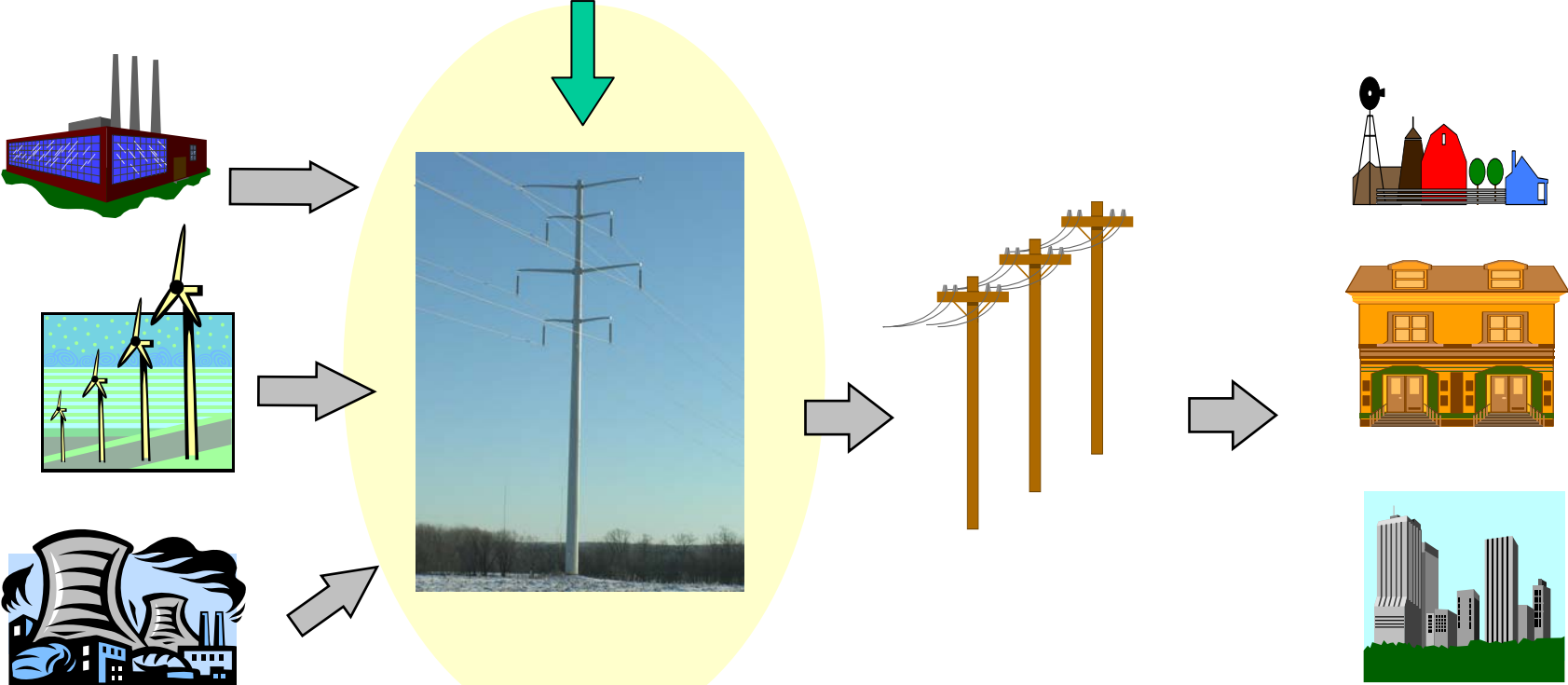


Talking Transmission

Tony Tewelis

Director - Customer Relations & Interconnection Services

What is transmission?



Multiple Sources of Generation

Interconnected Transmission System (Grid)

Distribution System

Customers

Who is ATC?

