SPP Southwest Power Pool

MISSOURI PSC PUBLIC MEETING WITH SPP RTO STATUS UPDATE

DECEMBER 17, 2025

Working together to responsibly and economically keep the lights on today and in the future.

SouthwestPowerPool SPPorg southwest-power-pool

TRANSMISSION PLANNING

2025 ITP OVERVIEW

For internal use only

WHAT IS THE ITP?

The **Integrated Transmission Planning** (**ITP**) assessment is a regional planning process built to leverage knowledge of the transmission system's reliability, public policy, operational, and economic needs, as well as compliance, generator interconnection, and transmission service request impacts to **develop a cost-effective transmission portfolio over a 10-year planning horizon**.

CONSOLIDATED PORTFOLIO

COLLABORATION

- 11 SPP Organizational Groups
- ~150 meetings
- 3750 solutions evaluated
- 27-Month Study

INPUTS

RESULTS

OUTPUTS

- **2900+ miles of new HV**
  - ~2100 miles of 765 kV
  - ~460 miles of 345 kV
- **~345 miles of rebuilt HV**
- **3000 issues mitigated**

IMPACTS

- Increases regional transferability
- Improves system resiliency
- Addresses load shed and stability issue areas
- Proactive investment against future issues

VALUE

OUTCOME

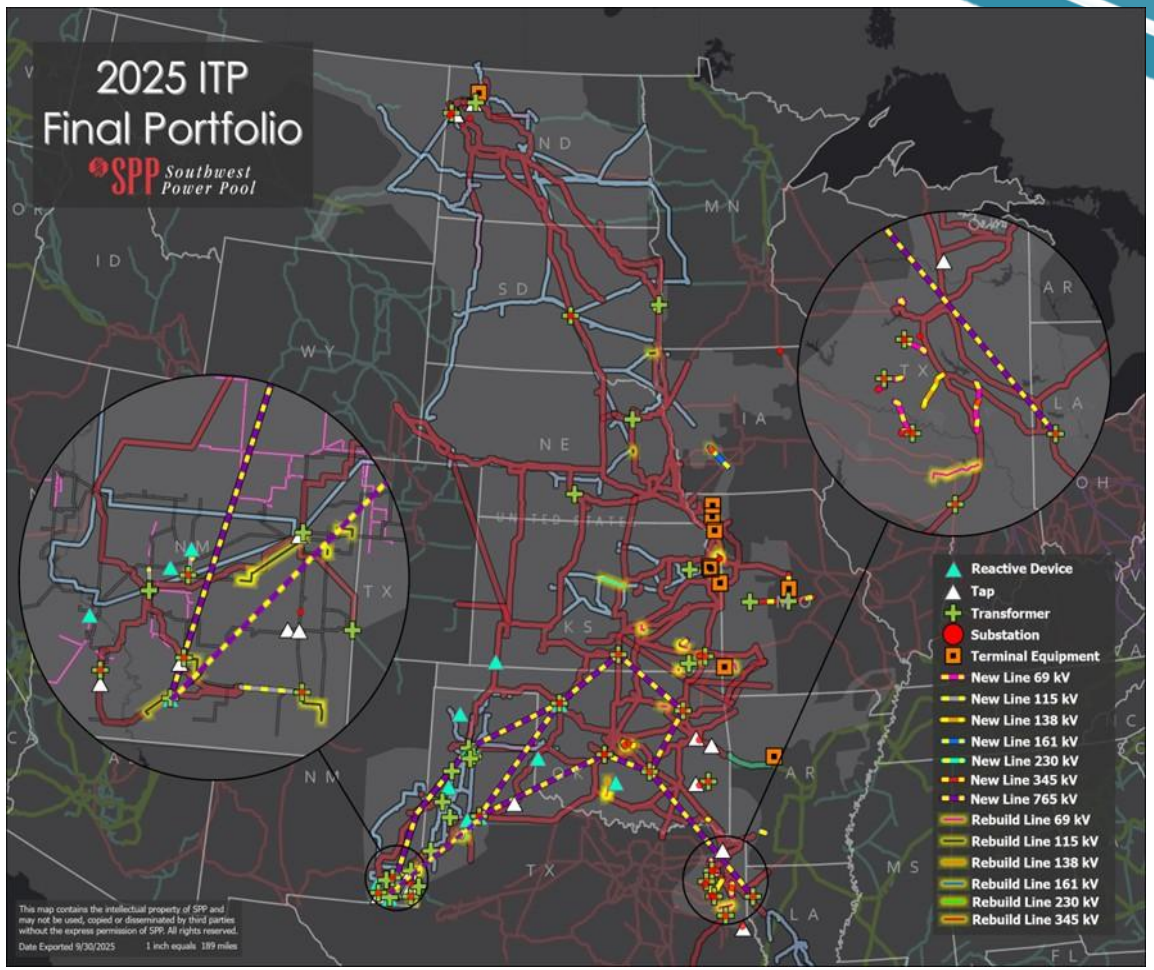
Final portfolio:

