congested flowgates for each of the areas: MISO, SPP, and tie lines between MISO and SPP.
- Results show the top five unique and impactful flowgates for each of the respected areas along the seam and their congestion measures for the 2034 and 2039 study years.
- There are slight shifts in some flowgates, but overall themes remain the same.

TOP 5 SPP FLOWGATES		
Flowgate	**Area**	**Congestion Measure***
LAWTON SHERIDAN – FTSIL_TP 138 kV	AEPW	$1,583,488
FORT HUMBUG – TRICHEL 138 kV	AEPW	$1,179,858
TULSA NORTH – ANTHEM 345 kV	AEPW	$588,056
VALLIANT TRANSFORMER 345/138 kV	AEPW	$538,158
DARDANELLE DAM – CLARKSVILLE 161 kV	SWPA	$467,731

TOP 5 MISO-SPP TIE LINE FLOWGATES		
Flowgate	**Area**	**Congestion Measure***
PATMOS WEST AECC – FULTON 115 kV	EES-ARK/AEPW	$580,208
RUSSELVILLE SOUTH – DARDANELLE DAM 161 kV	EES-ARK/SWPA	$157,307
SOUTHLAND – NORFORK 161 kV	EES-ARK/SWPA	$85,071
ARKANSAS NUCLEAR ONE – FT SMITH 500 kV	EES-ARK/OKGE	$38,935
SOUTH LEAD HILL – BULL SHOALS DAM 161 kV	EES-ARK/SWPA	$12,992

*Congestion Measure ($/MW) is an indication of the production cost savings opportunity from relieving congestion. It is calculated by multiplying the number of binding hours by the average shadow price for a particular flowgate. Values shown are the sum of two model years' flowgate congestion measures (2034 and 2039).

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Solutions Evaluations and Draft Recommendations

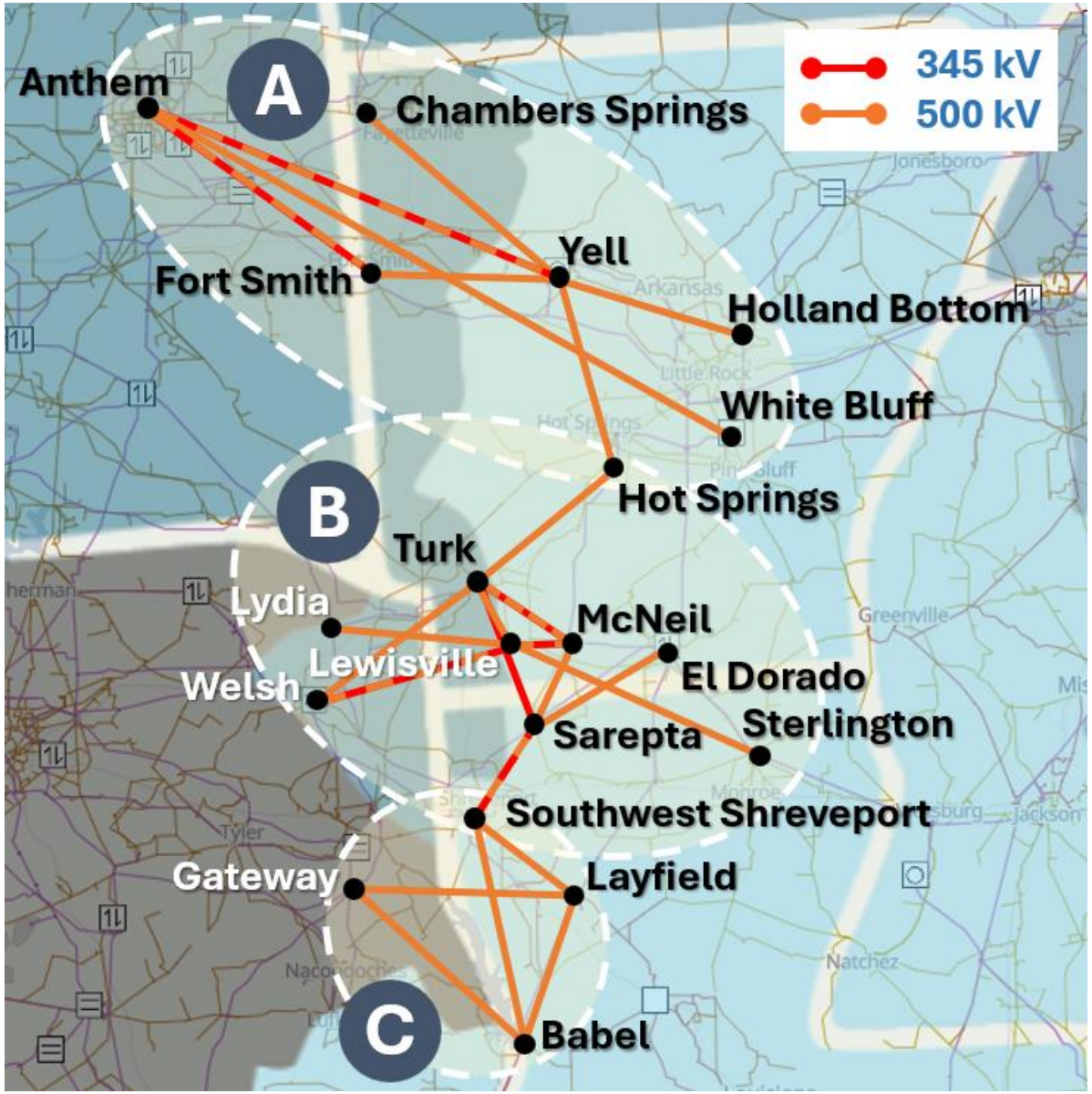
The CSP Study Journey: Scope, Engagement & Collaboration

- Initiated in 2024 with draft scope posted in late summer
- Quarterly IPSAC engagement throughout study with corresponding stakeholder feedback requests
- Continuous coordination with solution submitters and interested stakeholders
- Cross-RTO planning collaboration
- Iterative model updates incorporating stakeholder feedback

The recommendations presented today reflect an iterative, collaborative process grounded in stakeholder input and coordinated analysis across both RTOs.