We are responsible **for building, operating, upgrading and maintaining** the transmission system in most of Wisconsin and Michigan's Upper Peninsula as well as a small area of Illinois

We help **ensure the reliability of the transmission system** that delivers power to all customers using the grid in the upper Midwest

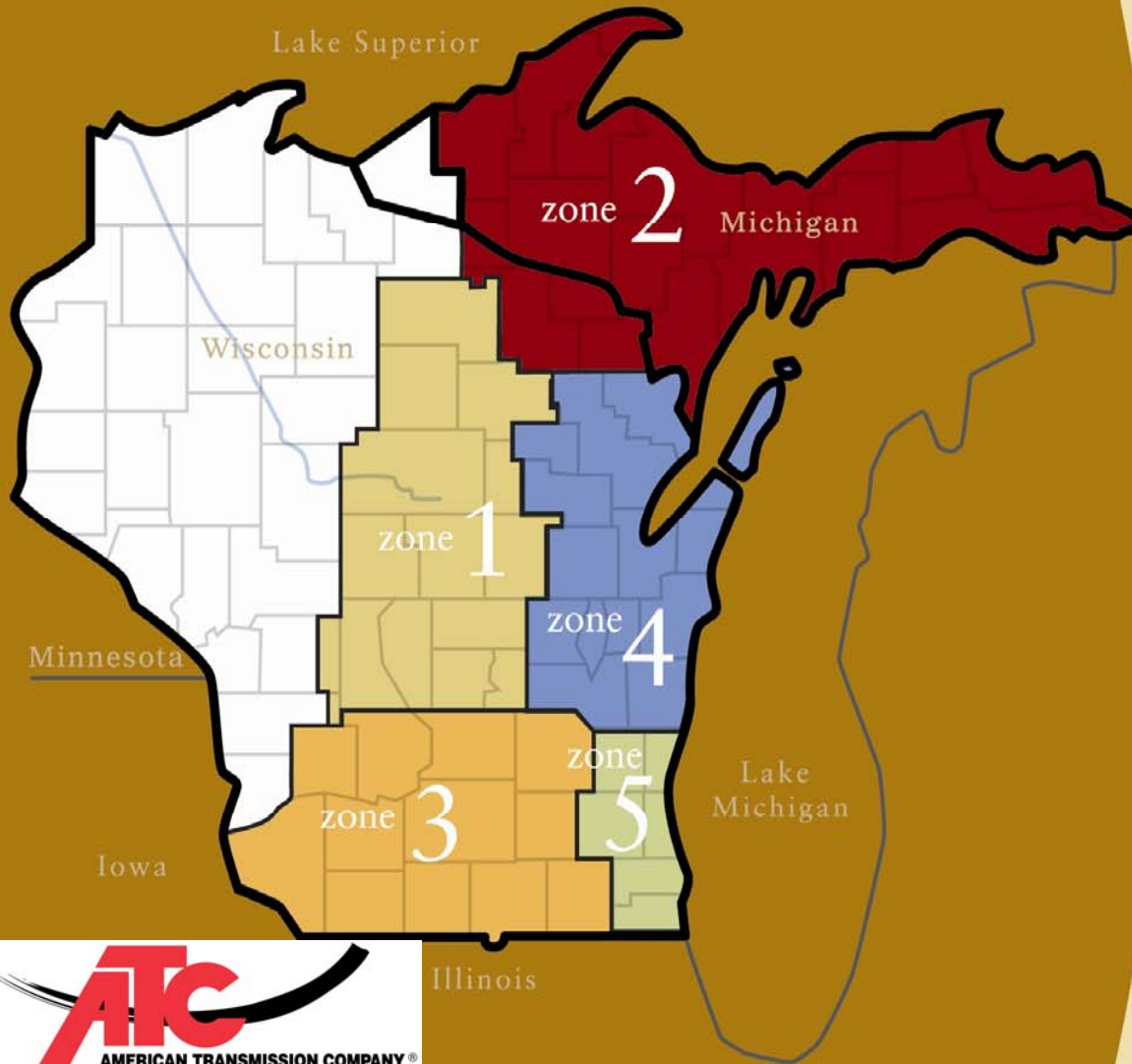
We are the critical **link between generating plants and the utilities** that provide power to your homes and businesses.

ATC: Background

- Began operations January 1, 2001
- 29 equity owners
- A member of the Midwest Independent Transmission System Operator & multiple reliability organizations
- Regulated by FERC for rates
- Regulated by states for siting transmission infrastructure
- Headquartered in Pewaukee, Wisconsin
- System can deliver more than 13,000 MW



ATC service territory



ATC at a glance

- Formed in 2001 as the first multi-state, **transmission-only utility**.
- Owner and operator of approximately **9,100 miles of transmission line** and **480 substations**.
- Meeting electric needs of approximately **five million people**.
- Transmission facilities in **66 counties** in Wisconsin, Michigan and Illinois.
- **\$1.8 billion** in total assets.
- **Seven offices** in the communities of Cottage Grove, De Pere, Madison, Waukesha and Wausau, Wis.; Kingsford, Mich.; and Washington DC.