- $19.4 B E&C Costs
- $26.6 B 0-year PV cost
- **$151.5B-$248.5B lower APC (40 yr)**
- **5.7:1 to 9.36 B/C range (40 yr)**

BENEFITS

2025 ITP PORTFOLIO

The 2025 ITP Consolidated Portfolio features **high-performing transmission solutions** (both new and rebuilt lines between 69 kV and 765 kV), along with new infrastructure including transformers, capacitors, substations, STATCOMs, and other equipment each selected through a **rigorous analytical process**.



The 2025 ITP balances reliability needs with the imperative to keep electric rates affordable

2025 ITP: 765 KV PHASE 1

- **West:** mitigates emergency energy, congestion, voltage collapse and transfer issues from GI processes
- **Middle:** solves **98%** of SPP regions' transfer needs and provide significant economic benefits
- **East:** addresses target area instability, low voltages, congestion, inlet/outlet and enables load and generation additions

A 765 kV backbone both meets system needs and lays foundation for future regional grid

PORTFOLIO DECISION POINTS

2025 ITP Portfolio	Description	Remaining Project Total
Full 2025 ITP Portfolio	All projects identified to meet 10-year reliability and economic needs	$18.1 billion
Staff Refined	Deferred a mix of projects without near-term needs, or that could be further optimized with 2026 ITP	$11.1 billion (~$7B deferred)
ESWG/TWG Endorsed	Approved Staff Refined proposal	$11.1 billion
MOPC Endorsed / Staff Recommendation	Deferred additional economic 765kV	$8.5 billion

TWG/ESWG = Technical Working Group

MOPC = Full representation policy committee

Many projects identified in the 2025 ITP will be further evaluated in the 2026 ITP along with other projects to solve needs

ANNUAL TRANSMISSION REVENUE REQUIREMENTS AND BENEFIT METRICS (2025 ITP)

Future 1	State	One-Year ATRR Costs – 2034 ($M)	One-Year Benefit – 2034 ($M)	A Rate Impact	B Rate Impact	A-B Net Impact
	Missouri	$225.5	$233.1	$6.74	$6.96	($0.23)

Future 2	State	One-Year ATRR Costs – 2034 ($M)	One-Year Benefit – 2034 ($M)	A Rate Impact	B Rate Impact	A-B Net Impact
	Missouri	$229.8	$632.2	$5.88	$16.17	($10.29)

Rate impact costs and benefits are allocated to the average retail residential ratepayer based on an estimated residential consumption of 1,000 kilowatt hours (kWh) per month. Benefits and costs for the 2034 study year were used to calculate rate impacts. All 2034 benefits and costs are shown in 2025 dollars, discounting at a 2.0% inflation rate.