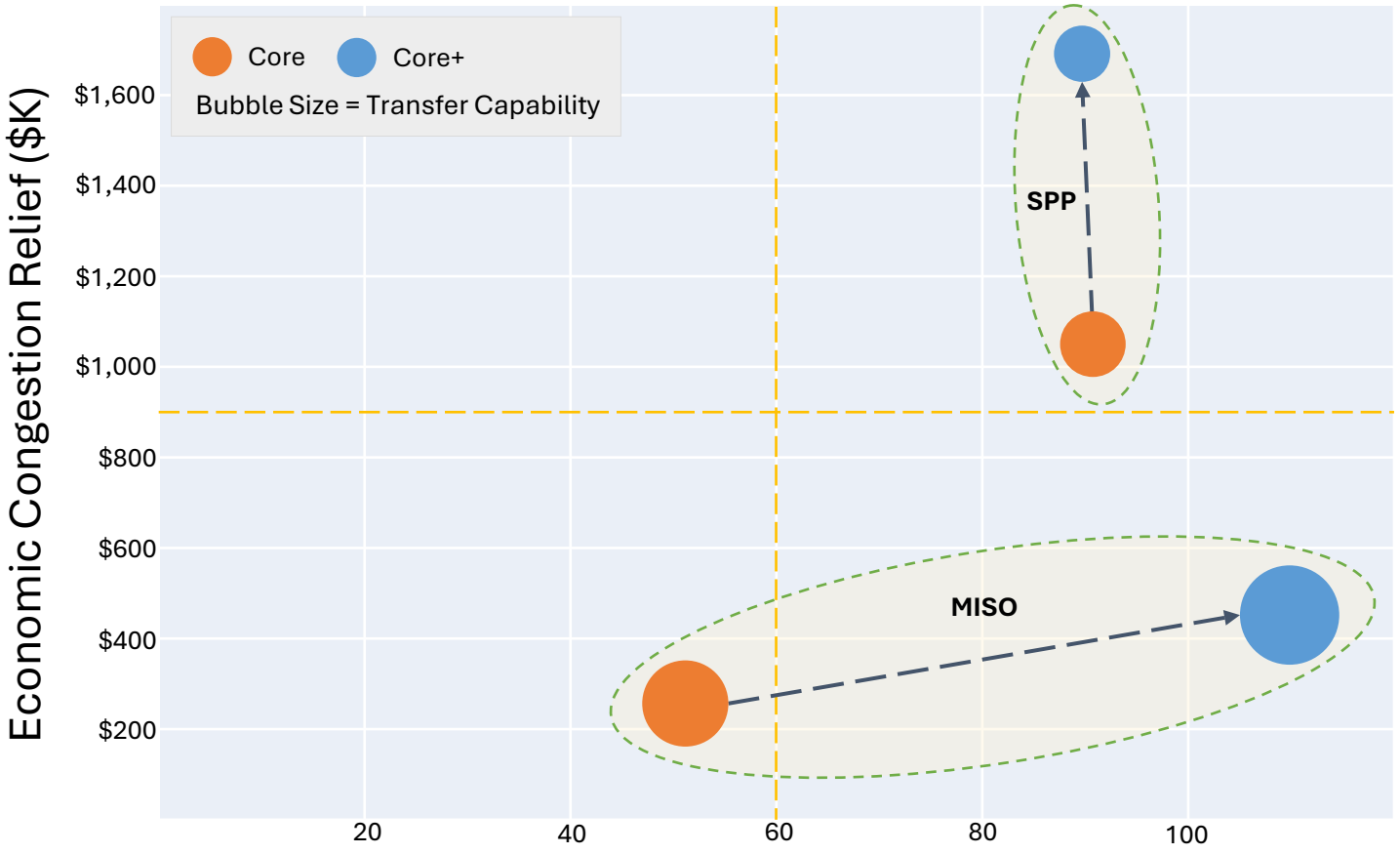
Solutions Evaluated

- In total, 70 solution proposals were considered for the CSP study: 46 stakeholder solutions were submitted, and 24 alternative solutions were proposed
- 3 key corridors were identified within the study focus area
- 3 rounds of studies were completed to get to the draft recommendations



Screening Results

Relative Performance Scale



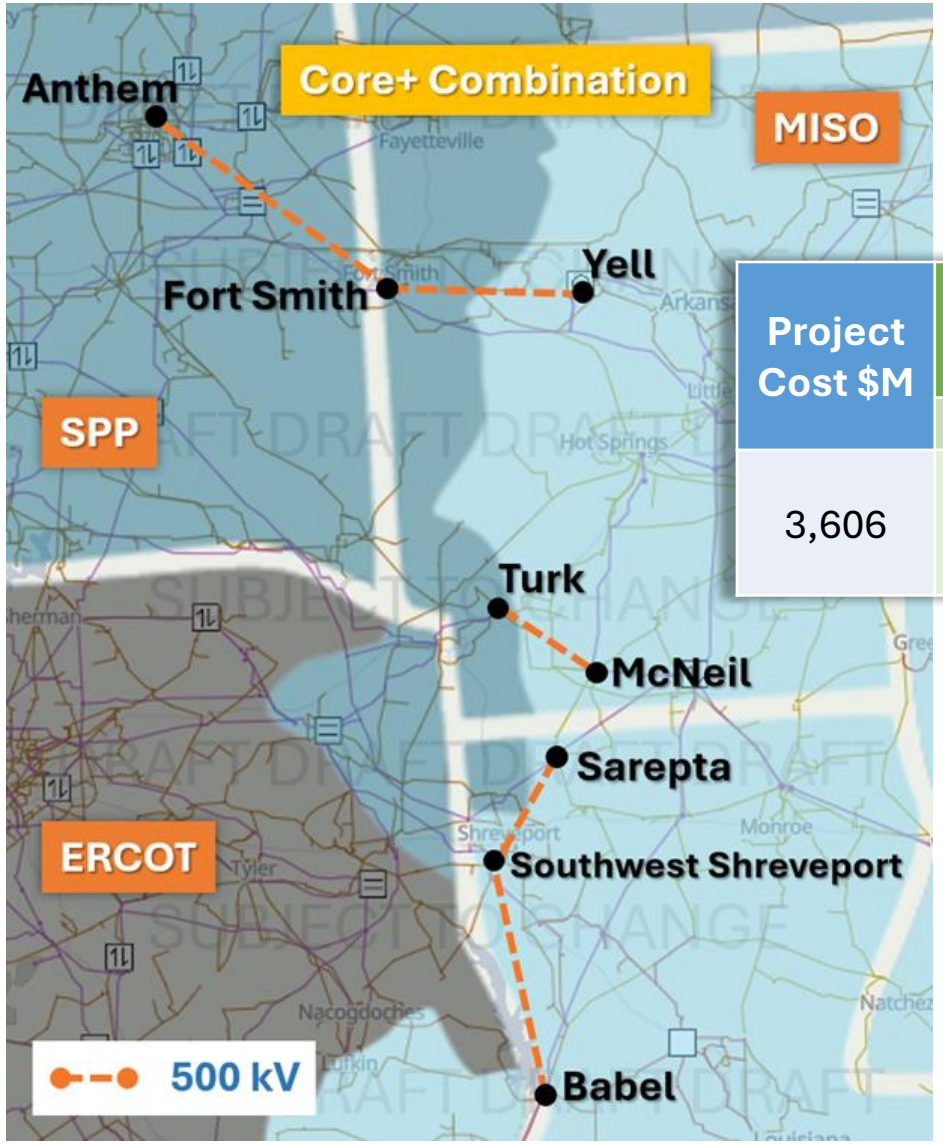
Tie line metrics are split between RTOs to avoid double counting at regional level

Reliability Net Issues Resolved (#)				
ID	Est. Cost $M	MISO	Tie Lines	SPP
Core+	3,607	94	32	75
Core	1,312	53	6	89

Economic – 2034 Congestion Relief ($K)				
ID	Est. Cost $M	MISO	Tie Lines	SPP
Core+	3,607	$297.4	$336.6	$1,522
Core	1,312	$82.9	$303.9	$895

Transfer Capability Avg. Import Capability Increase (MW)			
ID	Est. Cost $M	MISO	SPP
Core+	3,607	3,427	1,102
Core	1,312	2,578	1,529

Core+ Combination



Project Cost $M	Reliability (Net Issues Resolved)			Economic – 2034 (Congestion Relief $K)			Transfer Capability (Avg. Import Capability Increase MW)	
	MISO	Tie Lines	SPP	MISO	Tie Lines	SPP	MISO	SPP
3,606	94	32	75	$297.4	$336.6	$1,522.0	3,427	1,102

Core+ Combination

Economic Results

2034

- Economic Congestion Relief ($K)
  - MISO: $297.4, Tie Lines: $336.6, SPP: $1,522.0
- Overall, there was more congestion relief across flowgates in the southern region for MISO, SPP, and Tie Lines.
- Several flowgates saw larger decreases in congestion measure than in previously tested solutions.
- Total overall congestion measure dropped over $2.2M.
- Congestion across Fort Smith – Yell (originally Fort Smith – ANO) sees a drop in levels of congestion measure compared to the base case

Sample of Flowgates that Performed Positively		
Flowgate	**Change from Base**	**Change % from Base**
Harrison East 161 kV – Omaha 161 kV (EES-ARK)	($178,309)	-71%
Dardanelle Dam 161 kV – Clarksville 161 kV (SWPA)	($267,241)	-100%
Patmos West 115 kV – Fulton 115 kV (EES-ARK-AEPW)	($250,326)	-100%

*The original Dardanelle to Clarksville contingency was removed due to the introduction of Yell; however, the new contingency was replaced by the new line from this project and saw $0 in congestion measure. One flowgate from each area shown above.

Sample of Flowgates that Performed Negatively		
Flowgate	**Change from Base**	**Change % from Base**
Southland 161 kV – Norfork 161 kV (EES-ARK – SWPA)	$62,625	212%
Baxter Wilson 115 kV – Tallulah 115 kV (EES-MS-EES-LA)	$46,134	66%
Valliant Transformer 345/138 kV (AEPW)	$32,213	12%

*The flowgates shown above were chosen for the example due to locational differences, as well as severity of increase.