www.atcllc.com

The transmission system today

■ System at its limits

- New growth/generation/service cannot be adequately accommodated without reinforcement
- Enabling ongoing reliability requires reinforcement
- Very little system operating margin
- Insufficient import/transfer capability

■ Key drivers

- Load growth and location of growth
- New generating units
- Access to markets
- Other need drivers

ATC's response to situation

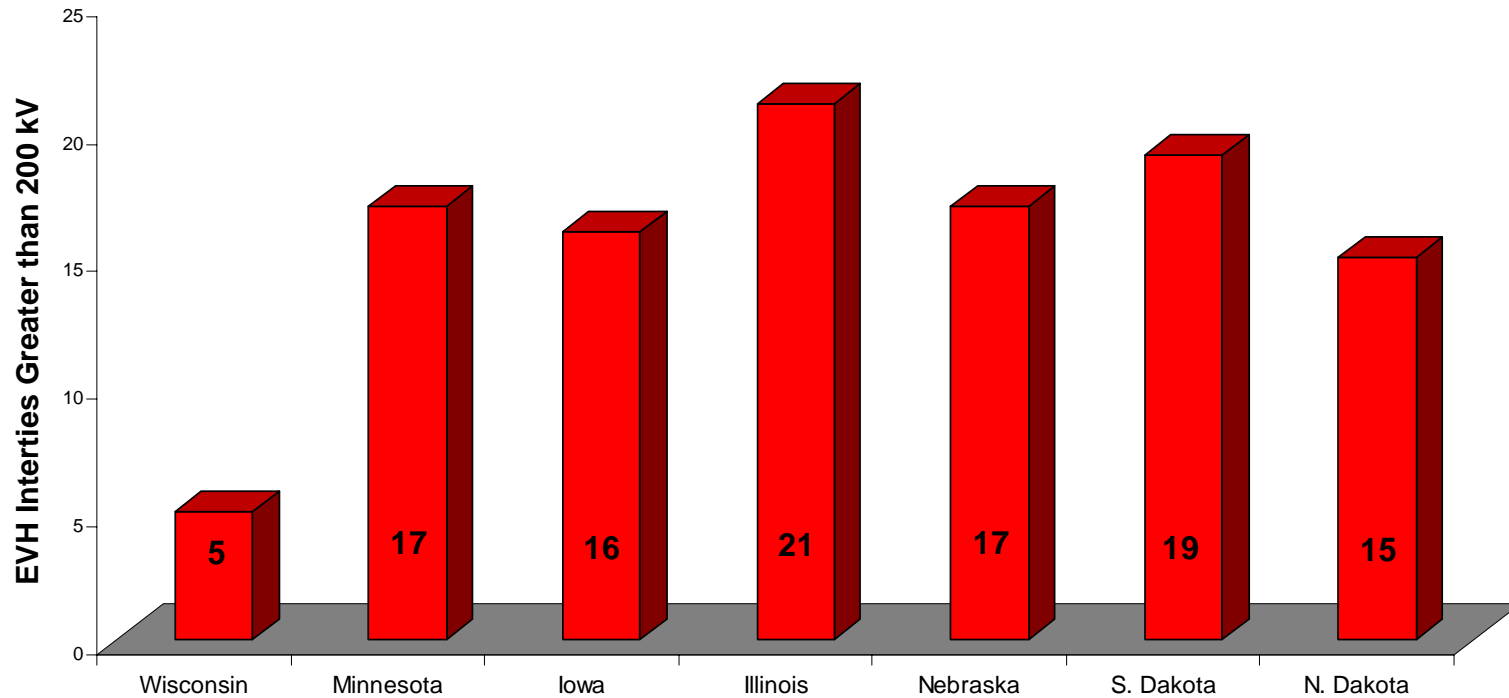
- Investment: \$3.1 billion next 10 years
- Growth: 160 projects
- Interconnections: 195 projects
- New generation: 30
- Transmission service: 41 projects
- Others (repairs, address service limitations): 31