Average Missouri customer (bill equivalent to 1,000 kWh) would be subject to lower costs of $0.23 to $10.29

COMPETITIVE PROJECTS

2025 ITP projects identified as competitive

- Anthem – Seminole 765 kV (OK)
- Woodward – Crawfish Draw 765 kV (OK-TX)
- Battle Axe – Wolf Camp 115 kV (NM – currently suspended)

Short-Term Reliability Projects

- Crawfish Draw – Phantom 765 kV (TX – NM)
- Seminole – Southwest Shreveport 765 kV (OK-LA)
- Crosstown – Blue Valley 161 kV
- North Hays – Chetolah Creek 115 kV (KS)

Some of these projects may ultimately be deemed competitive by the SPP Board, expected to rule in February

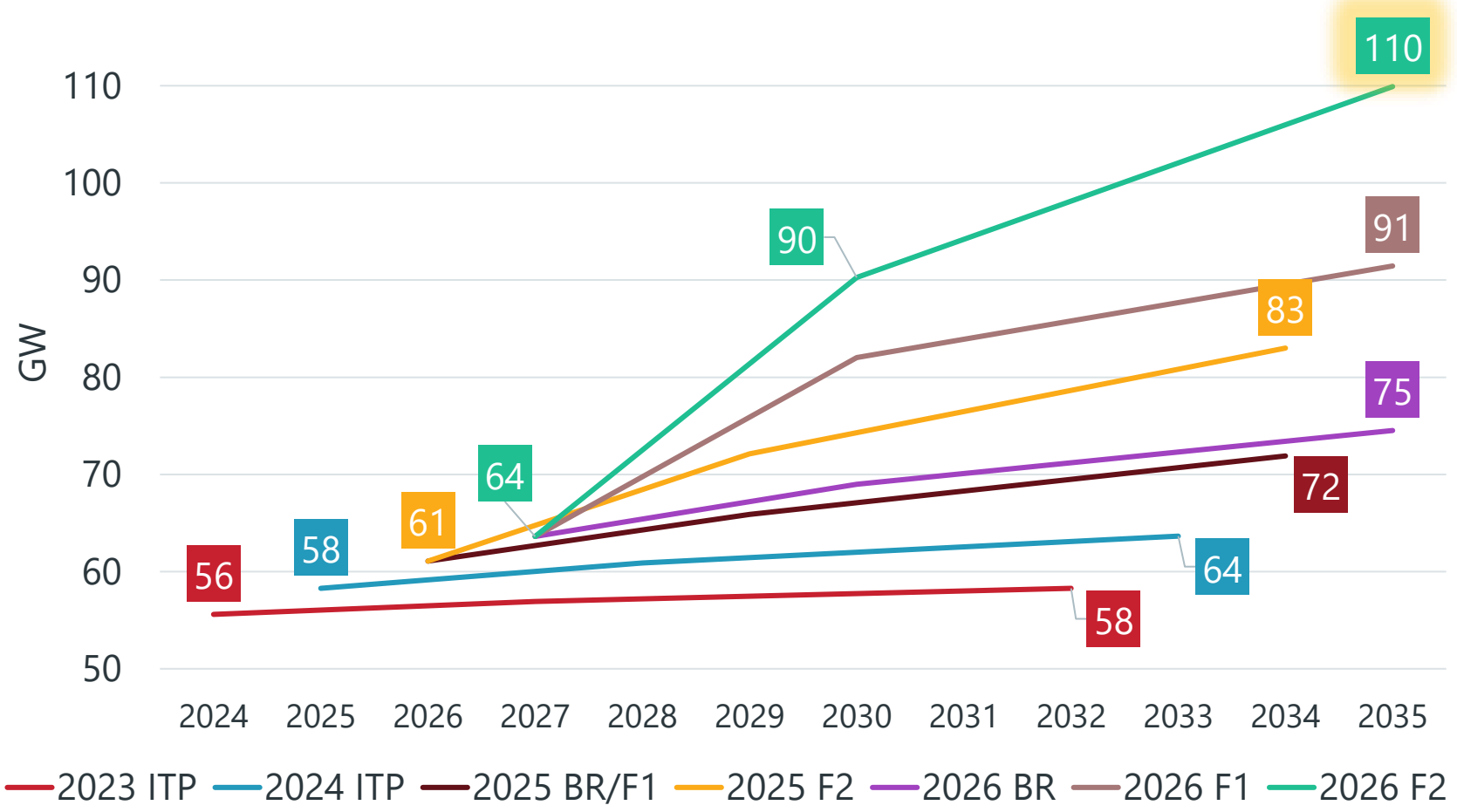
2026 ITP OUTLOOK

LOAD GROWTH IS ACCELERATING IN THE 2026 ITP

Most up-to-date load projections range from a **33-99%** increase from today

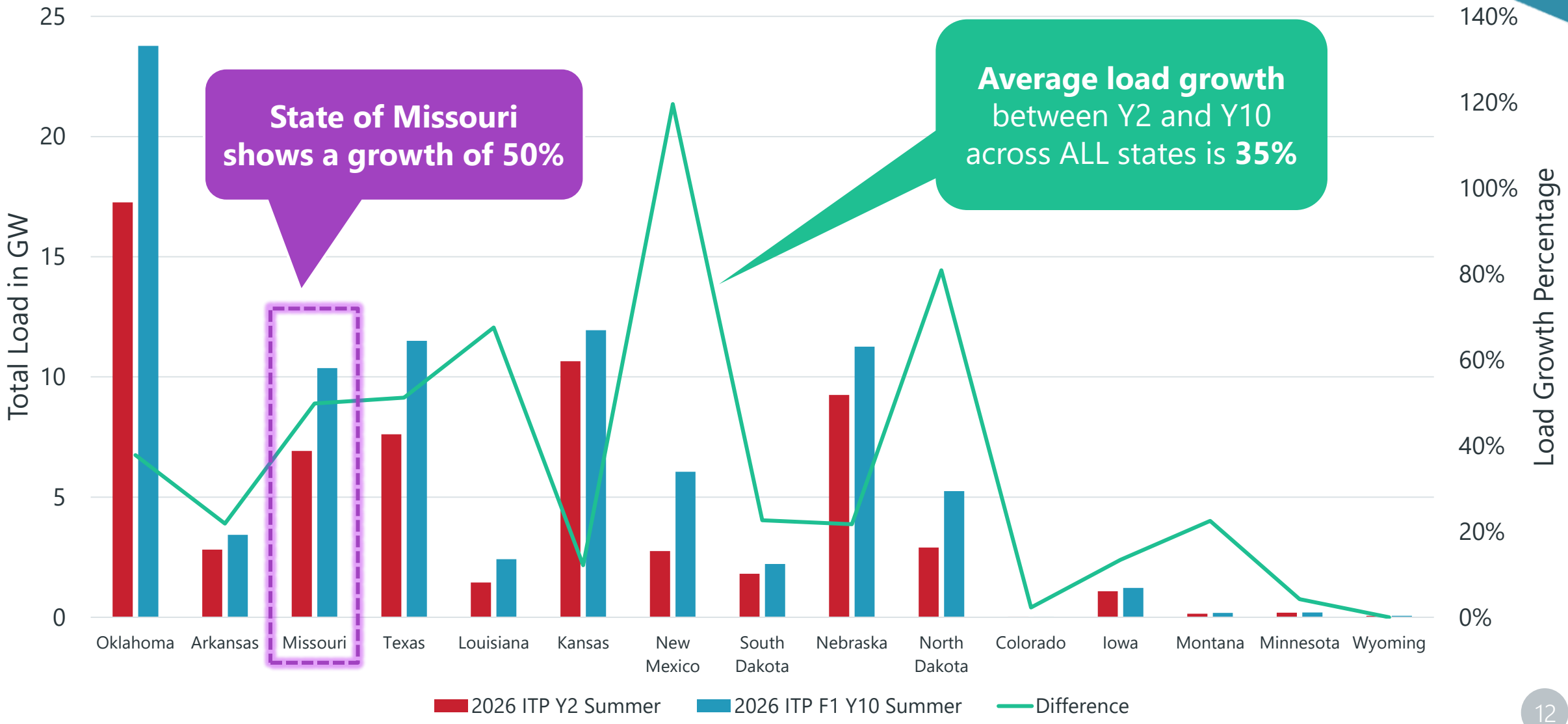
33% increase assumes ***0MW*** of submitted spot loads are realized

