

2023 Economic Planning Study Results

PRESENTED BY:

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Introduction

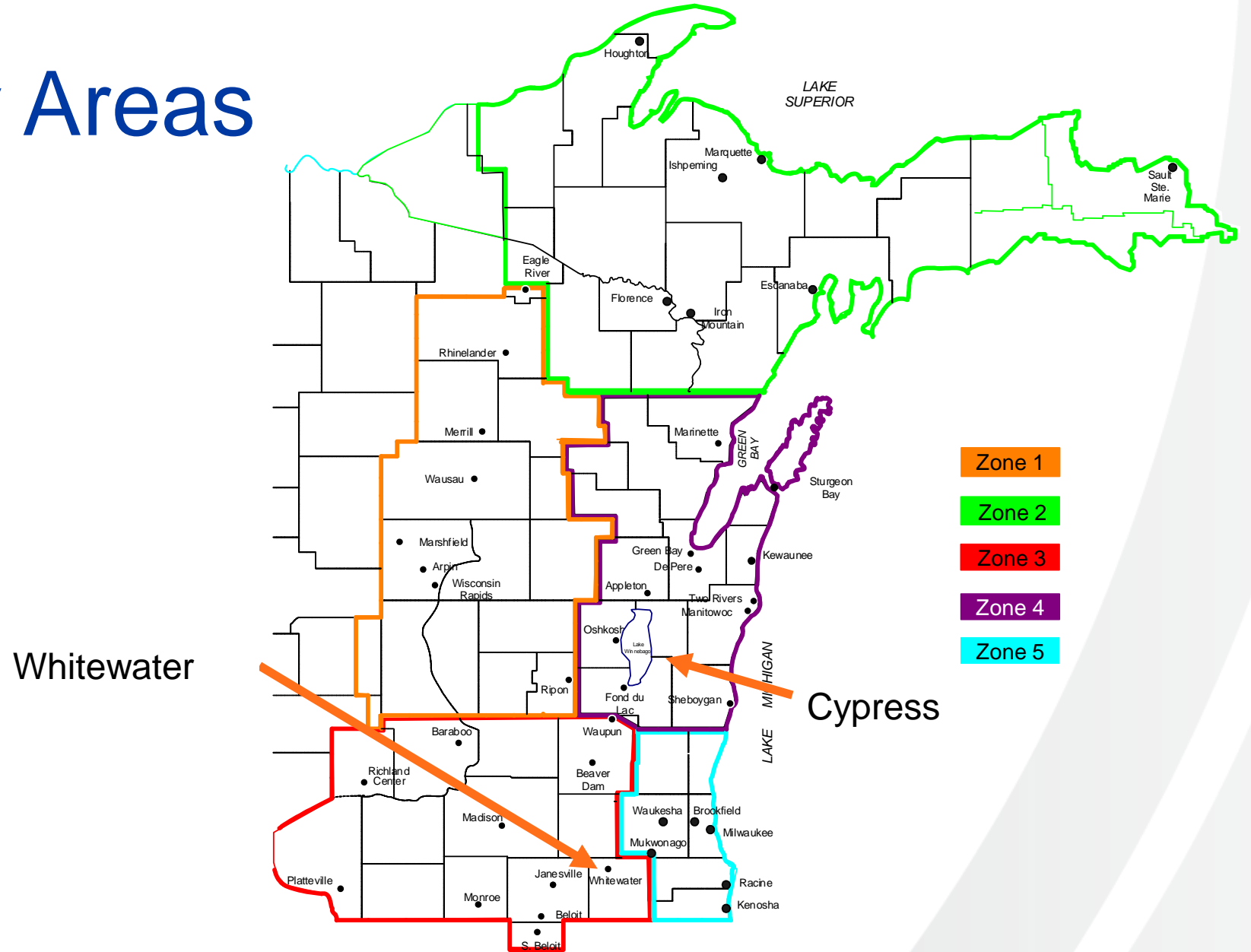
- Process Overview and Timeline
- Study Area Results
- Next Steps

ATC Process Overview and Timeline

- ATC Economic Project Planning – Per ATC Tariff
 - **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.

