

# 2026 10-Year Assessment Preliminary Solutions

*Stakeholder and Customer Webcast*

**PRESENTED BY:**

System Planning

May 18, 2026

- ATC Proprietary -

[atcllc.com](http://atcllc.com)

# Purpose

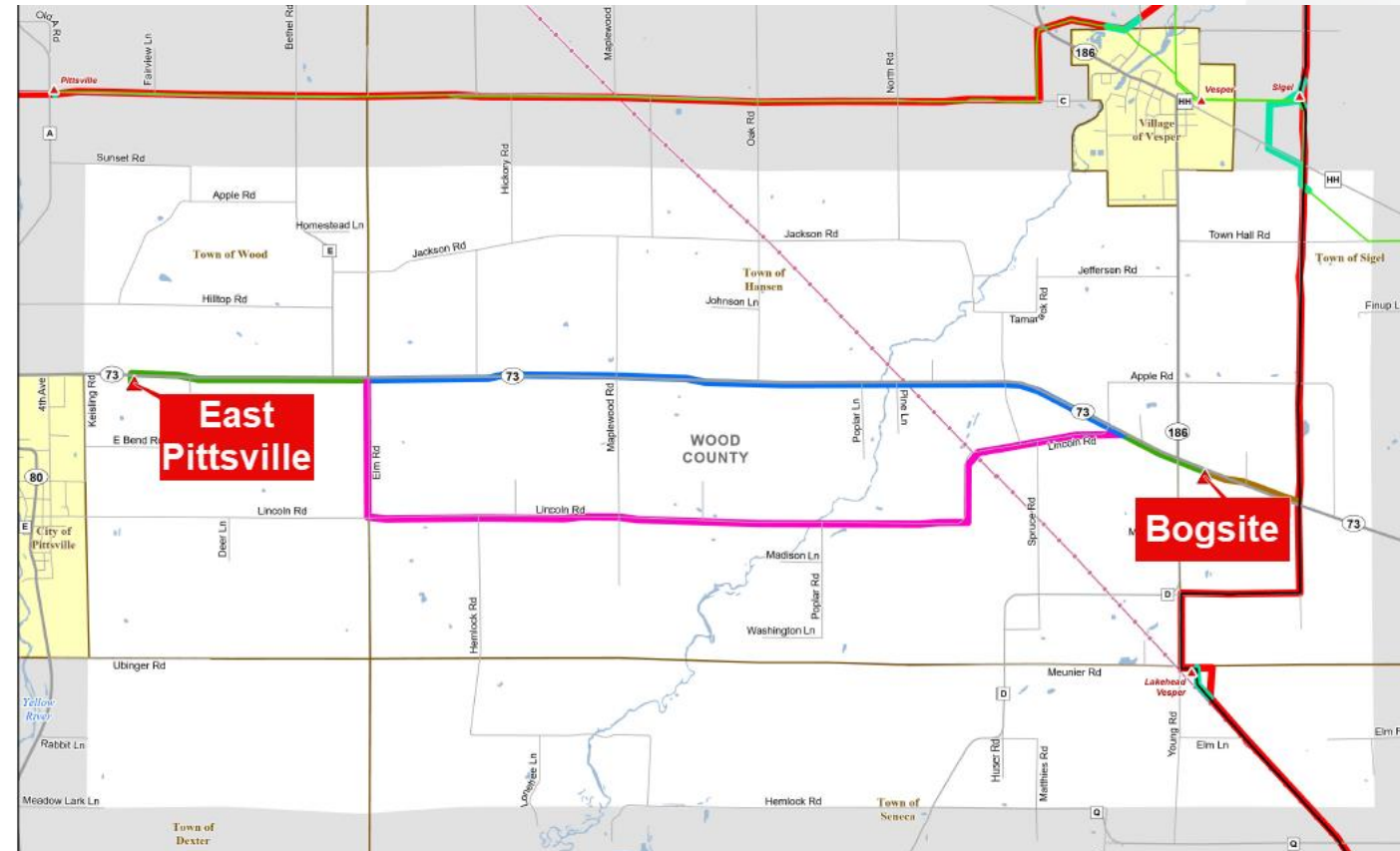
- Define and Solicit Input on Preliminary Solutions
  - Network/Reliability
  - Generation to Transmission (G-T)
  - Distribution to Transmission (D-T)
  - Asset Renewal
- Solicit Input on Public Policy Driven Needs
- Summarize Next Steps

# Preliminary Solutions

- New reliability projects and asset renewals are offering solutions to issues in the ATC footprint.
  - Pittsville Area Reliability Project (Update)
  - Western UP Reliability Project (Update)
  - Townline Rd – Rock River, Construct New Line
  - REC Innovation Park DIC
  - Nature Park New Substation (Update)
  - St. Rita to Racine 138 kV, Line Rebuild