100% increase assumed ***all*** submitted spot loads are realized



Rapid load growth is testing a transmission system already operating at capacity

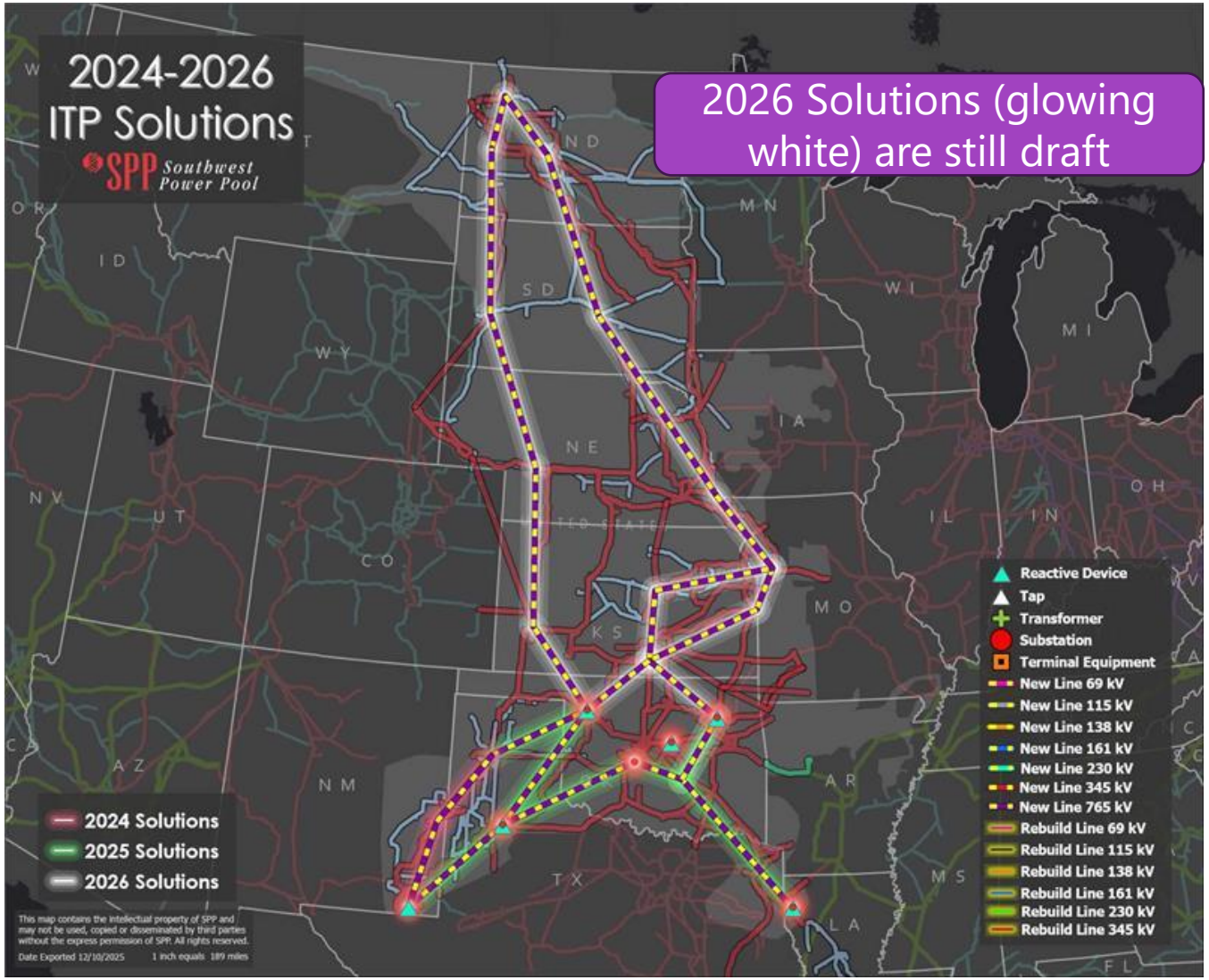
LOAD GROWTH BY STATE: Y2 TO Y10



2026 ITP OUTLOOK

SPP staff expects to complete a 765 kV overlay that builds upon the 2025 ITP

Some key lines from 2025 ITP are continuing to be evaluated



MISSOURI TRANSMISSION PROJECTS

MISSOURI 2025 ITP PROJECTS

Project Name	Project Cost
TWA - North Congress 161 kV Rebuild	$6,088,666
Joplin West 7th 161 kV Breaker	$275,000
Maryville - Midway - Avenue City - St. Joseph 161 kV Rebuild	$56,096,451
Crosstown - Blue Valley Station 161 kV New Line	$21,642,007
Pruek - Osage 69 kV Rebuild	$10,182,000
Roanridge Corridor Rebuilds 161 kV	$59,555,373
Total	$153,839,497

