2025 Economic Planning Study Kickoff

PRESENTED BY:

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Introduction

- Project Updates
- Process Overview and Timeline
- Study Area Results
- Next Steps

AAR (ambient adjusted ratings)

ATC

EMS Data Date:

2/3/2025

SELD Data Date:

2/3/2025

Ambient Adjusted Ratings (AAR) Pilot Program Summary

This information is a snapshot in time of lines in ATC's AAR pilot program. As ATC moves toward full compliance with FERC Order 881 (Order) lines may be in the program (listed in this report) and to maintain reliability and compliance, intentionally not calculating AAR at any given time. The Order goes into effect July 12, 2025 at which time transmission providers (for ATC, this is MISO) will be providing visibility to facilities and their ambient adjusted ratings per the transparency requirements of the Order.

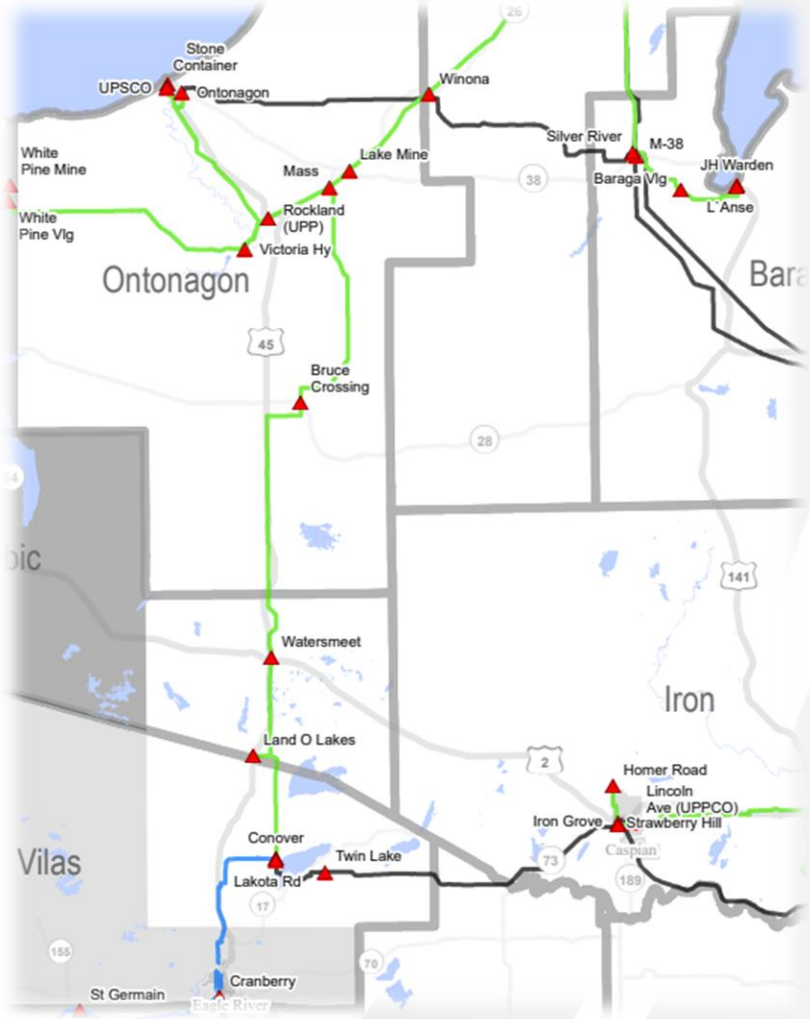
Line Number	SELD From Location	SELD To Location
111	Point Beach	Branch River
121	Branch River	Point Beach
13802	Sycamore	Blount
13826	Cardinal	Pleasant View

Posted on atcllc.com (ATC oasis) and will be update periodically.