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Core+ Combination

Reliability Results

			Base Y10		Core+ Y10	
Monitored Facility	RTO	Area	Max Loading (%)	# of Violations	Max Loading (%)	# of Violations
[AEPW] Tulsa N 345 kV – [AEPW] Anthem 345 kV	SPP	A	▲	5	▲	4
[AEPW] Pittsburg 345 kV – [OKGE] Seminole 345 kV	SPP	A	▲	7	▲	2
[OKGE] FT Smith 161 kV – [OKGE) Arklahoma 161 kV	SPP	A	●	1*	-	-
[EES] Patmos West 115 kV – [AEPW] Fulton 115 kV	Tie Line	B	■	22	▲	4
[EES] Lewisville 115 kV – [EES] Patmos West 115 kV	MISO	B	■	21	▲	4
[EES] Harvey Couch 115 kV – [EES] Lewisville 115 kV	MISO	B	▲	14	▲	2
[AEPW] Diana 345 kV – [AEPW] SW Shreveport 345 kV	SPP	C	●	5*	-	-
[AEPW] Noram 138 kV – [AEPW] Longwood 138 kV	SPP	C	▲	3	●	-
[AEPW] Lieberman 138 kV – [AEPW] Jefferson IPC 138 kV	SPP	C	▲	6	●	-

- No Violation | ● 90-100% | ▲ 100-150% | ■ > 150%

*Between 90-100% thermal loading

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Core+ Combination

Transfer Results Summary

MISO Import

SPP → MISO Base

Case	Monitored Facility	Voltage (kV)	RTO	Limit (MW)
Summer	[AEPW] Diana – [AEPW] SW Shreveport	345	SPP	1,060
Winter	[CLEC] Dolhill – [CLEC] Dolhill	345 / 230	MISO	4,458
Light Load	[EES] Longwood – [AEPW] Sarepta	345	Tie Line	3,638

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SPP → MISO Solution

Case	Monitored Facility	Voltage (kV)	RTO	Limit (MW)
Summer	[AEPW] Turk – [AEPW] Turk	138 / 345	SPP	4,826
Winter	[AEPW] SW Shreveport – [AEPW] SW Shreveport	765 / 500	MISO	8,117
Light Load	[AEPW] SW Shreveport – [AEPW] SW Shreveport	765 / 500	SPP	6,493

Note: Monitored Facilities – Base Case or P1

Core+ Combination

Transfer Results Summary

SPP Import

MISO South → SPP South Base

Case	Monitored Facility	Voltage (kV)	RTO	Limit (MW)
Summer	[EES] ANO – [OKGE] Ft. Smith	500	Tie Line	2,164
Winter	[EES] ANO – [OKGE] Ft. Smith	500	Tie Line	6,314
Light Load	[EES] Babel – [AEPW] Layfield	500	Tie Line	6,854

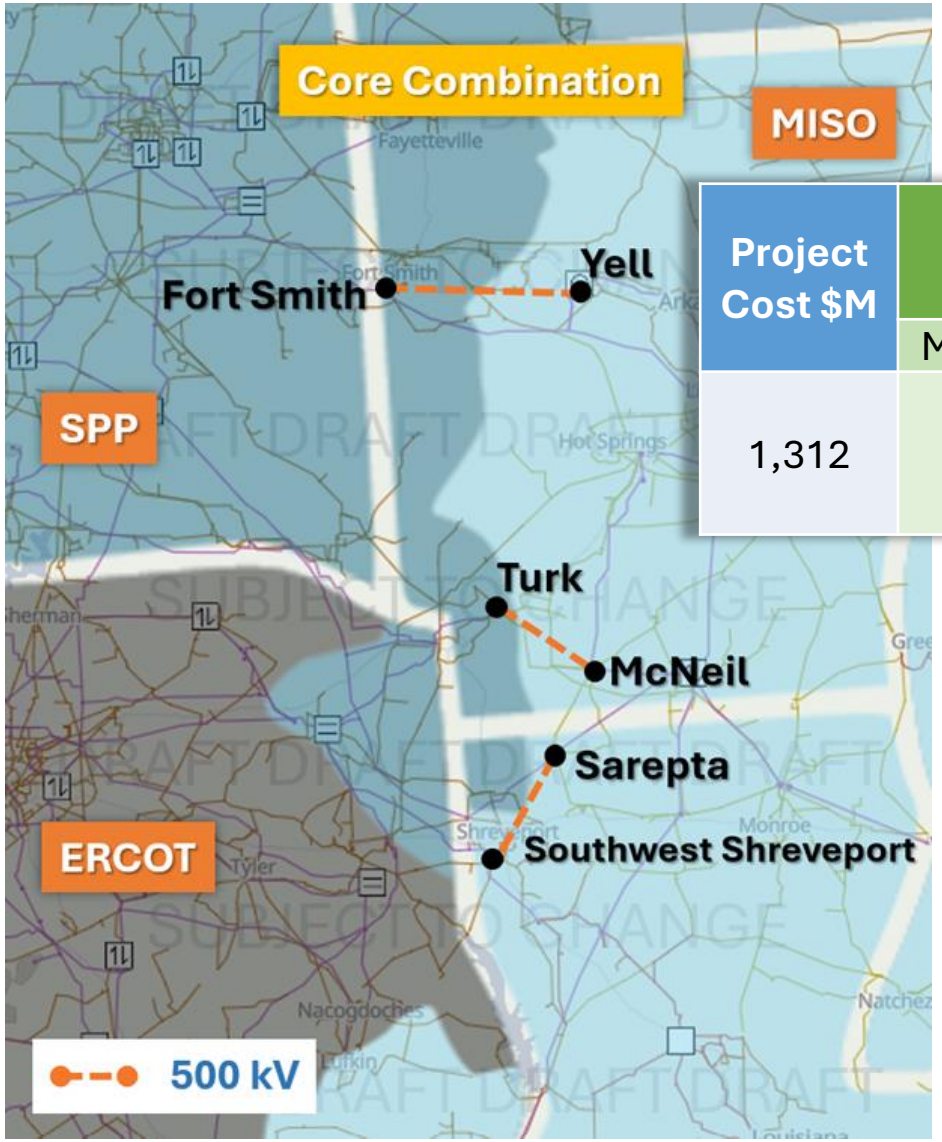
ANO – Arkansas Nuclear One

MISO South → SPP South Solution

Case	Monitored Facility	Voltage (kV)	RTO	Limit (MW)
Summer	[OKGE] Yell – [OKGE] Ft. Smith	500	SPP	4,839
Winter	[CLEC] Rodemacher – [CLEC] Colfax	230	MISO	7,064
Light Load	[CLEC] Rodemacher – [CLEC] Colfax	230	MISO	7,288

Note: Monitored Facilities – Base Case or P1

Core Combination



Project Cost $M	Reliability (Net Issues Resolved)			Economic – 2034 (Congestion Relief $K)			Transfer Capability (Avg. Import Capability Increase MW)	
	MISO	Tie Lines	SPP	MISO	Tie Lines	SPP	MISO	SPP
1,312	53	6	89	$82.9	$303.9	$895.0	2,578	1,529

Core Combination

Economic Results

2034

- Economic Congestion Relief ($K)
  - MISO: $82.9, Tie Lines: $303.9, SPP: $895.0
- Overall, there was more congestion relief across flowgates in the southern region for MISO, SPP, and Tie Lines.
- While this solution drops overall congestion for each of the areas, compared to the Core+ combination, there is less relief for certain flowgates.
  - Example: Harrison East 161 kV – Omaha 161 kV
- Total overall congestion measure dropped over $1.3M.
- Monitored as base case elements (with no outages), no new flowgates saw any levels in congestion.

Sample of Flowgates that Performed Positively

Flowgate	Change from Base	Change % from Base
Morrilton East 161 kV – Gleason 161 kV (EES-ARK)	($195,736)	-65%
Dardanelle Dam 161 kV – Clarksville 161 kV (SWPA)	($267,241)	-100%
Patmos West 115 kV – Fulton 115 kV (EES-ARK-AEPW)	($250,326)	-100%

*The original Dardanelle to Clarksville contingency was removed due to the introduction of Yell; however, the new contingency was replaced by the new line from this project and saw $0 in congestion measure. One flowgate from each area shown above.

Sample of Flowgates that Performed Negatively

Flowgate	Change from Base	Change % from Base
Southland 161 kV – Norfork 161 kV (EES-ARK – SWPA)	$86,176	292%
Baxter Wilson 115 kV – Tallulah 115 kV (EES-MS-EES-LA)	$65,284	94%

*The flowgates shown above were chosen for the example due to locational differences, as well as severity of increase.