MID-MISSOURI TRANSMISSION PROJECT UPDATE

MID-MISSOURI STATUS UPDATE

2025 Mid-Missouri project Coordination

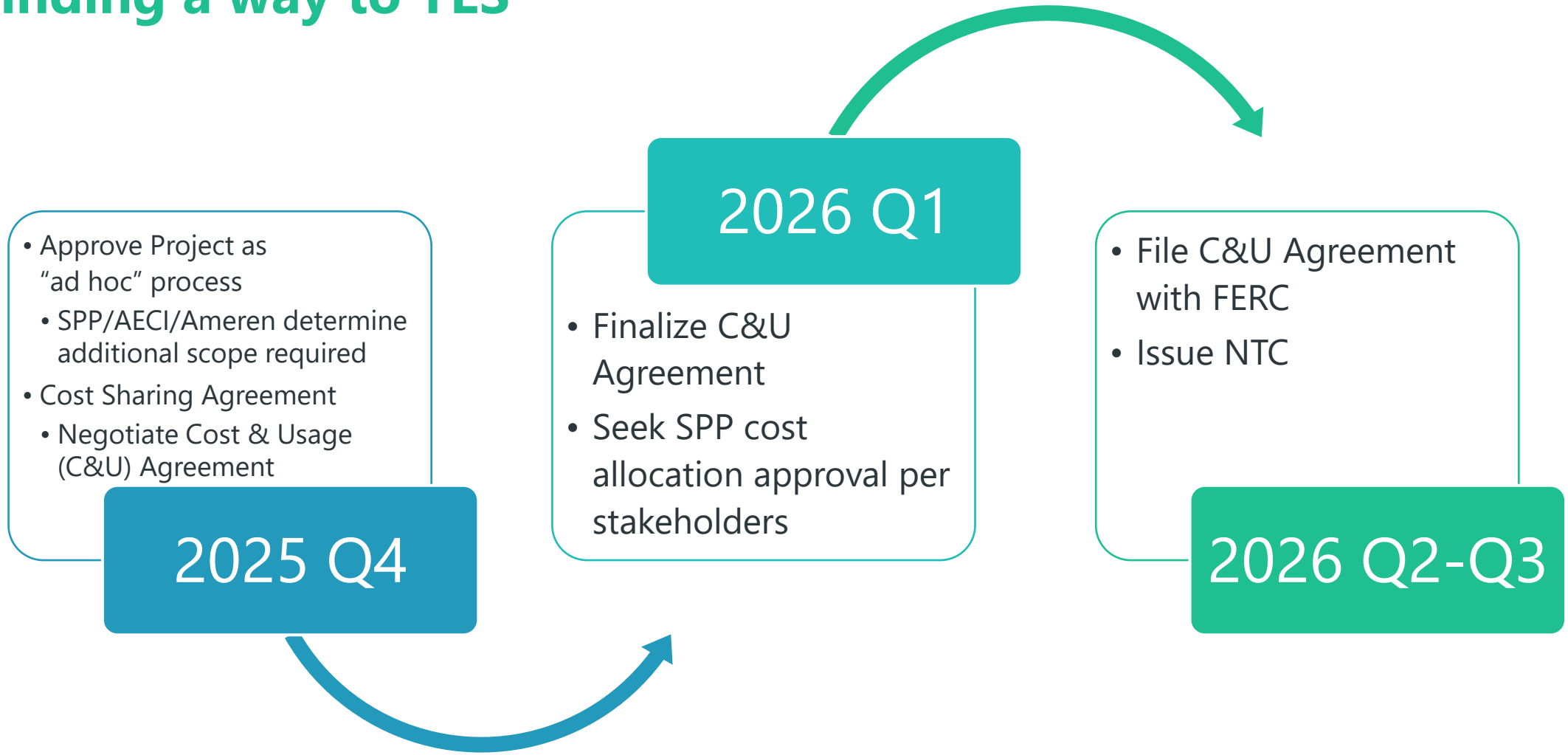
- Joint evaluation of a potential 345kV project in mid-Missouri
- Collaboration with AECI, Ameren, Evergy
- Goal: Identify cost-sharing opportunities across parties