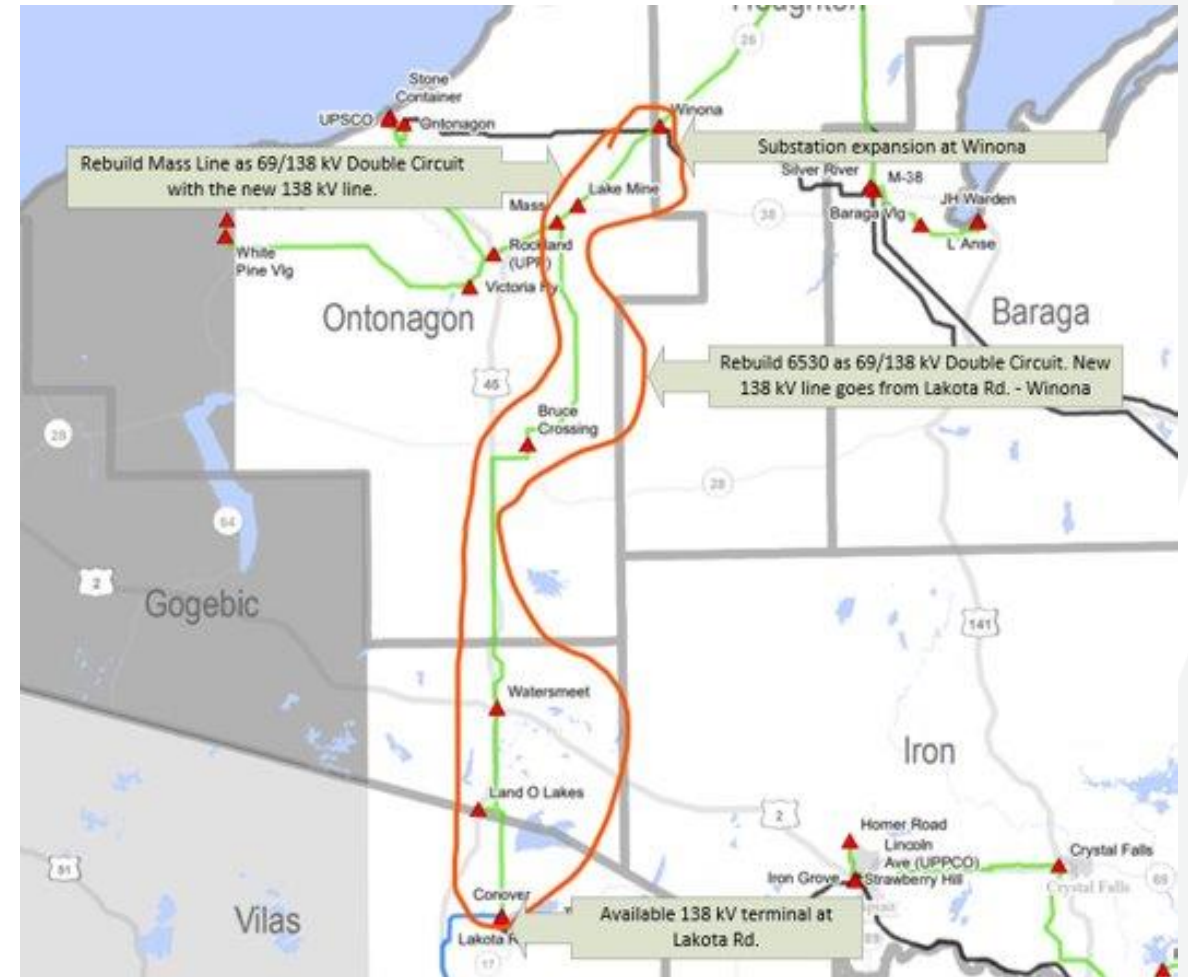
# Pittsville Area Reliability Project Update

- Need Drivers:
  - Load interconnection request
  - Inability to back feed existing Pittsville area load from alternate sources
- Scope of Work
  - Construct a new Bogside switching station networking Port Edwards - Sigel 138 kV (X-42) line
  - Construct new 138 kV line from Bogside to the new Alliant's East Pittsville Substation
- MTEP25 App A, ID #25314
- Target ISD: June 2029
- Cost estimates
  - About \$45M depending on the route chosen
- Filing CPCN in June with the PSCW



# Western UP Reliability Project Update

- Need Drivers:
  - NERC TPL thermal and voltage limitations
  - Condition and performance
  - Other benefits
    - ◆ Operational flexibility
    - ◆ Economic benefit
- Scope of Work:
  - Rebuild Conover – Mass and Mass – Winona 69kV lines to double circuit 138/69 kV from Lakota to Winona
  - Miscellaneous substation expansion and asset renewal
- MTEP26 Target App A, ID #50770
- Target ISD: Q4 2030
- Cost Estimate: \$236M



# Townline Rd – Rock River, Construct New Line

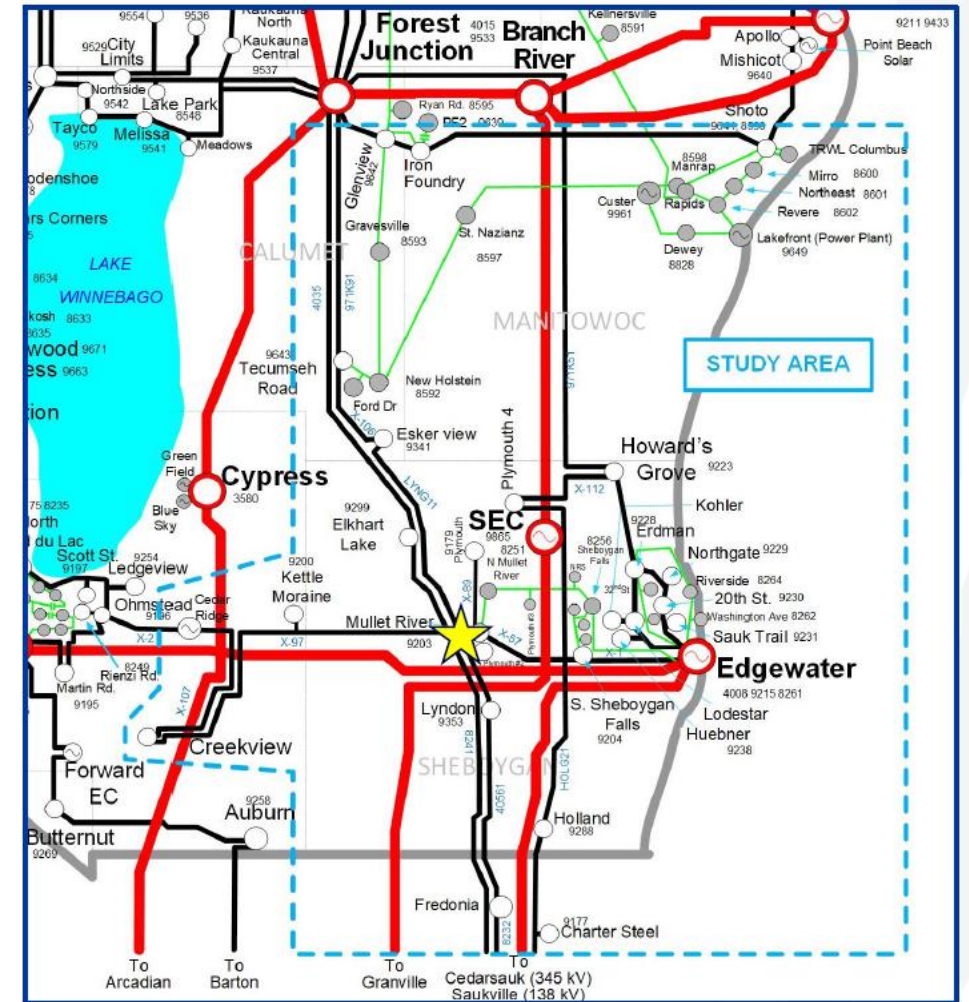
- Need Driver:
  - Address thermal limitations in the area
- Scope of Work:
  - ~0.7mi of new 138 kV transmission line
  - Remote end substation work
- MTEP26 Target App A, ID #51112
- Target ISD Q2 2028
- Cost Estimate: \$12.4M