SPP Southwest Power Pool | MISO

Core Combination

Reliability Results

				Base Y10		Core Y10	
Monitored Facility	Voltage (kV)	RTO	Area	Max Loading (%)	# of Violations	Max Loading (%)	# of Violations
[AEPW] Tulsa N – [AEPW] Anthem	345	SPP	A	▲	5	▲	5
[AEPW] Pittsburg – [OKGE] Seminole	345	SPP	A	▲	7	▲	3
[OKGE] FT Smith – [OKGE] Arklahoma	161	SPP	A	●	1*	▲	1
[EES] Patmos West – [AEPW] Fulton	115	Tie Line	B	■	22	▲	6
[EES] Lewisville – [EES] Patmos West	115	MISO	B	■	21	▲	4
[EES] Harvey Couch – [EES] Lewisville	115	MISO	B	▲	14	▲	2
[AEPW] Diana – [AEPW] SW Shreveport	345	SPP	C	●	5*	-	-
[AEPW] Noram – [AEPW] Longwood	138	SPP	C	▲	3	●	-
[AEPW] Lieberman – [AEPW] Jefferson IPC	138	SPP	C	▲	6	●	-

- No Violation | ● 90-100% | ▲ 100-150% | ■ > 150%

*Between 90-100% thermal loading

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Core Combination

Transfer Results Summary

MISO Import

SPP → MISO Base

Case	Monitored Facility	Voltage (kV)	RTO	Limit (MW)
Summer	[AEPW] Diana – [AEPW] SW Shreveport	345	SPP	1,060
Winter	[CLEC] Dolet Hills – [CLEC] Dolet Hills	345 / 230	MISO	4,457
Light Load	[EES] Longwood – [AEPW] Sarepta	345	Tie Line	3,638

ANO – Arkansas Nuclear One

SPP → MISO Solution

Case	Monitored Facility	Voltage (kV)	RTO	Limit (MW)
Summer	[AEPW] Turk – [AEPW] Turk	138 / 345	SPP	4,424
Winter	[CLEC] Dolet Hills – [CLEC] Dolet Hills	345 / 230	MISO	6,682
Light Load	[CLEC] Dolet Hills – [CLEC] Dolet Hills	345 / 230	SPP	5,784

Note: Monitored Facilities – Base Case or P1

Core Combination

Transfer Results Summary

SPP Import

MISO South → SPP South Base

Case	Monitored Facility	Voltage (kV)	RTO	Limit (MW)
Summer	[EES] ANO – [OKGE] Ft. Smith	500	Tie Line	2,164
Winter	[EES] ANO – [OKGE] Ft. Smith	500	Tie Line	6,314
Light Load	[EES] Babel – [AEPW] Layfield	500	Tie Line	6,854

ANO – Arkansas Nuclear One

MISO South → SPP South

Case	Monitored Facility	Voltage (kV)	RTO	Limit (MW)
Summer	[OKGE] Seminole – [OKGE] Draper	345	SPP	6,120
Winter	[CLEC] Rodemr – [CLEC] Colfax	230	MISO	7,064
Light Load	[EES] Babel – [AEPW] Layfield	500	Tie Line	6,733

Note: Monitored Facilities – Base Case or P1

Economic Results Summary

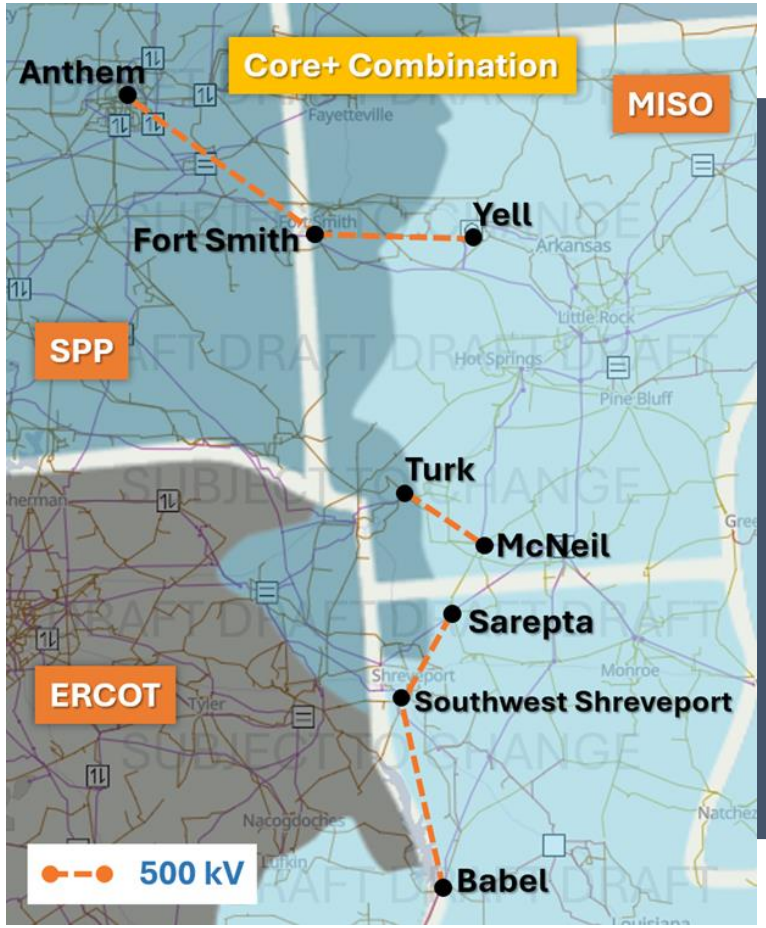
Total Congestion Measure ($)

(Evaluated by sum of congestion measure for 2034 & 2039)

Monitored Facility	RTO	Base	Core+	Relief	Core	Relief
[EES] HARRISON EAST – [EES] OMAHA 161 kV	MISO	$417,094	$126,271	▲	$486,714	▼
[EES] MORRILTON EAST – [EES] GLEASON 161 kV	MISO	$412,123	$193,135	▲	$127,743	▲
[AEPW] FORT HUMBUG – [AEPW] TRICHEL 138 kV	SPP	$1,179,858	$971,045	▲	$1,036,008	▲
[AEPW] TULSA NORTH – [AEPW] ANTHEM 345 kV	SPP	$588,056	$408,646	▲	$563,021	▲
[SWPA] DARDANELLE DAM – [SWPA] CLARKSVILLE 161 kV	SPP	$467,731	$0	▲	$0	▲
[EES] PATMOS WEST AECC – [AEPW] FULTON 115 kV	MISO/SPP	$580,209	$0	▲	$0	▲
[EES] RUSSELVILLE SOUTH – [SWPA] DARDANELLE DAM 161 kV	MISO/SPP	$157,307	$0	▲	$0	▲
[EES] SOUTHLAND – [SWPA] NORFORK 161 kV	MISO/SPP	$85,071	$199,277	▼	$290,738	▼
[EES] ANO – [OKGE] FT SMITH 500 kV	MISO/SPP	$38,934	$423	▲	$0	▲
Total Congestion Measure Sums		$3,926,383	$1,898,797	▲	$2,504,224	▲

*Flowgates shown derived from the top 15 congested flowgates list that showed large changes from the base