ATC's current plan

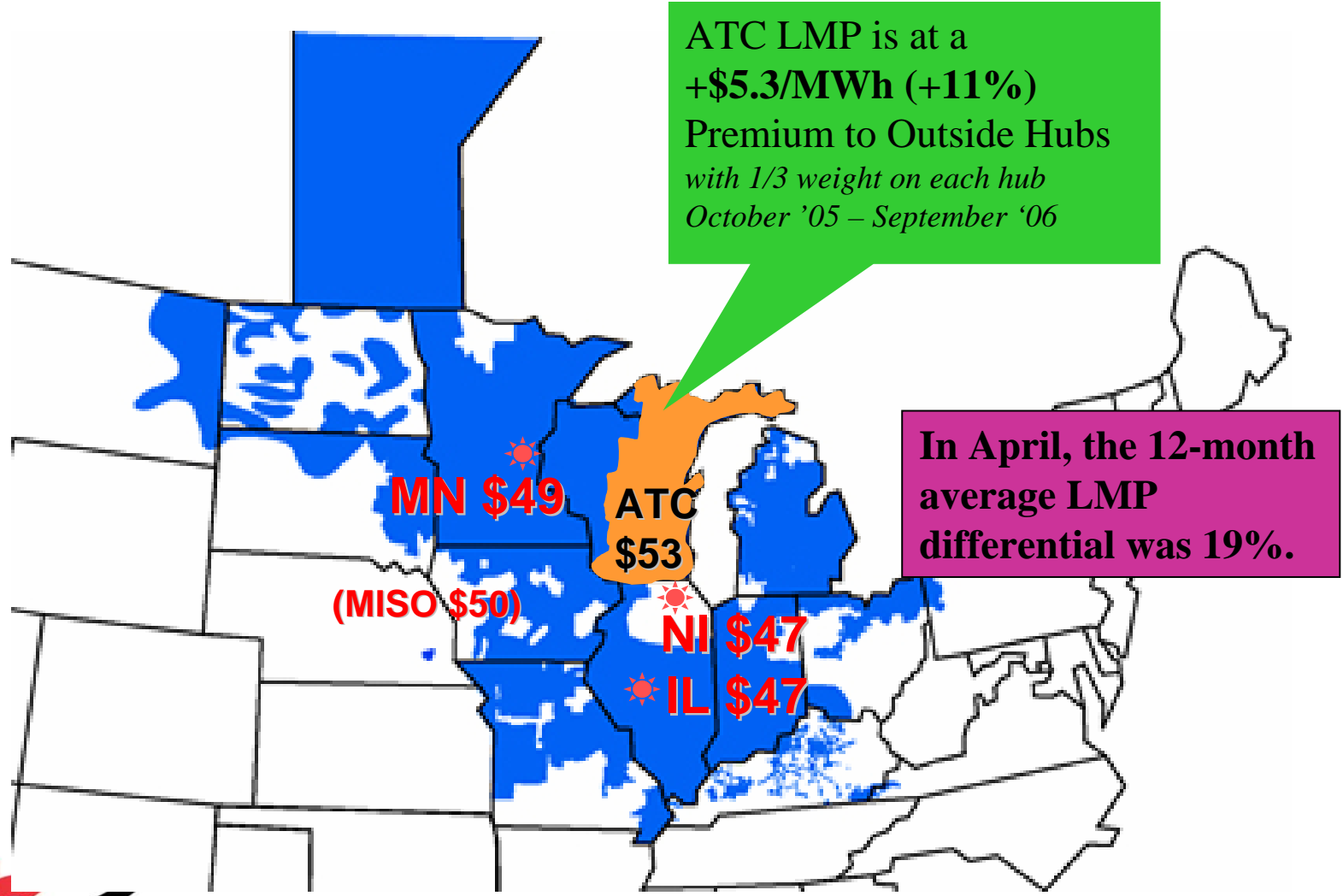
- Major projects approved/under construction:
 - Arrowhead-Weston
 - Gardner Park-Central Wisconsin
 - Morgan-Werner West
 - Cranberry-Conover-Plains
 - Oak Creek/Elm Road
- Major projects proposed/provisional:
 - Dane County
 - Access Initiative