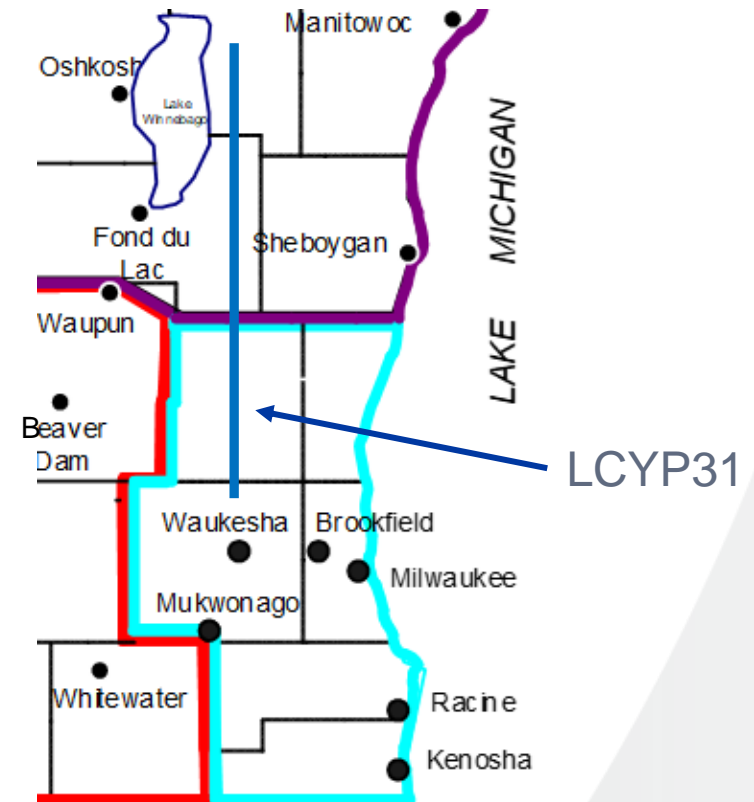
2023 Study Areas

- Cypress
- Whitewater



Cypress Area Alternatives

- **Uprate**
 - Rebuild spans along L-CYP31 to higher rating
- **Battery Storage**
 - 10 MW, 40 MWh battery
 - Located at Arcadian SS
- **New 345kV Substation**
 - Located at Edgewater – Saukville 345 kV crossing with SEC – Granville 345 kV
- **New 138kV Substation**
 - Plymouth 4 – Holland 138 kV tied into existing SEC 345 kV substation



Arcadian – Cypress Study Results

Alternatives	Benefits (\$M)	Cost Estimate (\$M)
Uprate L-CYP31	(\$0.3)	\$10
Battery Storage	\$3.7	\$30
New 345kV Substation	\$8.8	\$40
New 138kV Substation	\$2.7	\$40