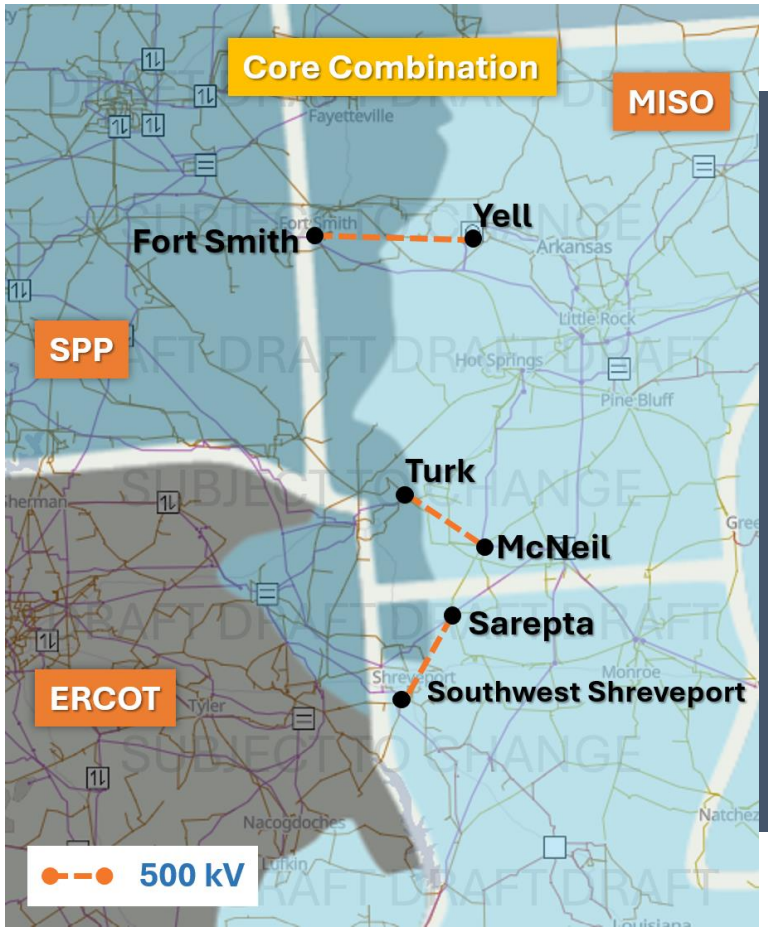
Considerations in Recommending a Path Forward



$3,606M

Addresses issues at larger scale immediately

Screening shows higher reliability and economic impact



$1,312M

Greater ability to build onto as system evolves

Preserves optionality amid rapid load growth

SPP Southwest Power Pool | MISO

Feedback Request

MISO and SPP request stakeholder feedback on the presented draft 2024-25 CSP study combination recommendations and draft study report.

Please submit your feedback to both MISO and SPP by **Friday, April 3, 2026** to the following email addresses:

- InterregionalPlanning@misoenergy.org
- InterregionalRelations@spp.org

Next Steps

1. Stakeholder Review & Feedback
   - Draft recommendations and the CSP study report have been posted with today's meeting materials
   - Stakeholder input will inform refinement of both the recommendations and the report
2. Refinement & Direction Setting
   - The RTOs will review stakeholder feedback and determine the appropriate path forward
3. Subsequent Process Steps
   - Evaluate solution justification and necessary next steps
   - Portfolio decision processes within each RTO

IPSAC Proposed Management Plan

2026 Quarterly* Meetings

- 2024-25 CSP study business case methodology & proposals approval
- 2026 CSP study scope
- FERC Order 1920 interregional compliance filing

2027 Quarterly* Meetings

- 2026 CSP study progress
- FERC Order 1920 interregional compliance implementation
- TMEPs filing

*Subject to change; MISO & SPP will add meetings as needed

Contact

- Interregional Planning (MISO)
  interregionalplanning@misoenergy.org
- Interregional Relations (SPP)
  interregionalrelations@spp.org

Appendix

Solution Segments Performance Summary
Solution Screening Metrics Details
IPSAC Stakeholder Feedback and Responses Summaries – Dec 19, 2025
Solution Overviews

Solution Segments Performance Summary

			Reliability (Net Issues Resolved)			Congestion Relief ($K)			Transfer Capability (Avg. Import Capability Increase MW)	
Solution Description	**Area**	**Voltage (kV)**	**MISO**	**Tie Lines**	**SPP**	**MISO**	**Tie Lines**	**SPP**	**MISO**	**SPP**
Anthem – Ft Smith – Yell	A	345/500/765	52	48	(20)	$120	$78	$1,136	(453)	101
Ft Smith – Yell	A	500	4	15	(6)	($105)	($23)	$477	146	1,686
Chambers Springs – Yell	A	500	33	16	(21)	($56)	$12	$617	208	910
Lydia – Lewisville – McNeil	B	500	5	(13)	20	$105	$102	$245	1,787	55
McNeil – Turk	B	345	21	1	49	$132	$307	$304	1,838	(2)
Welsh – Lewisville – McNeil	B	500	12	(11)	25	$101	($28)	$27	1,798	26
Turk – Sarepta – Shreveport – Layfield	B/C	345/500/765	16	2	42	$90	$310	$499	2,554	(1,802)
Turk – Sarepta – SW Shreveport	B/C	345/500/765	9	(2)	41	$65	$310	$348	2,290	83
Shreveport – Layfield	C	500	5	-	5	$50	$25	$231	1,241	(1,997)
Babel – Gateway	C	500	27	(11)	36	$26	$13	$96	1,771	(568)
Sarepta – Shreveport	C	500	20	(3)	1	N/A	N/A	N/A	711	128
Sarepta – Shreveport – Babel	C	500	27	(7)	3	$56	$24	$246	1,067	331
Combination A	A/B	345/500	20	18	14	$311	$343	$1,424	(182)	649
Combination B	A/B/C	500	25	5	28	$253	$291	$1,075	3,262	1,507
Core+ Combination	A/B/C	500	94	32	75	$297	$337	$1,522	537	1,102
Core Combination	A/B/C	500	53	6	89	$83	$304	$895	2,578	1,529
Core+ Combination– 15 Year	A/B/C	500	159	128	32	$111	$771	$1,250	970	602
Core Combination– 15 Year	A/B/C	500	135	138	31	($311)	$711	$560	466	1,929

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Solution Screening Metrics – Additional Details

	Reliability	Economic	Transfer Capability
Metric	**Net Issues Resolved (#)** net improvement/(net harm)	**Congestion Relief ($/MW)** relief/(increased congestion)	**Avg. Import Capability Change (MW)** increase/(decrease)
Details	The net change in the count of thermal loading issues in steady-state power flow analysis Reliability issues: monitored facility and contingent facility with post contingent thermal loading >100% Contingencies Considered: NERC P0 (base case), P1, P2, and P7 Calculation: the difference between the number of resolved reliability issues and the number of newly introduced reliability issues when comparing the change case to the base case	The change in total congestion measure within the study focus area, summarized by RTO Congestion relief presented represents single year results (10yr. CSP Blended Model) Calculation (For each RTO): Base case Total Congestion Measure – Change case Total Congestion Measure Total congestion measure is the summed congestion measure (avg shadow price * binding hours) for all the flowgates within the study focus area	The change in import capability (MW) for each RTO averaged across seasons (summer and winter) Approach: determine first incremental transfer limit MW in the base case and the new first limit MW in the change case. Contingencies Considered: NERC P0 and P1 Limits are averaged across seasons (summer, winter and light-load for today's results) for scenarios: 1a/1b (MISO-S ↔ SPP-S) Calculation: Change case MW – Base case MW = Δ Avg. Import Capability

December IPSAC Stakeholder Feedback

Stakeholder feedback was requested on the solution analysis results and use of screening metrics presented at the December 19, 2025 MISO-SPP IPSAC meeting.

December 19, 2025 IPSAC meeting materials can be found on the MISO website and SPP website

Approved verbatim feedback can be found on the MISO website and SPP website

Feedback Theme: Screening Metrics

Stakeholder Feedback	RTOs Response
• Strong request for clarity on how screening criteria are combined and weighted, including publication of full screening results—even for screened-out projects. • Concerns about relying on Average Import Capability Increase for screening without addressing local constraints and case fidelity. • Preference to use APC reductions for economic signal rather than unhedged congestion alone; caution on negative/bi-directional transfer results and calls to adjust DFAX thresholds to better isolate seam-relevant impacts.	• Current screening uses three metrics: reliability (net issues resolved), economic (congestion relief), and transfer (average import change), with plans to publish results in March IPSAC materials. Metrics are not weighted. • RTOs agree to explain TARA transfer assessment and causes of negative values; acknowledge this is screening only and APC will be used later for benefits. • MISO and SPP are open to refining DFAX thresholds and improving transfer attribution as study advances.

Feedback Theme: Constructability, Endpoint Feasibility & Design Optimization

Stakeholder Feedback	RTOs Response
• Concerns raised on siting of some solution recommendations. • Need to explicitly weigh constructability and expandability of endpoints and maintain Yell-anchored options for ANO operational guide constraints. • Support for consolidation into fewer, higher-impact projects and consideration of higher-voltage alternatives, and corridor-scale solutions anchored to backbone nodes.	• The RTOs agree that constructability is a key consideration for final solutions. Preliminary evaluations have been performed, with a more comprehensive feasibility assessment planned as part of the forthcoming benefits metrics analysis. • The RTOs are actively testing Yell-inclusive options; will reflect non-modeled considerations in the draft report. • MISO and SPP will assess consolidation and voltage upgrades where meaningful.