https://www.atcllc.com/wp-content/uploads/Q1_2025_AAR-In-Program.pdf

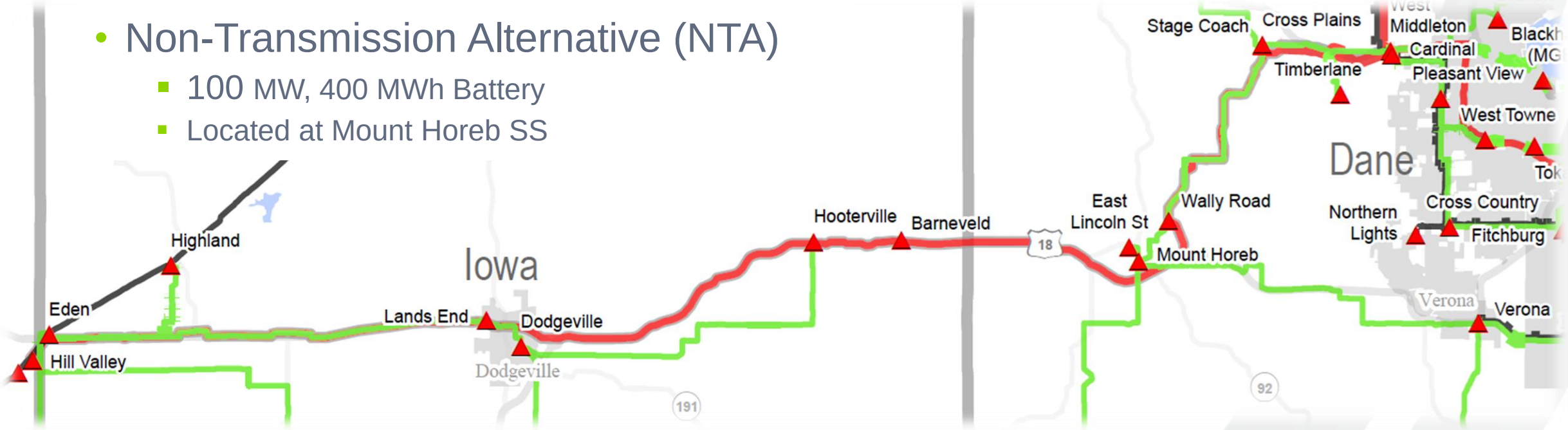
Conover–Mass 69 kV (6530) - Alternatives

- Economic Alternatives
  - Lakota Rd – Mass – Winona
    - Rebuilds with 69kV and/ or 138kV considerations
  - Non-Transmission Alternative (NTA)
    - 100 MW, 400 MWh Battery
    - Located at Winona SS
- Reliability Considerations
  - Coordinating with Zone Planning
    - See ‘2025 TYA Preliminary Needs’
  - Further studies ongoing



Hill Valley Outlet – Alternatives

- Uprate
  - Highland to Mt Horeb to Verona 69kV
- Partial Rebuild
  - Highland to Verona partial rebuild
- New 138kV Line
  - New 138kV line from Highland to Verona
  - New 138kV line from Highland to Cardinal
- Non-Transmission Alternative (NTA)
  - 100 MW, 400 MWh Battery
  - Located at Mount Horeb SS



Hill Valley Outlet Study Results

Alternatives	Benefits ($M)	Cost Estimate ($M)
Highland - Verona 69kV Uprate	$39.42	$50
Highland – Verona 69kV Partial Rebuild	$63.34	$70
New 138kV Line Highland - Verona	$128.44	$150
New 138kV Line Highland - Cardinal	$116.35	$150
NTA	($820.06)	Did not estimate

Note: Savings are 2025$ present value gross 40-year benefit savings from the Customer Benefit Metric. Costs are 2025$ estimates.

Hill Valley Outlet Conclusions

- Uprates
  - Eliminated because significant congestion remained, and generation curtailments were not mitigated
- Highland – Verona 69kV Partial Rebuild
  - Promising benefits for asset renewal, OPGW, P6 (two overlapping contingencies) curtailment reduction
  - Proceeding with further studies on this alternative
- New 138kV Line
  - Eliminated due to insufficient benefit/cost ratio
- NTA
  - Eliminated due to insufficient benefit/cost ratio

2025 TYA Kickoff

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ATC Process Overview and Timeline

- **During February –** we hold an initial stakeholder meeting to review the market congestion summary and potential fixes and to discuss economic study scenarios, drivers, ranges, and assumptions.
- **By March 1 –** we work with stakeholders to request and prioritize new/other economic studies and recommend study assumptions.
- **By April 15** – we identify preliminary areas of economic study, study assumptions and models and solicit further comments from stakeholders.
- **By May 15** – we finalize areas of economic study, study assumptions and models to be used in analysis.
- **By November 15** – we provide a summary of the results of the economic analyses to our stakeholders.