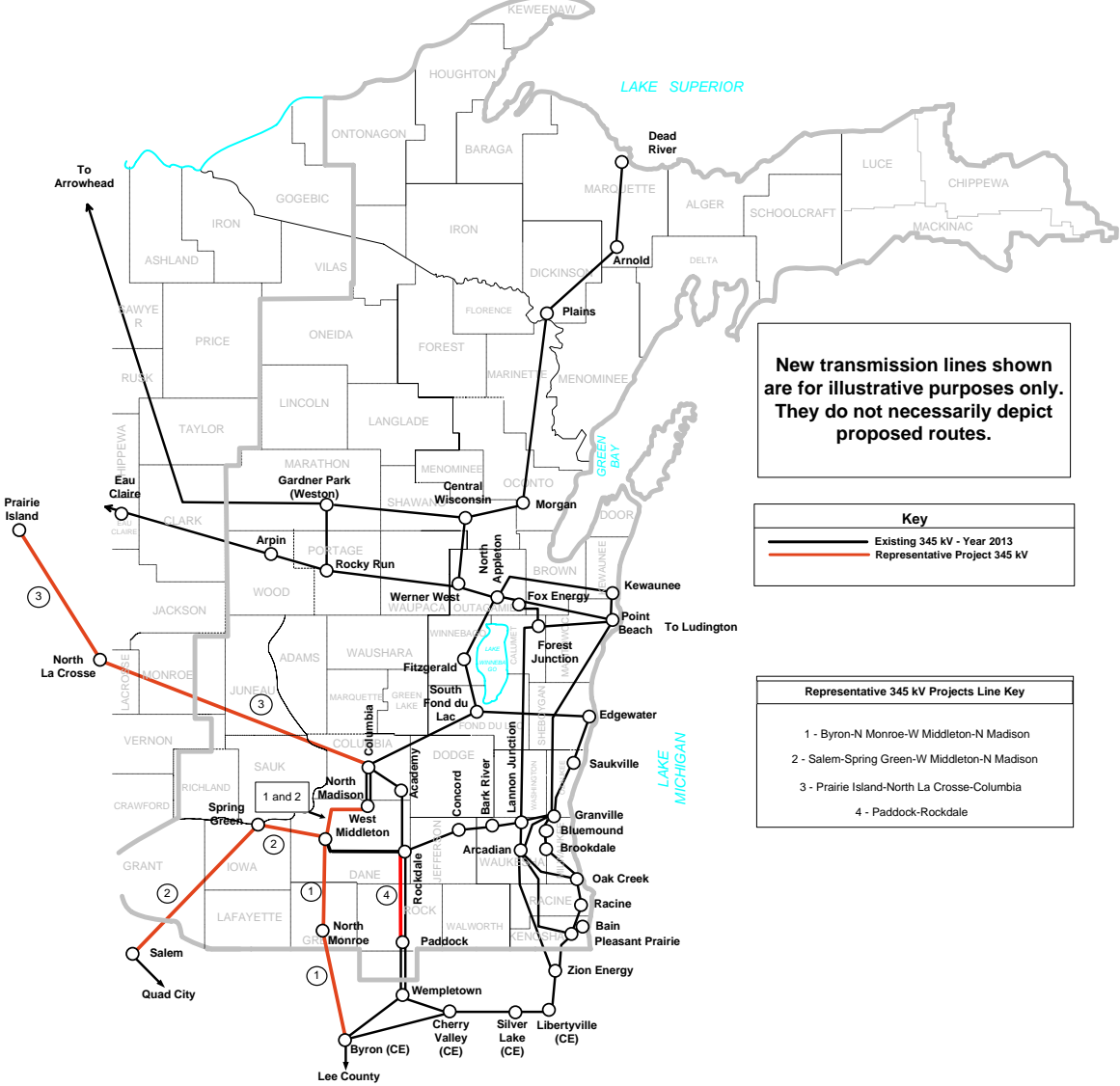
High Voltage Interconnections



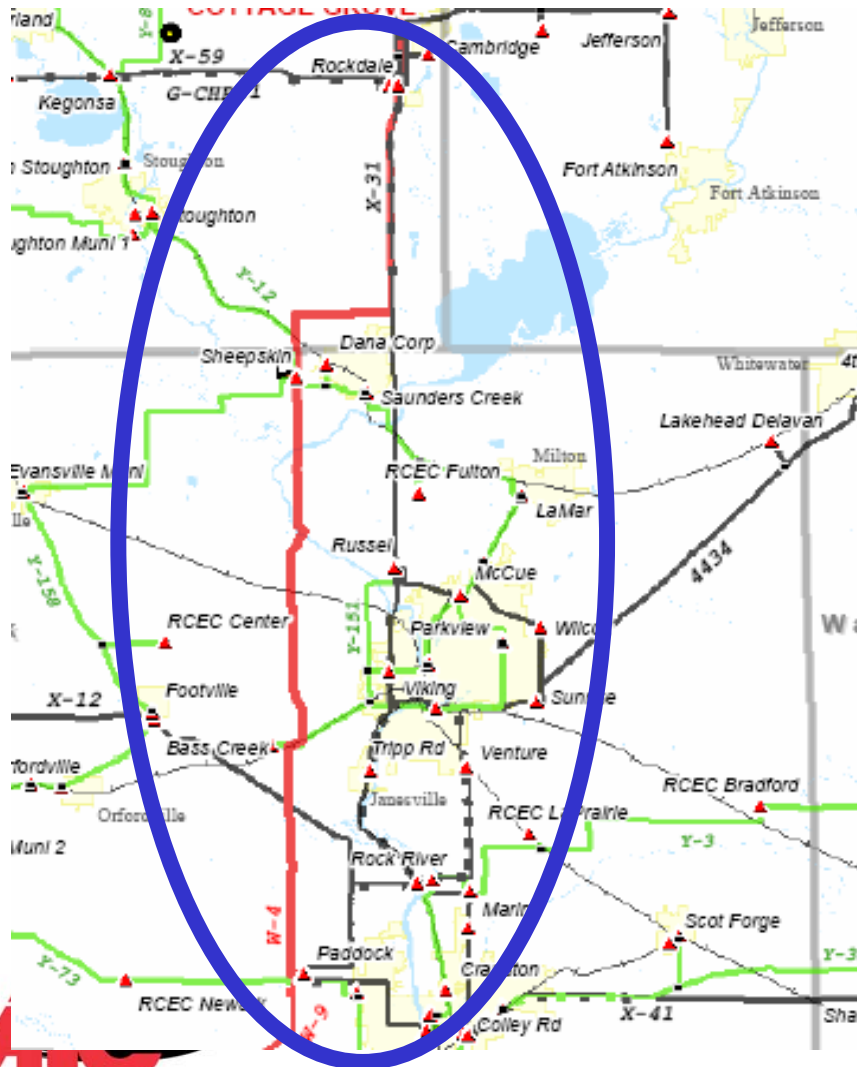
LMP Differentials



Access Alternatives



Project Map Study Area



Project Package:

- Add 345 kV circuit to existing W4 345kV Paddock Rockdale line