Feedback Theme: Modeling Scope, Alignment & Sensitivities

Stakeholder Feedback	RTOs Response
• Requests for updated presentations and models incorporating ERAS/equivalents across both RTOs before March, plus Light Load case timing. • Calls for portfolio-based evaluation, especially where Region A and B solutions interact, and caution that modeling choices (monitoring seams, DFAX limits) materially affect outcomes. • Desire for sensitivity analyses to harmonize ERAS GIAs and other assumptions across MISO and SPP.	• The most recent models include updated generation (incl. MISO ERAS), load, and transmission; Light Load case will also be included. • MISO and SPP confirm both single-solution and combination (portfolio) tests are being run. • The RTOs will evaluate sensitivity analyses that incorporate additional resources with executed GIAs prior to finalizing the business case.

Feedback Theme: Benefit Framework, Cost Realism & Affordability

Stakeholder Feedback	RTOs Response
• Strong emphasis on ratepayer affordability and caution to discount certain benefit categories (e.g., outage-based reliability, reserve margin, extreme weather, avoided infrastructure) to better reflect actual savings. • Recognition that some interregional projects may be reliability-driven even if B/C falls short; implications for cost allocation. • Desire to align with FERC Order 1920 by using a multi-benefit framework consistent across RTOs, minimizing methodological differences.	• The RTOs confirm APC will be used for economic benefits; benefits methodology to be developed in 2026 via IPSAC with quarterly touchpoints; aim to align with Order 1920 where practicable and will explain any differences. • RTOs acknowledge cost estimate realism issues and will work with TOs to adjust for terrain, preserves, mountainous routes, etc.

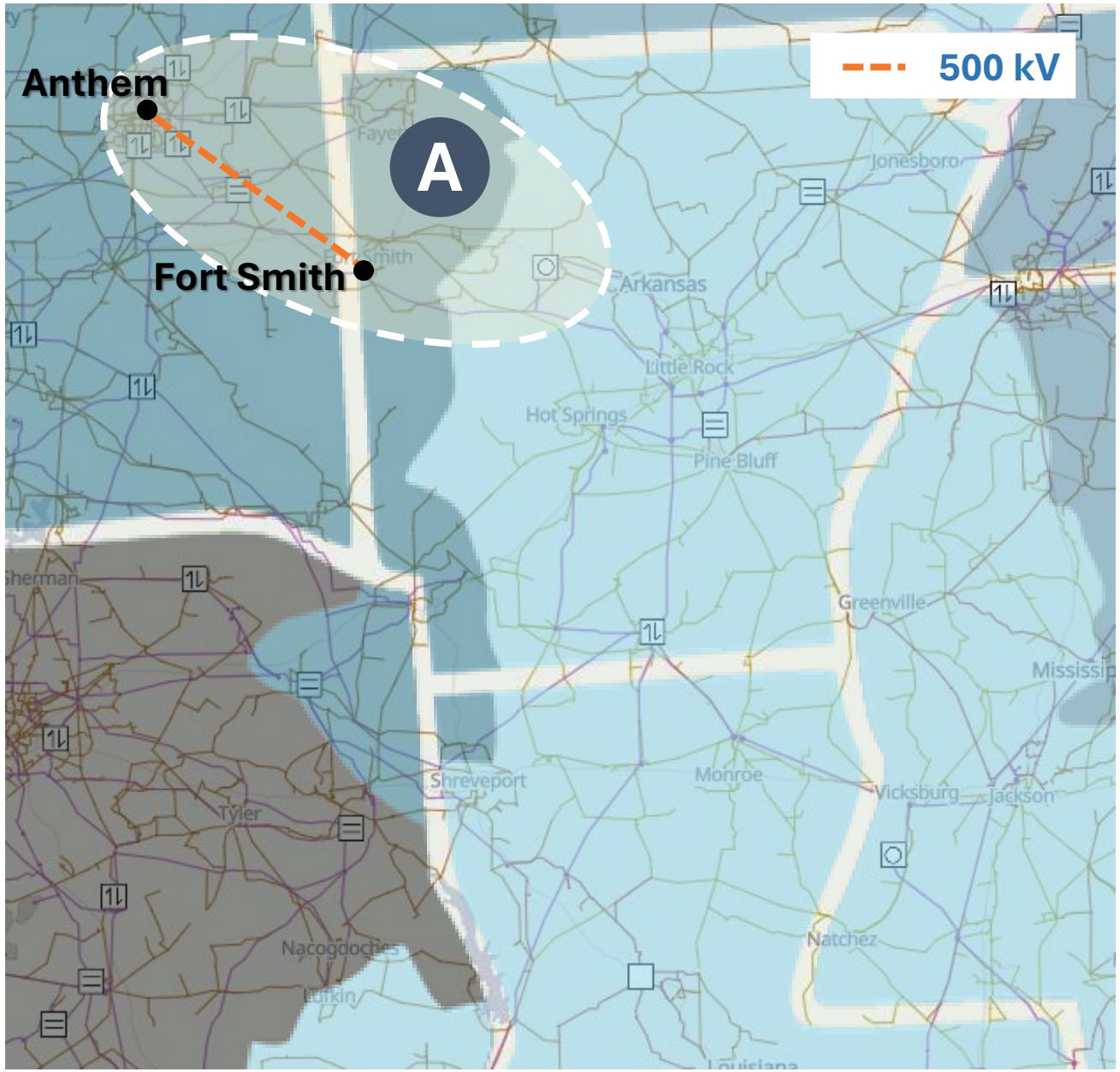
Feedback Theme: Regional Focus Areas & Operational / Resilience Considerations

Stakeholder Feedback	RTOs Response
• Shreveport: request for interregional tie alternatives that support load and reliability. • Fort Smith area benefits skew toward SPP (noted as consistent with history); Turk area import gains into MISO South may be overstated if SPP sources are constrained during MISO South shortfalls. • Resilience: caution about relying on Winter Storm Uri alone; request for extreme heat supplemental case and clarity on resilience metrics and temporal assumptions.	• RTOs acknowledge Shreveport concerns and are actively evaluating additional seam-reinforcing alternatives. • As the process moves into the benefit calculation stage, the RTOs will evaluate underlying assumptions for import values to ensure they reflect a range of possible operating conditions, including instances when one RTO may not be able to supply the full nameplate capacity of surplus generation (exports). • MISO and SPP will document resilience metrics (load served, transfer capability, operability) and maintain flexibility to add extreme heat sensitivity later.

Solution Overviews

To see the full list of evaluated proposals, see CSP Study Report Appendix:

- **MISO website:** Interregional Meetings > Related Documents
- **SPP website:** SPP Documents & Filings > Reference Documents



Anthem – Fort Smith

Cost Estimate: $1,406 M

Description:

- Anthem 345kV station is operated by PSO/AEP (SPP) in Oklahoma. Anthem will be upgraded to 765kV with new Anthem – Seminole 765kV line approved as part of SPP ITP25
- Ft Smith is a 500kV station in Arkansas (SPP), owned and operated by OG&E
- Construct a new ~150-mile 500kV double circuit line from Anthem to Ft Smith