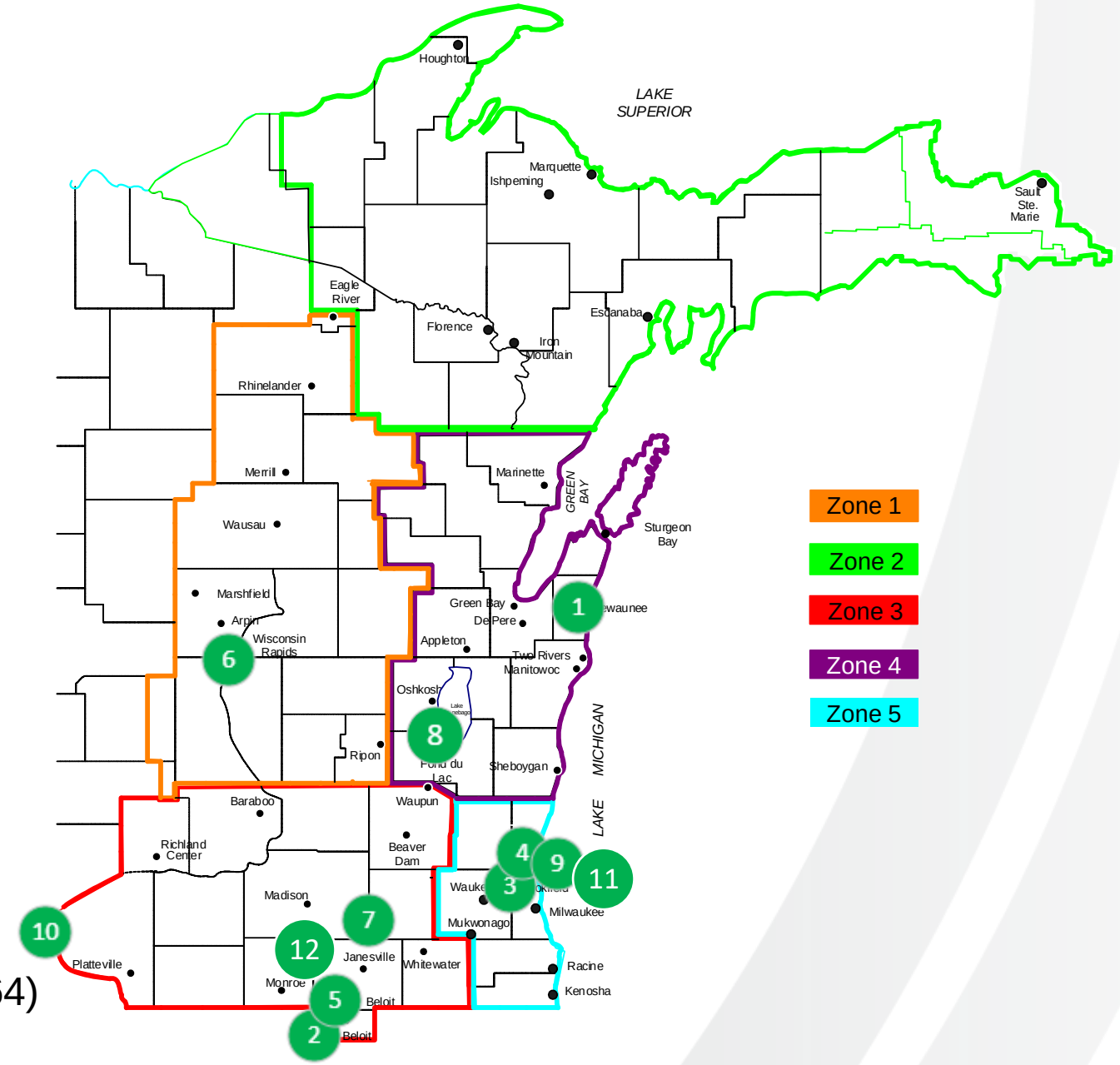
Model Development

- MISO Economic Model Series (MEMS) 1A Future 2A models
  - Add DPP 19, 20, and 21 projects and generators
  - Consider TYA, LRTP Tranche 2, and 2025 Target A projects
- Series 1A Updates
  - Years 10, 15, 20 (2032, 2037, 2042)
    - Accelerated pace of generation fleet transition
  - Reference Case Scenarios
    - Includes LRTP Tranche 1 projects
  - Change Case Scenarios
    - Includes preliminary LRTP Tranche 2 projects