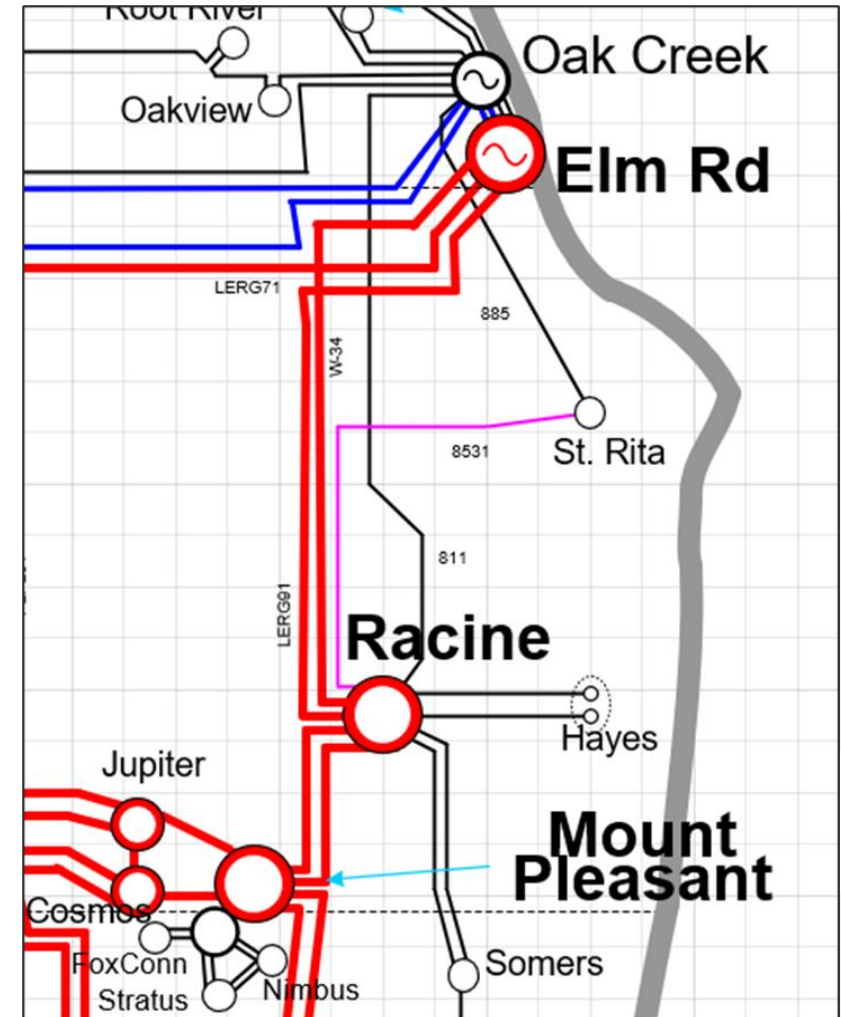
# Nature Park New Substation (Mullet River Area Reliability Project) Update

- Need Drivers:
  - Network reliability: TPL N-1-1 thermal limitations
  - Asset renewal needs: Mullet River and North Mullet River SS
- Scope of Work:
  - Construct greenfield 138/69 kV Nature Park substation
  - Network four 138kV lines into Nature Park SS
    - ◆ North – South lines LYNG11 and 8141
    - ◆ East – West lines 138 kV line X-97, X-57
  - Reroute radial 138 kV line X-89 into Nature Park SS
  - Reroute 69 kV line Y-50 into Nature Park SS
  - Retire Mullet River and North Mullet River substations.
- MTEP24 App A, ID #21900
- Target ISD revised from Nov 2028 to May 2029
- Cost estimate: \$71.1M
- Filing CA in June with the PSCW



# St. Rita to Racine 138 kV, Line Rebuild

- Need Drivers: Reliability, Asset Renewal, Communications:
  - MTEP25 NERC TPL thermal limitations
    - Single event (P7) and N-1-1
  - Wood monopole structures, reaching its end of useful life at 70 years
  - Legacy 24-Strand OPGW is fully utilized
- Solution Scope: Full rebuild of the St. Rita to Racine 138 kV line (~9.5 miles)
- MTEP26 Target App A, ID #50509
- Target ISD: Q2 2030
- Cost estimate: \$28.9M