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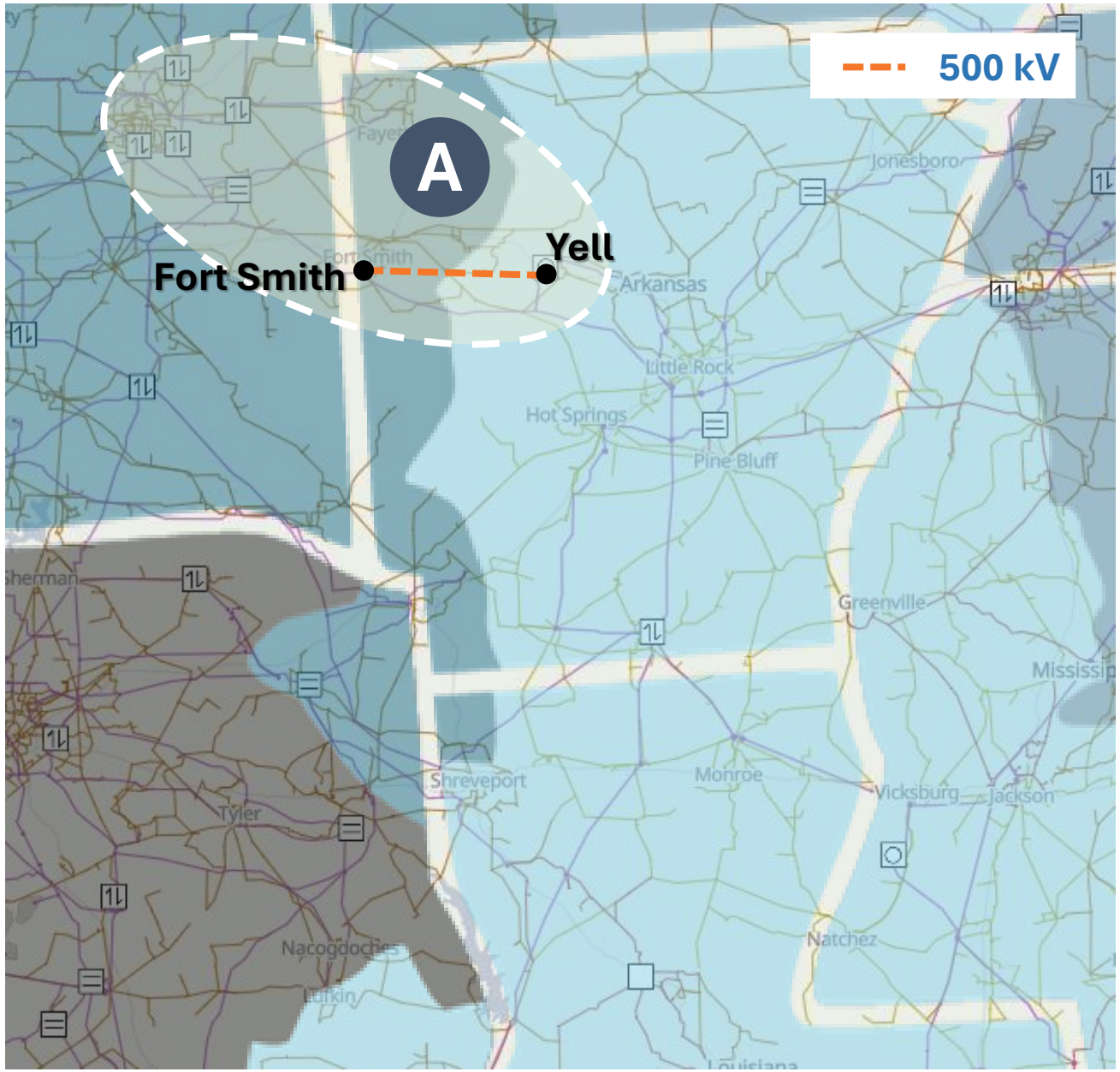

Fort Smith – Yell

Cost Estimate: $488.3M

Description:

- Ft Smith is a 500kV station in Arkansas (SPP), owned and operated by OG&E.
- Yell would be a newly constructed 500kV station operated by Entergy Arkansas (MISO) located ~17 miles south of Arkansas Nuclear One (ANO), where the Ft Smith and Mabelvale lines split off.
- The project would cut-in ANO – Ft Smith and bring into the new station. Cut-in ANO – Mabelvale 500kV line and bring into the new station. Construct a new ~85-mile 500kV line from the new station to the Ft Smith station.

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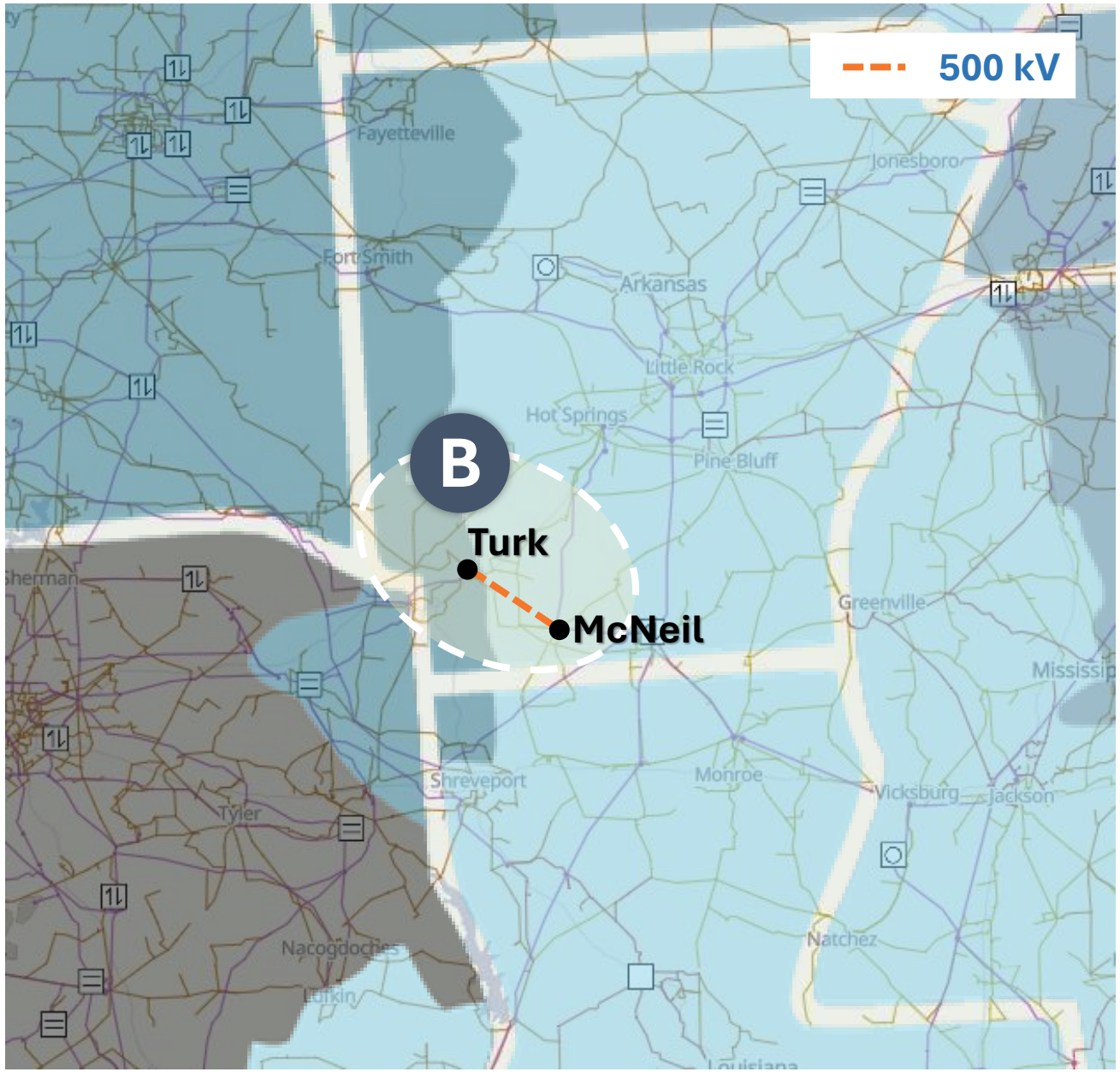

Turk – McNeil

Cost Estimate: $426M

Description:

- John W. Turk, Jr. Power Plant is a 345kV station in Arkansas owned by AEP (SPP)
- McNeil is a 500kV station in Arkansas owned by Entergy AR (MISO)
- The project is proposed to construct a new 500 kV line from Turk to McNeil at ~65 miles straight line distance and add two 500/345kV transformers at Turk