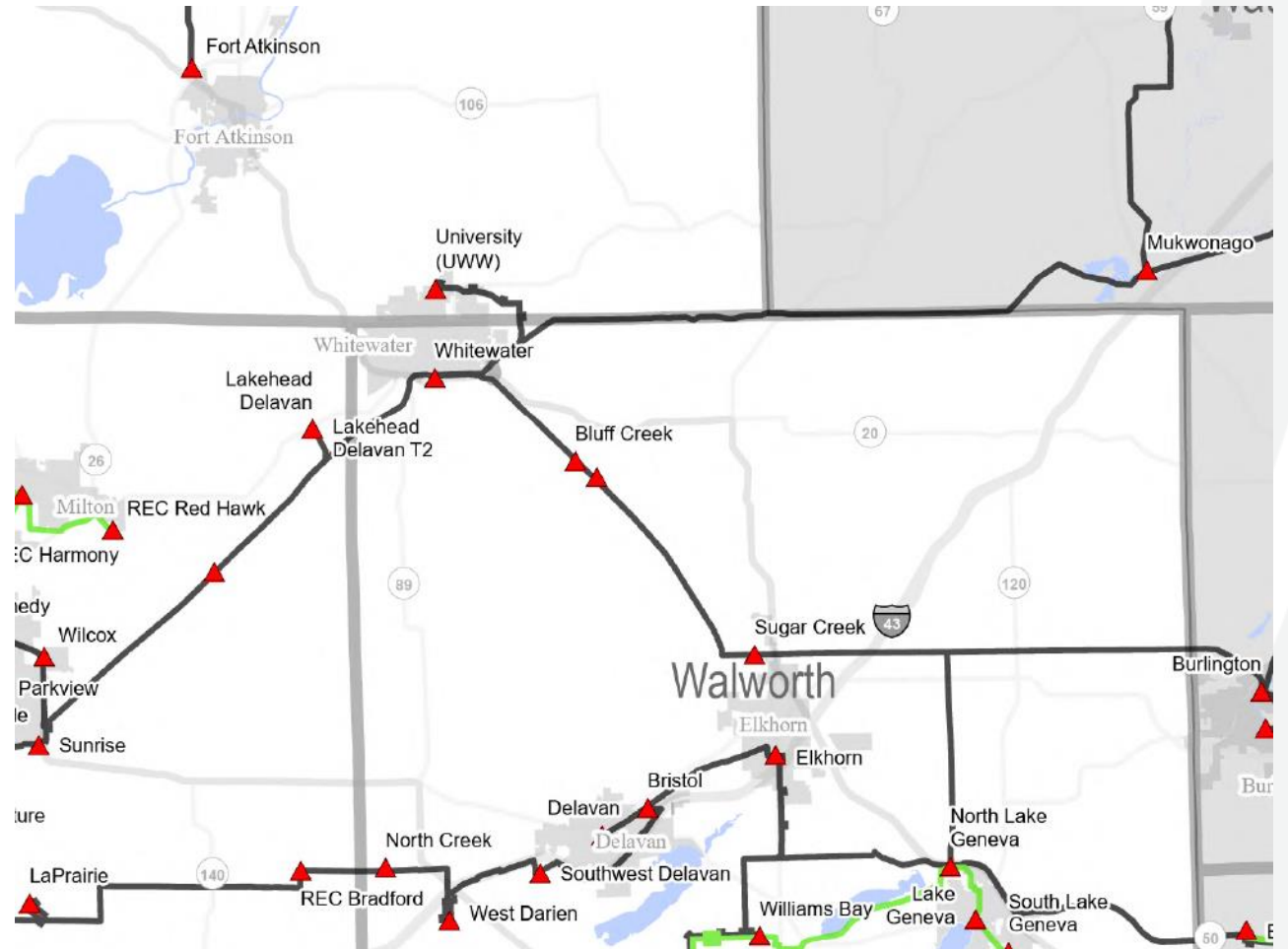
Note: Savings are 2023\$ present value gross 40-year benefit savings from the Customer Benefit Metric. Costs are 2023\$ estimates.

Cypress Area Conclusions

- **Uprate**
 - Eliminated due to insufficient benefit
- **Battery Storage**
 - Eliminated due to insufficient benefit/cost ratio
- **New 345kV Substation**
 - Eliminated due to insufficient benefit/cost ratio
- **New 138kV Substation**
 - Eliminated due to insufficient benefit/cost ratio

Whitewater Area Alternatives

- **New 138 kV line (2 alternatives)**
 - University – Fort Atkinson
 - Sugar Creek – Elkhorn
- **Multiple 138 kV lines**
 - Sunrise – Sugar Creek – Elkhorn
- **Double Circuit 138kV**
 - Add a University – Mukwonago 138 kV
- **Energy Storage**
 - Located at North Lake Geneva
 - 60 MW, 10 MWh



Whitewater Area Study Results

Alternatives	Benefits (\$M)	Cost Estimate (\$M)
New University – Fort Atkinson 138kV Line	\$47.7	\$60
New Sugar Creek – Elkhorn 138kV Line	(\$1.0)	\$10
New Sunrise – Sugar Creek – Elkhorn 138kV Line	(\$14.9)	\$50
Double Circuit 138kV	\$15.4	\$50
Battery Storage	\$15.9	\$40

Note: Savings are 2023\$ present value gross 40-year benefit savings from the Customer Benefit Metric. Costs are 2023\$ estimates.

Sensitivities

1) University – Fort Atkinson LRTP Sensitivity

Alternatives	Benefits (\$M)
New University – Fort Atkinson 138kV Line with LRTP Tranche 2	(\$0.33)

Note: Savings are 2023\$ present value gross 40-year benefit savings from the Customer Benefit Metric.

Whitewater – Bluff Creek Area Conclusions

- **New 138 kV University – Fort Atkinson line**
 - Eliminated due to insufficient benefit with potential LRTP Tranche 2 project(s)
- **New 138 kV Sugar Creek – Elkhorn**
 - Eliminated due to insufficient benefit
- **New 138 kV Sunrise - Sugar Creek - Elkhorn**
 - Eliminated due to insufficient benefit
- **Double Circuit Mukwonago – University**
 - Eliminated due to insufficient benefit/cost ratio
- **Battery Storage**
 - Eliminated due to insufficient benefit/cost ratio

Next Steps

- March 2023 – Next Stakeholder Meeting

Questions

- ATC Economic Planning
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Q&A