Notable 2024 Congestion

Day Ahead Hours	Real Time Hours	Constraint
498.0	29.0	Kewaunee - Point Beach 345 kV (Q-303)
196.0	114.0	Paddock - Shaw 69 kV (Y-54)
273.0	152.3	Bluemound - Butler 138 kV (5061)
264.0	162.9	Granville - Tosa 138 kV (3443)
224.0	65.9	Northwest Beloit - Paddock 138 kV (X-53)
681.0	299.5	7 Mile Creek - Port Edwards 138 kV (X-159)
571.0	224.5	Bluff Creek - University 138 kV (WHIG53)
222.0	40.4	Aviation - North Fond du Lac 138 kV (G-111)
97.0	19.6	Cornell - Range Line 138 kV (61443)
44.0	2.6	Bloomington - Nelson Dewey 69 kV (Y-184)
47.0	21.4	Elm Road - Racine 345 kV (L-ERG91)
210.0	12.0	Bass Creek - Norwegian Creek 138 kV (X-164)

1. Kewaunee - Point Beach 345 kV (Q-303)
2. Paddock - Shaw 69 kV (Y-54)
3. Bluemound - Butler 138 kV (5061)
4. Granville - Tosa 138 kV (3443)
5. Northwest Beloit - Paddock 138 kV (X-53)
6. 7 Mile Creek - Port Edwards 138 kV (X-159)
7. Bluff Creek - University 138 kV (WHIG53)
8. Aviation - North Fond du Lac 138 kV (G-111)
9. Cornell - Range Line 138 kV (61443)
10. Bloomington - Nelson Dewey 69 kV (Y-184)
11. Elm Road - Racine 345 kV (L-ERG91)
12. Bass Creek - Norwegian Creek 138 kV (X-164)



Choosing Study Area

- Avoid areas that may have fixes for historical congestion
- Project scopes are not completely finalized for LRTP Tranche 2 or newer DPP cycles

- Best Value Plan
  - Kewaunee - Point Beach 345 kV (Q-303)
    - Line uprate and wave trap replacement
  - Bluemound - Butler 138 kV (5061), Granville - Tosa 138 kV (3443), Elm Road - Racine 345 kV (L-ERG91)
    - LRTP Tranche 2
  - Cornell - Range Line 138 kV (61443)
    - Cornell SS 61443/ 61451 Reconfiguration
  - 7 Mile Creek - Port Edwards 138 kV (X-159)
    - New Saratoga - 7 Mile Creek 138 kV line
  - Bluff Creek - University 138 kV (WHIG53)
    - LRTP Tranche 2
  - Bloomington - Nelson Dewey 69 kV (Y-184)
    - Nelson Dewey - Bloomington (Y-184), 69kV, Rebuild & OPGW

Stakeholder and Customer Feedback

- ATC is soliciting stakeholders and customers for recommendations on new/ alternative economic projects, study assumption changes, and study areas of focus for our 2025.
- ATC requests feedback in areas where Public Policy Requirements may drive transmission needs.
  - Public Policy Requirements are enacted statutes (i.e., passed by the legislature and signed by the executive) and regulations promulgated by a relevant jurisdiction, whether within a state or at the federal level, including duly enacted laws or regulations passed by a local governmental entity, such as a municipal or county government. Stakeholders are encouraged to provide ATC with Public Policy Requirements. ATC utilizes transmission needs driven by Public Policy Requirements in its assumptions when performing economic analysis of study areas. The transmission needs driven by Public Policy Requirements that will be included in ATC's finalized assumptions will be posted prior to May 15th.

Next Steps

- Project / Analysis Development
  - Review of Congestion and Adjacent Projects
  - Stakeholder Feedback
- Analysis of Projects
  - All Study Years and All Futures
- Timelines
  - By April 15: Define Preliminary Assumptions
  - By May 15: Finalize Assumptions
  - By November 15: Provide Analysis Update

Questions

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