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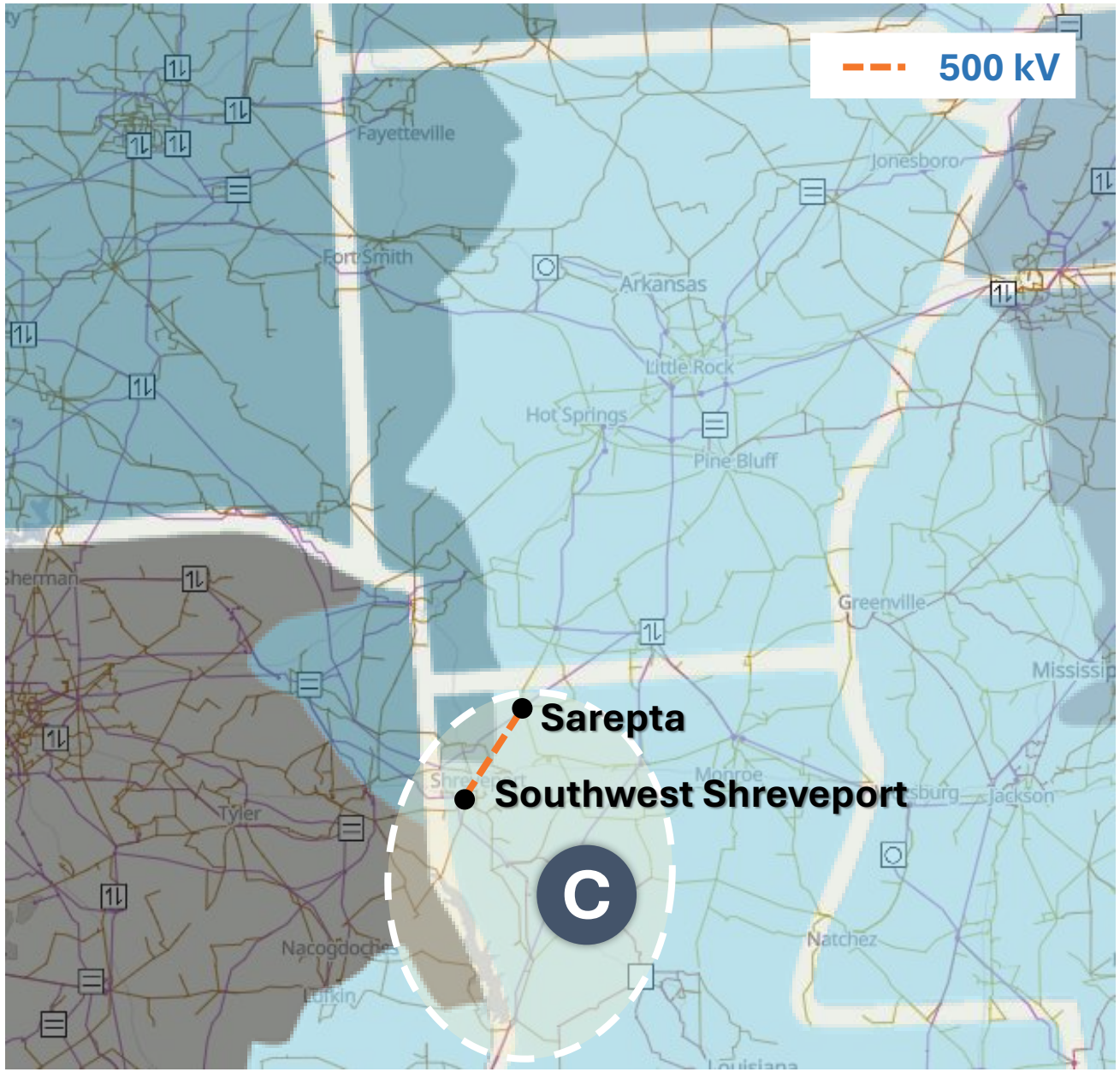

Sarepta – SW Shreveport

Cost Estimate: $397.5M

Description:

- Sarepta is a 345kV station in Louisiana owned by Entergy LA (MISO) which will be upgraded to a switching station for 345/500kV as part of MISO's MTEP25
- SW Shreveport is a 345kV station in Louisiana owned by AEP/SWEPCO (SPP) which will be upgraded to 765kV as part of SPP's ITP25
- This project is proposed to construct a ~52-mile 500kV line and step up to 765kV

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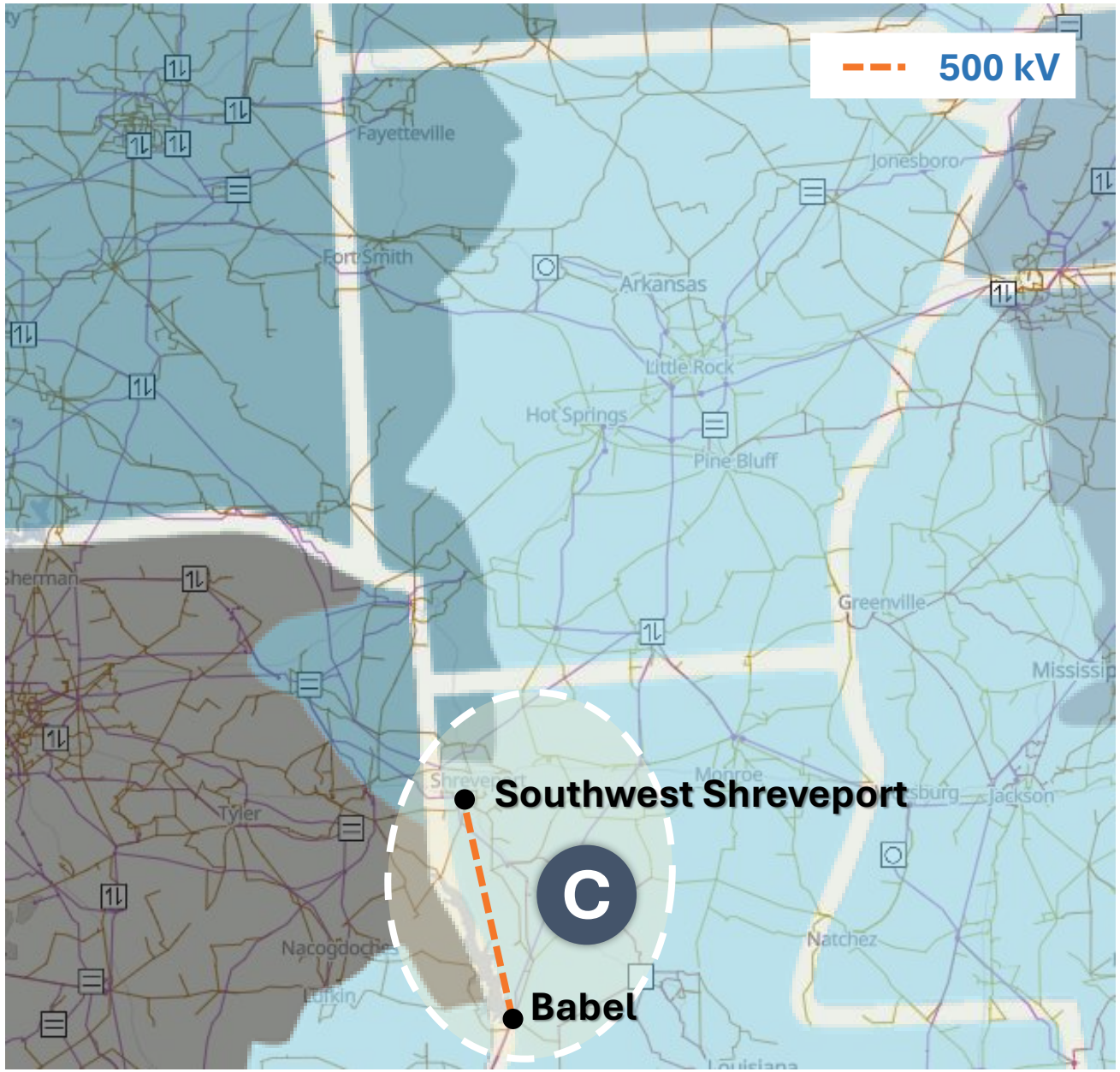

SW Shreveport – Babel

Cost Estimate: $889.1M

Description:

- SW Shreveport is a 345kV station in Louisiana owned by AEP/SWEPCO (SPP) which will be upgraded to 765kV as part of SPP's ITP25
- Babel is a newly approved 500kV station in Louisiana owned by Entergy LA (MISO) as part of MISO's MTEP25
- This project is proposed to construct a ~156-mile 500kV line

SPP Southwest Power Pool | MISO