- Replace the Rockdale transformer
- Upgrade the Portage-Trienda 138kV line to increase capacity

Existing Line Rating:

- 1214MVA, 181°F

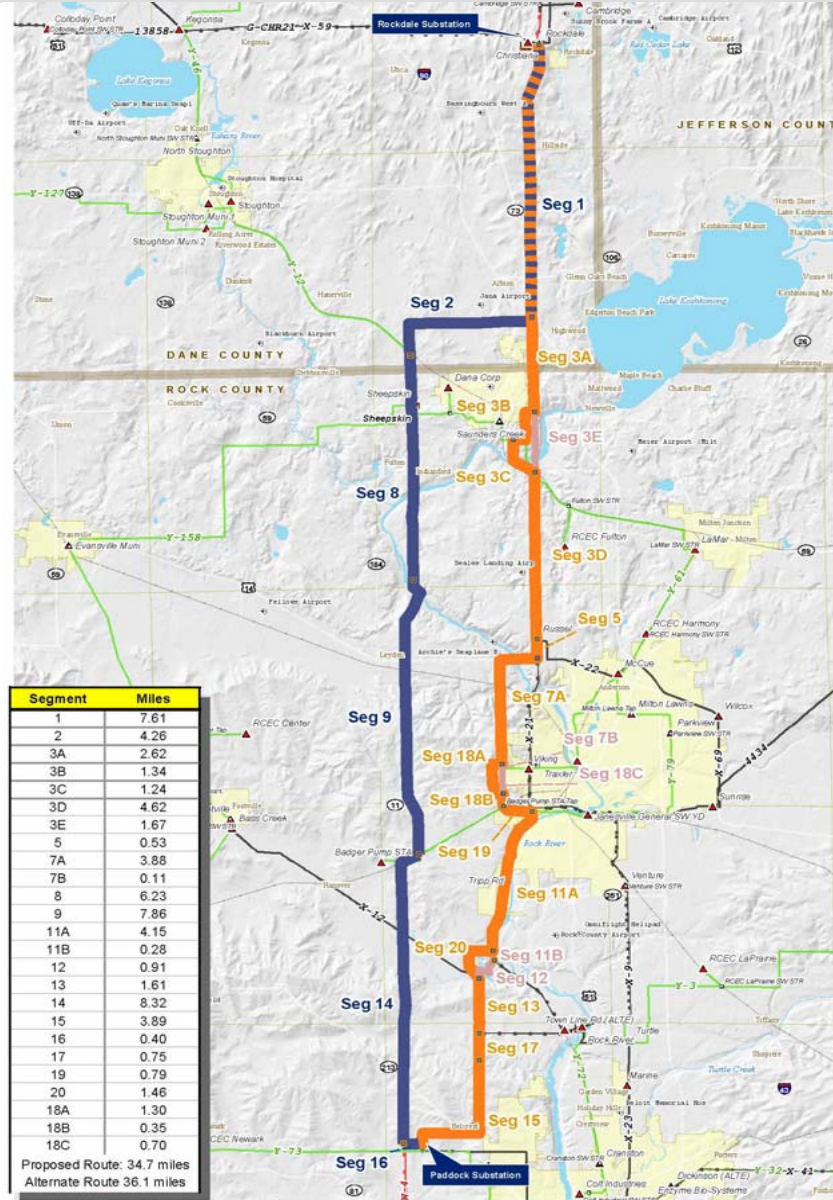
Original Line Installed:

- 1975

Proposed and Alternate Routes

Proposed Route

Alternate Route



Segment	Miles
1	7.61
2	4.26
3A	2.62
3B	1.34
3C	1.24
3D	4.62
3E	1.67
5	0.53
7A	3.88
7B	0.11
8	6.23
9	7.86
11A	4.15
11B	0.28
12	0.91
13	1.61
14	8.32
15	3.89
16	0.40
17	0.75
19	0.79
20	1.46
18A	1.30
18B	0.35
18C	0.70

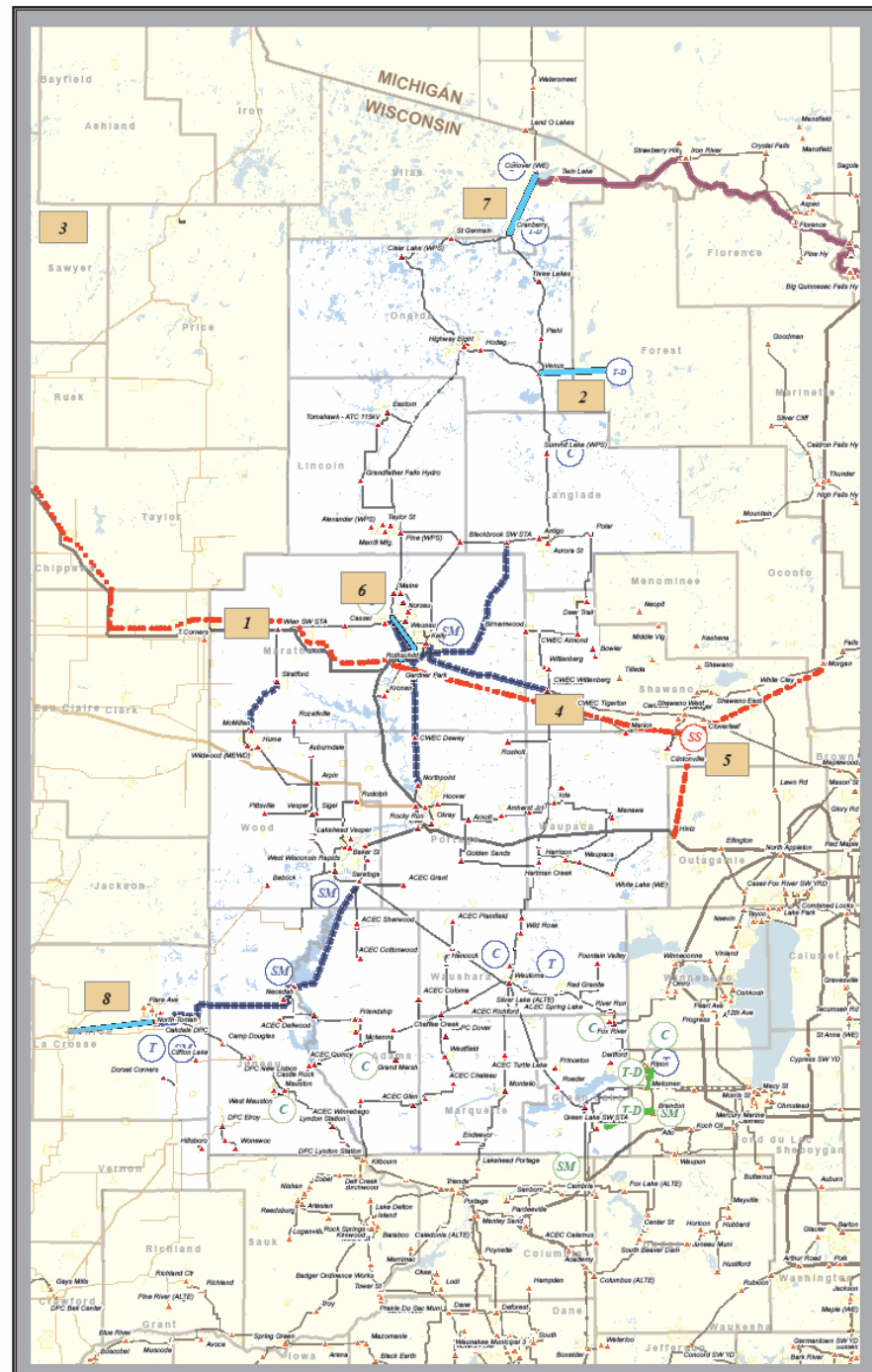
Proposed Route: 34.7 miles
Alternate Route: 36.1 miles