# D-T Interconnections & Economic Development Projects

## Large loads

- Mining, bitcoin, data centers, or manufacturing
- Complex planning studies

## Transmission upgrades

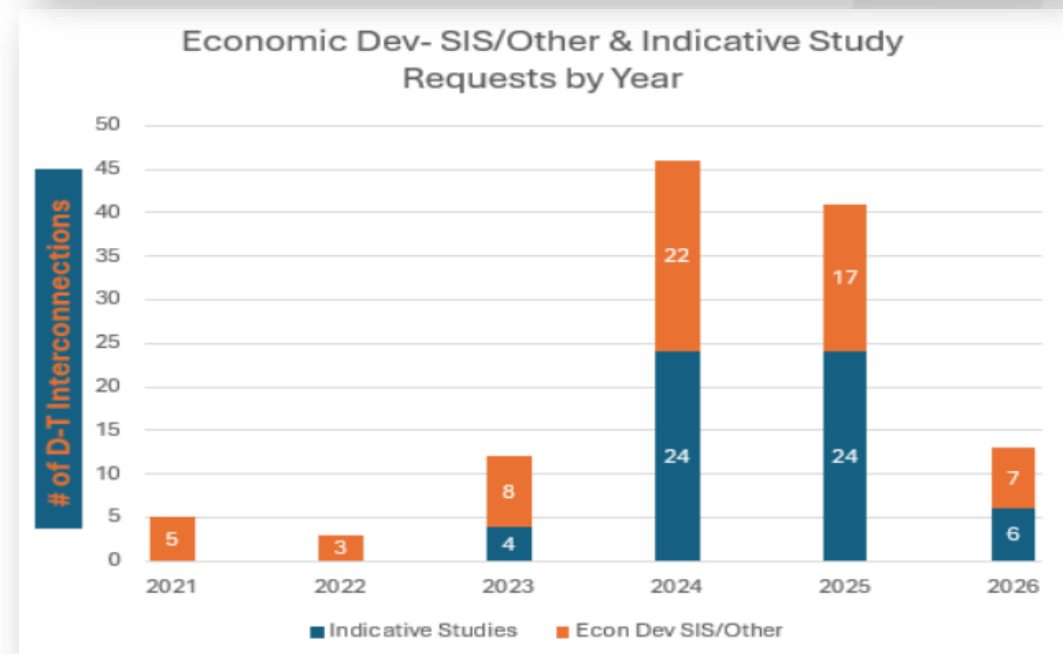
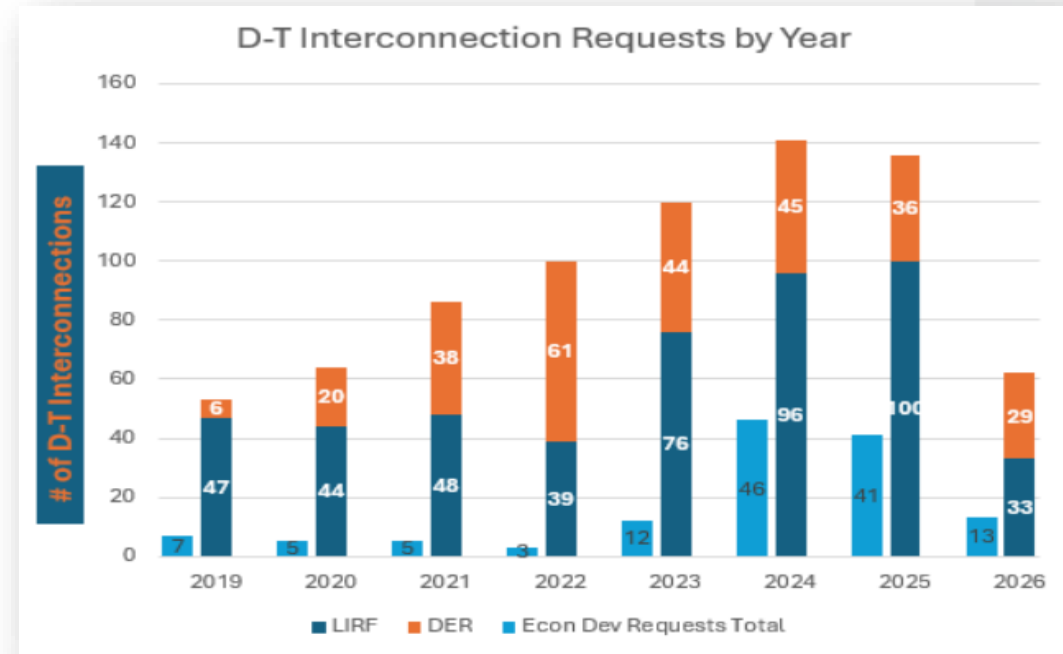
- MISO MTEP approval (Expedited Project Review)
- Balance of confidentiality and external processes

## Accelerated timelines



- Regulatory approval (CA/CPCN)
- Equipment lead times

## Customer Agreements

- Project Commitment Agreement (PCA)
- Project Acceleration Agreement (PAA)



# ATC & MISO\* Requirements Compared

Category/Criteria		
Active Power Variation	25MW/5sec	10MW/5sec
Active Power Ramp rate	For changes in load of 50MW+, ramp at 30MW/min (0.5MW/sec)	30MW/min
Voltage Ride Through	Aligned with IEEE 2800 & PRC-029	Aligned with IEEE 2800 & PRC-029
Large Load Definition	200 MW serving a single end-use customer	Any new commercial or industrial facility or aggregation greater than 50 MW at a single site behind one or more points of interconnection.