Current Status of Conversations

- SPP/AECI/Ameren have a weekly meeting cadence
  - Discussion has focused on identifying the appropriate study approach, drafting a scope, and timeline
  - Currently finalizing a draft scope that will be introduced into SPP stakeholder processes in January 2026
  - Pending updated cost estimates expected to receive by end of 2025
- SPP/Evergy have discussed the portion of project to be constructed in SPP, and SPP has officially requested more refined cost estimates that are closer to +/- 20%

SPP-AECI MID-MISSOURI STUDY PROCESS

Finding a way to YES



SPP-AECI MID-MISSOURI SCHEDULE

January 2026	Initial SPP Stakeholder Reviews for Study and Scope	TWG/ESWG Joint meeting 01/28/2026
February 2026	Initial SPP Stakeholder Reviews for Cost and Usage Agreement - Cost Allocation approaches	CAWG meeting 02/12/2026
	Final Report & Presentation of Results to Stakeholders; seek approvals of Report & Recommendation(s)	TWG/ESWG joint meeting 02/25/2026
March 2026	Seek Approval for Cost & Usage Agreement; Approval for Cost Allocation treatment for SPP cost recovery	CAWG meeting 03/11/2026
	IF Report & Recommendations outstanding, continue to seek approval	*TWG/ESWG joint meeting 03/31/2026*
April 2026	Report and Recommendation approval	MOPC meeting 04/14/2026
	IF Cost & Usage Agreement approval outstanding and/or Cost Allocation treatment for SPP Cost Recovery outstanding, continue to seek approval	*CAWG meeting (TBD)*
May 2026	Report and Recommendation approval; Cost & Usage Agreement Approval	SPP Board of Directors meeting 05/05/2026
	Cost & Usage Agreement and SPP Cost Allocation treatment for SPP Cost Recovery approval	SPP Regional State Committee 05/04/2026

* Informational updates for this study will be shared at monthly SPP Seams Advisory Group meetings
* If the May schedule is not met, approvals for SPP Board of Directors and Regional State Committee will occur in August 2026
* Following required SPP Stakeholder approvals, Cost and Usage Agreement will be filed with FERC
* Once FERC approval is received, SPP can issue Notification to Construct per study report and recommendations

CONTACT

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SR. INTERREGIONAL STRATEGIST