Zone 1 Projects

1. Arrowhead – Weston 345 kV Line 2006/2008
2. Venus – Metonga 115 kV Line 2007
3. Stone Lake Substation 2008
4. Gardner Park – Central Wisconsin 345 kV Line 2009
5. Central Wisconsin 345 kV Substation 2009
6. Weston – Sherman St. – Hilltop 115 kV Rebuild
& new Gardner Park – Hilltop 115 kV Line 2007
7. Cranberry – Conover 115 kV Line 2008
8. Monroe County – Council Creek 161 kV Line 2012

Zone 1 Map

Please refer to ATC
Zone 1 Handout



Zone 4 Projects

1. Loop Butternut – South Fond du Lac 138 kV into Forward Energy Center 2007
2. Loop Forest Junction – Arcadian 345 kV into Cypress Substation 2007
3. Werner West 345 /138 kV Substation 2006
4. Stiles – Amberg double circuit 138 kV line rebuild 2006
- ★ Sunset – Ellinwood second circuit 138 kV Line 2007
5. Werner West – Morgan 345 kV line and Clintonville – Werner West 138 kV line 2009
6. Crivitz – High Falls 69 kV double circuit line rebuild 2009
7. Canal – Dunn Road 138 kV Line 2012
8. Dunn Road – Egg Harbor 138 kV Line 2016
9. Shoto – Custer 138 kV Line 2012
10. Bayport – Suamico – Sobieski – Pioneer 69 kV line rebuild & conversion to 138 kV 2016
11. Northside – City Limits (Appleton) 138 kV Line 2016

Zone 4 Map

Please refer to ATC
Zone 4 Handout



What are the challenges?

- Planning ahead for changing conditions
- Resource-intensive: both labor and capital
- Siting new facilities is a long process
 - 5 to 7 years for a new major transmission line
- Gaining support for new projects
- NIMBY & NUMBY

Electric transmission is approximately
5%-7% of the average electric bill

YOUR ELECTRIC BILL

Meg A. Watts
NRG4 Electric Ave.
Rehliaville, WI

**Generation &
Fuel Costs**

**Distribution
Costs**

**Transmission
Costs**

Why public outreach?



- Tell public and regulators about need and possible impacts
- Learn their concerns
- Respond to concerns and questions
- Demonstrate fairness
- Spend time now....
Save time later

How can you assist?

- Become informed
- Read project literature
- Attend open houses
- Ask questions – WPS & ATC
- Regulatory public comment period
- Contact & inform employees / civic groups
- Provide feedback

Contacts

- Rick Czajka (920) 338-6575
Senior Regional Manager – Customer Relations
- Brett French (906) 779-7902
Senior Regional Manager – Customer Relations
- Greg Levesque (608) 877-3649
Manager – Customer Relations
- Tony Tewelis (262) 506-6797
Director – Customer Relations & Interconnection Services

Questions?