\*MISO criteria are currently proposed and under review (including stakeholder feedback) – information provided here is based on the MISO materials as presented at the 4/20/2026 Large Load Working Group (LLWG) meeting

# Innovative Solutions

- Ground Clearance
  - Structure Reinforcement
- Flow Control options
  - Grid Enhancing Technology (GETs)
- Advanced Conductor Technology
  - Now in-service (TS Gould at University)
- 138kV Mobile Cap Banks
  - Provide outage flexibility

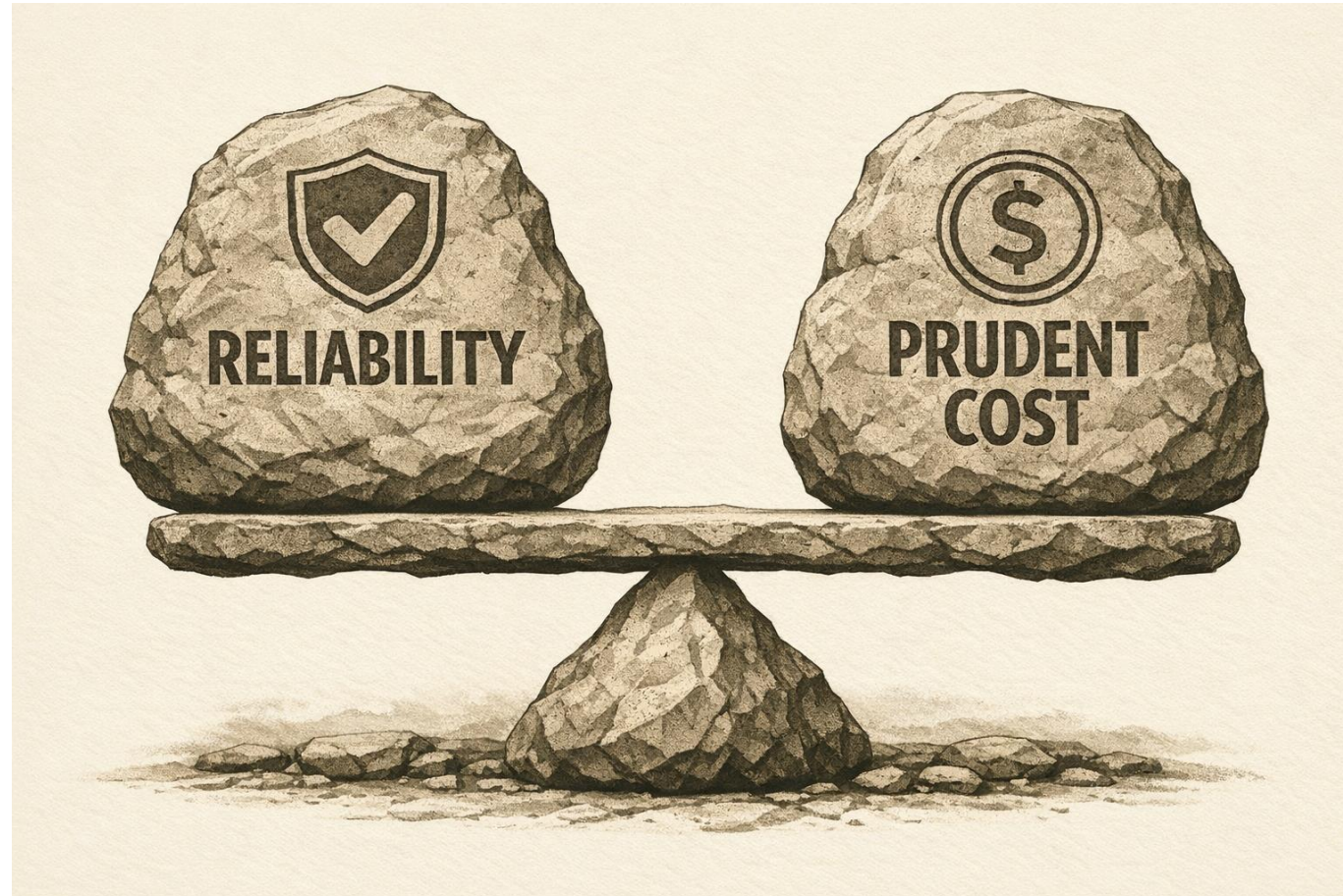


# Asset Renewal Program

**PRESENTED BY:**

Adam Brecklin

# “ATC’s Asset Renewal strategy is about balancing Asset Risk and Costs”



# Asset Renewal Program Objectives



SAFETY – PUBLIC  
AND WORKER



MINIMIZE TOTAL  
LIFE CYCLE COST  
[NET PRESENT  
VALUE OF  
REVENUE  
REQUIREMENTS  
(NPV RR) FROM  
CUSTOMER  
COST/RATE  
PERSPECTIVE]