MONSHERRA BLANK
MANAGER, REGULATORY AFFAIRS

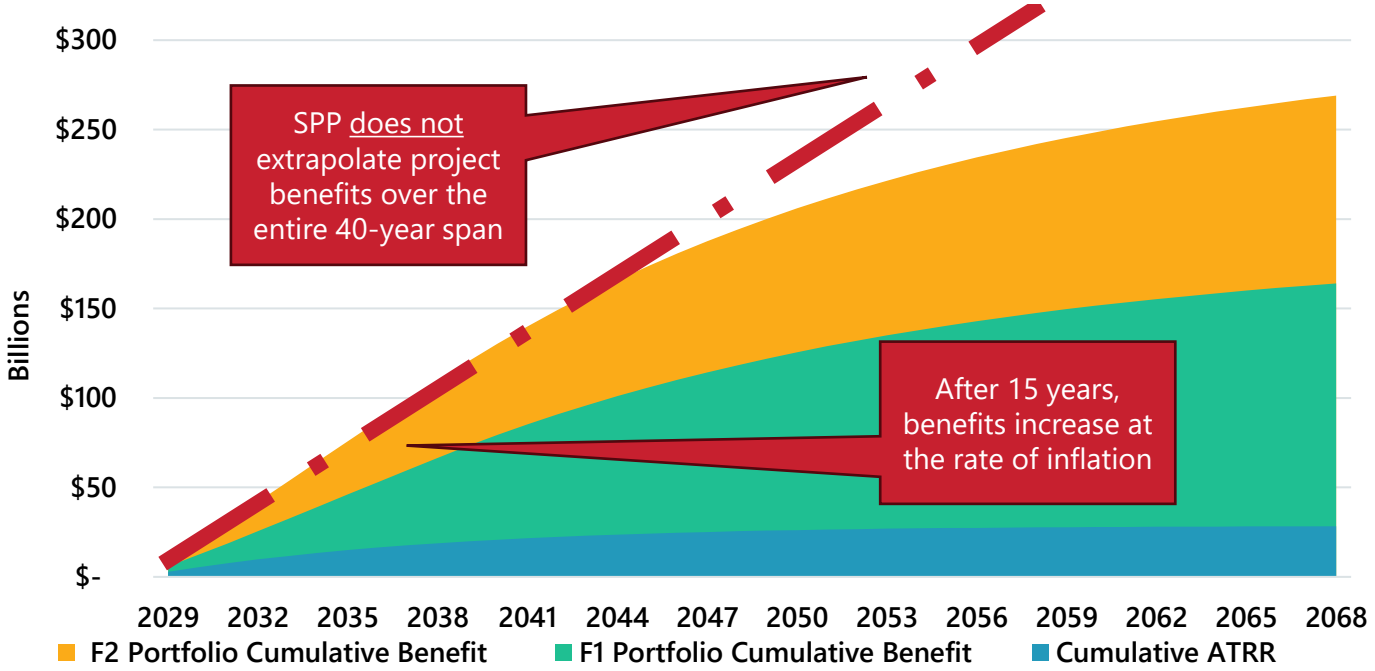
APPENDIX

40-YEAR BENEFIT CALCULATION

Year	Method	Calendar Year
0-3	None (upgrade not in service)	2025-2028
4	None	2029
5	**Model Output (upgrade included)**	**2030**
6	Interpolation	2031
7	Interpolation	2032
8	Interpolation	2033
9	Interpolation	2034
10	**Model Output**	**2035**
11	Extrapolation	2036
12	Extrapolation	2037
13	Extrapolation	2038
14	Extrapolation	2039
15	Extrapolation	2040
16	Inflation	2041
17	Inflation	2042
18	Inflation	2043
19	Inflation	2044
20	Inflation	2045
21	Inflation	2046
22	Inflation	2047
23	Inflation	2048
24	Inflation	2049
25	Inflation	2050
26-42	Inflation	2051-2066

SPP converts one-year benefits into a **40-year Net Present Value:**

- Use modeled benefits for 2–3 years (e.g., Year 5 & Year 10)
- Interpolate the years in between
- Extrapolate a few years before/after
- Use an inflation-based "terminal value" for years far out
- Discount everything back to present dollars



MID-MISSOURI 345KV STUDY HISTORY

Finding a way to YES

2024

JCSP

- Mid MO studied as part of 2024 JCSP with AECI, does not provide enough SPP benefits to justify cost

2025

ITP

- Mid MO part of 2025 ITP, does not meet SPP B/C thresholds for NTC approval without cost sharing

2026

Work

- SPP pursuing ad hoc process with AECI/Ameren to seek approval for SPP including cost sharing for project

SPP-AECI MID-MISSOURI STUDY NEXT STEPS

Finding a way to YES

Finalize Scope of Study & Negotiate C&U Agreement

*already started

- 60-90 days
- Draft Scope
- Outlines cost-sharing, ownership, and usage terms
- 2 or 3 party agreement

Seek SPP Stakeholder approval of Report & C&U Agreement

- 60-90 days
- SPP Board & RSC approval required (meet quarterly)
- May 2026 target approval (August 2026 if missed)

File C&U Agreement at FERC

- 60-90 days
  - Maybe longer if protested
- Acceptance of C&U Agreement by FERC results in SPP issuing NTC