COMPLIANCE



MANAGE RISK



RELIABLE  
PERFORMANCE –  
MAINTAIN OR  
IMPROVEMENT

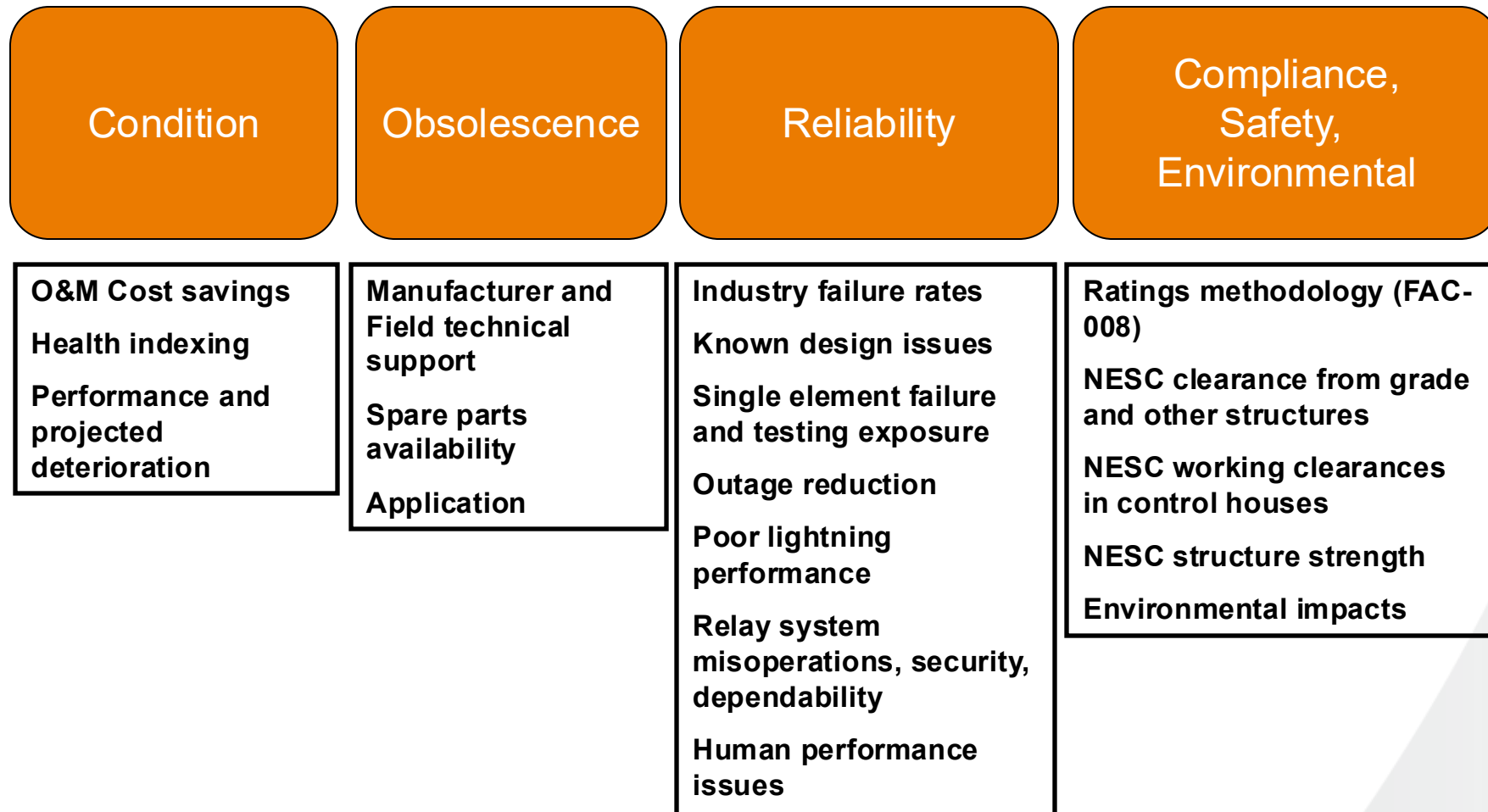


ENVIRONMENTAL  
PERFORMANCE  
IMPROVEMENTS

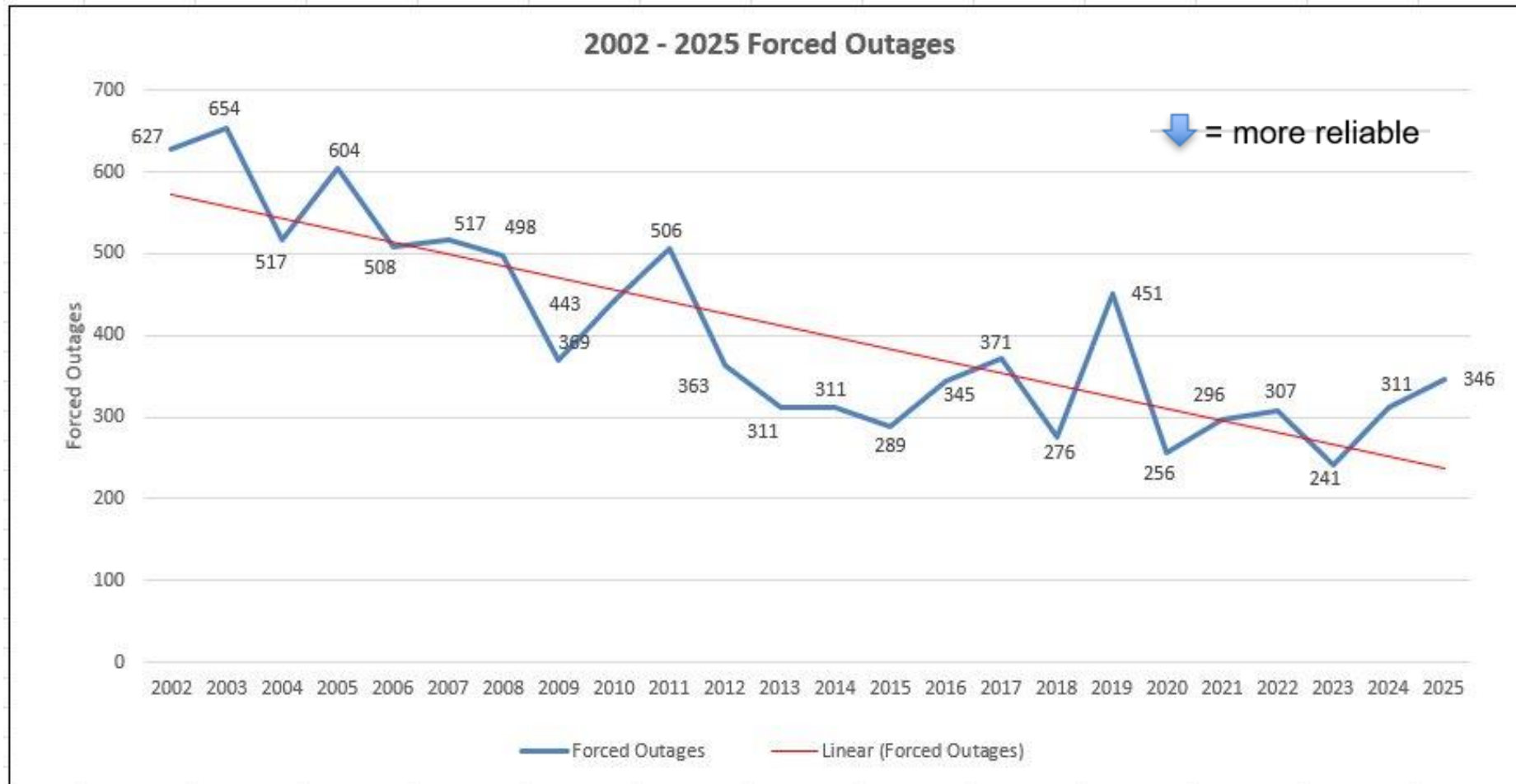


COORDINATION  
WITH  
STAKEHOLDERS

# Asset Renewal Program Considerations

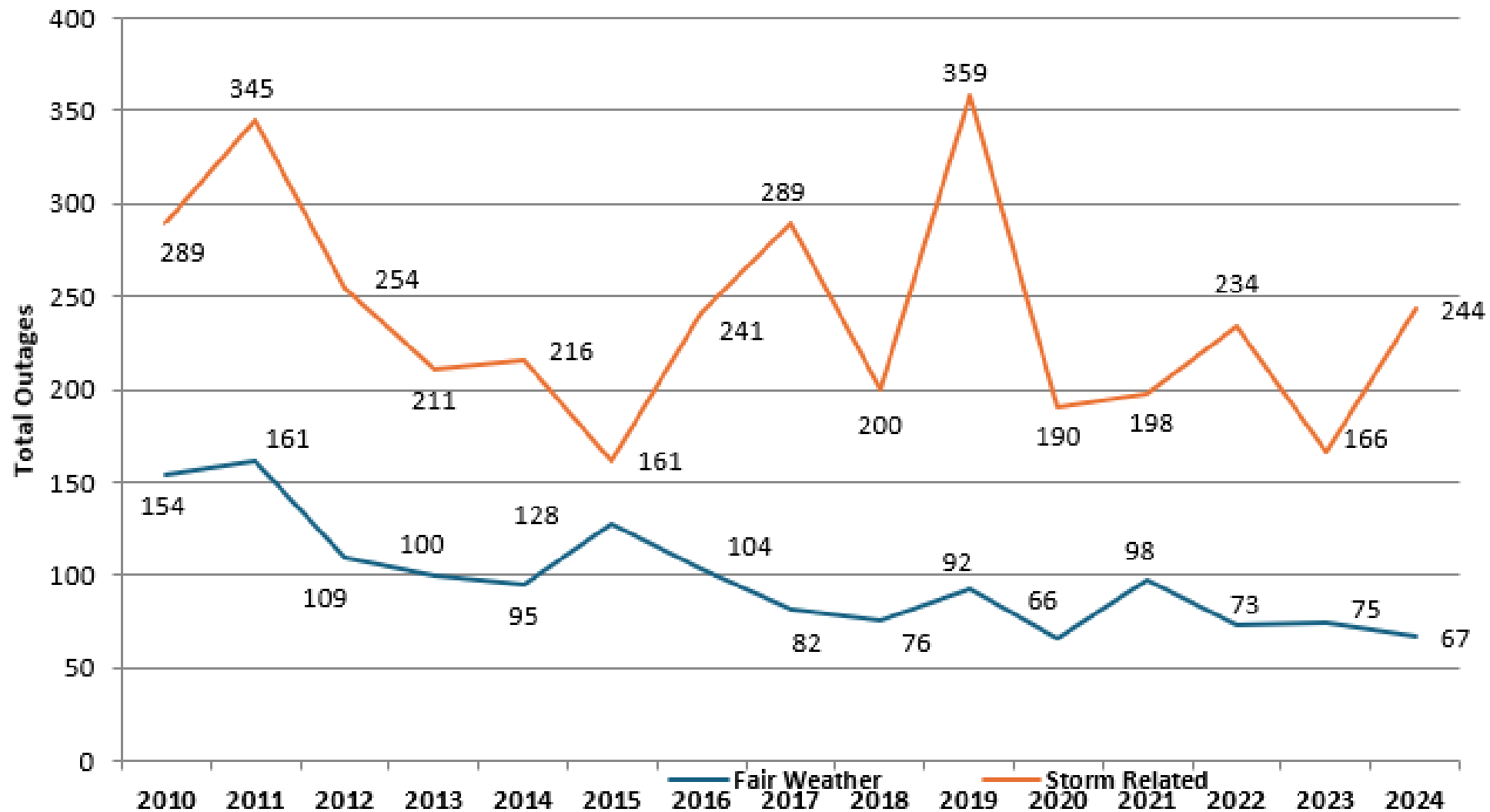


# What is the Value of Asset Renewal?



- One way to measure the value of the asset renewal program is the increased reliability by driving down forced outages.
- This trend has continued through the expansion of the transmission system and the addition of assets.

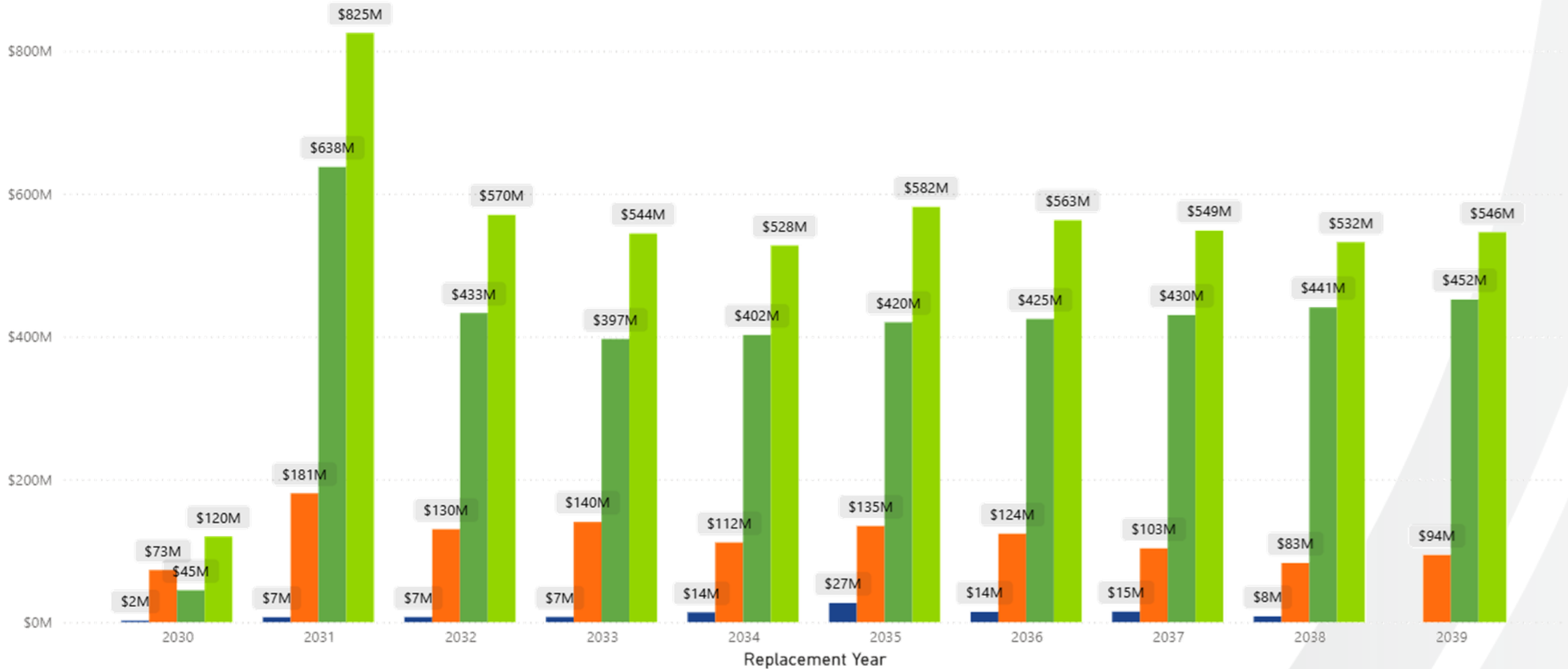
## 2010 - 2024 Fair Weather/Storm Outage Comparison



# 10 Year - \$5.4B Spend

## 10 Year Asset Renewal Spend Per Year

● IT/OT/Fiber ● Substation ● Transmission Line ● Total



# GRIP – “Grid Risk Investment Planning”

## Project Objectives

- Develop enterprise asset performance management tool for Substation, T-Line, Fiber, and Vegetation Management
- Transition from “Health Indexing” → “Predictive Analysis” → Risk Analysis for all equipment in dollars (\$\$\$)
- Optimize (10 Year) forecast
- Support transition from time-based to condition-based maintenance
- Retire legacy standalone tools



# HVB Breaker Replacement Program



Seeking AIM approval to replace all GE-Hitachi HVB gas circuit breakers by 2035

35 units remain in service at 345, 161 and 138kV.

Prone to HP events due to unique air mechanism design

Breakers were not tested for Transformer Limited Faults (TLF), and may not be able to clear for this type of fault. Replacing these breakers is the only way to fully mitigate this risk.

History of mechanism and interrupter issues (Most recently, PLA BTL2-3 failed during testing in December and was subsequently replaced in January 2026).

Periodic maintenance costs exceed \$35,000 due to unique air trip mechanism.

Estimated program cost ~\$29M

# 1.05pu MCOV Surge Arrester Program



Seeking AIM approval to replace all units by 2029

Legacy design that was installed on ATC's system up until ~2010

Approximately 300 units remain in service.

ATC has experienced at least 12 failures in the last 8 years, resulting in faults causing line outages.

Sustained operation near the maximum voltage rating of the arresters results in heating which breaks down the seals in the arresters, leading to moisture ingress and eventually failure.

Replacement of arresters with our current standard design will result in fewer failures and improved reliability.

Estimated program cost ~ \$8M

# Ten Year Assessment Status

- Next Steps
  - Solutions comments – due June 1
  - Start drafting TYA online report – May
  - Finish sensitivity studies – May
  - Develop new or revised scope and cost estimates – June
  - ATC internal review/approval – August
  - 2026 Assessment publication – November
  - TYA Stakeholder Meeting – November 16, 2026
    - 2026 TYA Summary / 2027 TYA Study Design

# Contacts: updates

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Q&A

