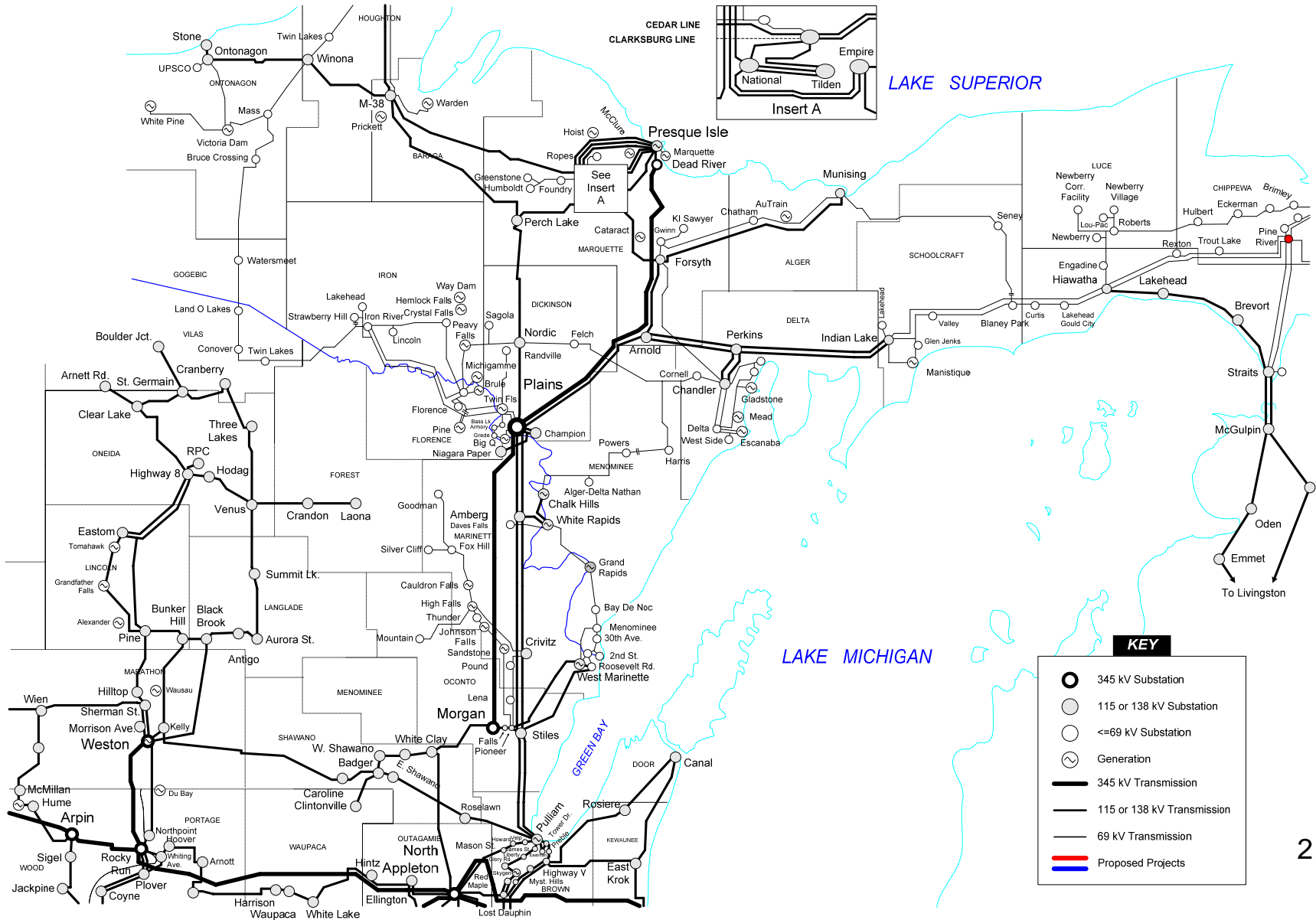




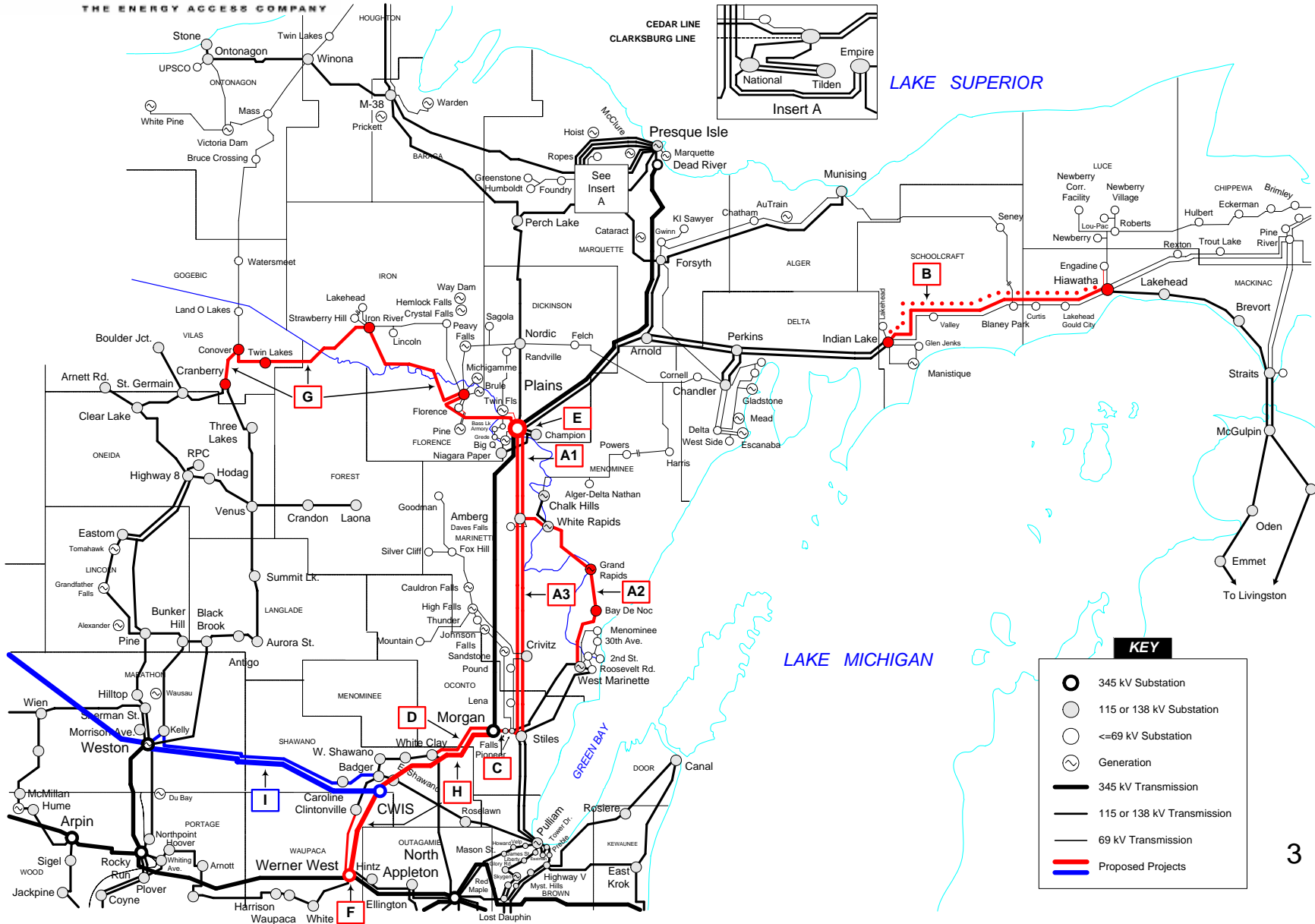
Northern Umbrella Plan Update

July 16, 2007









System Prior to NUP Projects



Northern Umbrella Plan



KEY

	345 kV Substation
	115 or 138 kV Substation
	<=69 kV Substation
	Generation
	345 kV Transmission
	115 or 138 kV Transmission
	69 kV Transmission
	Proposed Projects



NUP Projects

Completed Projects:

A: Plains – Stiles 138 kV Rebuild

B: Indian Lake – Hiawatha 69 kV to 138 kV Rebuild

C: Morgan – Stiles 138 kV Rebuild

D: Morgan – White Clay 138 kV Up-rate

F: New Werner West 345/138 kV Substation

In-progress Projects:

E: Add 2nd Plains Transformer

G: Cranberry – Conover – Plains Project

H: Morgan – Werner West 345 kV Line (including Clintonville – Werner West 138 kV)

I: Gardner Park – Central Wisconsin 345 kV Line (for generator interconnection)



Project Overview and Status

E. Second Transformer at Plains

- Scope
 - Add a second 345/138 kV, 250MVA transformer
- Schedule/Status
 - Project planning in progress (scoping, estimating, etc.)
 - Will obtain internal ATC project authorization in August '07 (was June/July '07)
 - New transformer has been ordered
 - Planned in-service December 2009



Project Overview and Status

G. Cranberry-Conover-Plains

- Scope
 - Phase 1: New 15 miles of 115kV line (overhead and underground) from Cranberry to new Lakota Road Substation with modifications at various substations including Conover SS
 - Phase 2: Rebuild 69kV line from Conover SS to Iron River SS to 138kV including new Iron Grove SS
 - Phases 3 and 4: Rebuild 69kV line from Iron River SS to Plains SS to 138kV (single, double and triple circuit configurations) with modifications at various substations including Aspen SS



Project Overview and Status

G. Cranberry-Conover-Plains (cont'd)

- Phase 1 -- Schedule/Status
 - OH line, UG line and substation design/procurement activities underway
 - New easement acquisition underway
 - Construction start Aug. '07 UG line, Fall '07 SS and Dec. '07 OH line
 - Planned in-service June 2008
- Phase 2 -- Schedule/Status
 - OH and SS design and procurement activities underway
 - Partial construction (Twin Lakes crossing) 1Q08
 - Remainder of construction 3Q08 to 1Q09 (with construction complete to Twin Lakes SS in 3Q08)
- Phase 3 & 4 -- Schedule/Status
 - OH line and substation design/procurement activities will start 1Q08
 - Construction start 2Q09
 - Planned in-service June 2010



New Morgan-Werner West 345kV Line

ATC Executive approval	February 2005
ATC Board approval	February 2005
File CPCN application	March 2005
CPCN issued	June 2006
Pre-construction activities <i>(Surveying, engineering, real estate, material procurement)</i>	January 2006 – January 2009
Construction period	January 2007 – December 2009
Project in-service	December 2009



New Gardner Park-Central WI 345kV line

ATC Executive approval	February 2005
ATC Board approval	February 2005
File CPCN application	March 2005
CPCN issued	June 2006
Pre-construction activities <i>(Surveying, engineering, real estate, material procurement)</i>	January 2006 – January 2009
Construction period	January 2007 – December 2009
Project in-service	December 2009



Project Status Summary

Project Name	Key Need Drivers	Projected In-Service Date	Projected Cost	Status
A: Plains – Stiles 138 kV Rebuild	Physical condition; transfer capability; solution also results in a more robust parallel path for 2/3 of P-S corridor		\$94.3M	Complete
•A1: Plains – Amberg		October 2005	-	Complete
•A2: Amberg – West Marinette		November 2005	-	Complete
•A3: Amberg – Stiles		October 2006	-	Complete
B: Indian Lake – Hiawatha 69 kV to 138 kV Rebuild	TLR mitigation; voltage support; physical condition; local load-serving in Manistique area; required operating guide that splits the U.P. system			Complete
•Phase 1 – Rebuild Indian Lake – Glen Jenks		August 2004	\$6.1M	Complete
•Phase 2 – Rebuild as double circuit 138 kV, operate at 69 kV		March 2006	\$46.2M	Complete
•Phase 3 – Convert to 138 kV operation		N/A	N/A	Not part of the Northern Umbrella Plan
C: Morgan – Stiles 138 kV Rebuild as double circuit	Transfer capability	May 2006	\$8.0M	Complete



Project Status Summary

Project Name	Key Need Drivers	Projected In-Service Date	Projected Cost	Status
D: Morgan – White Clay 138 kV uprate (eventual rebuild as part of Element H)	Transfer capability	March 2005	\$0.4M	Project Complete.
E: Add 2 nd Plains transformer (250 MVA 345/138 kV)	Transfer capability	4Q09	\$6.5M	Transformer ordered, project scope, schedule and cost being defined and planned.
F: New Werner West Substation with 345/138 kV transformer	TLR mitigation, system security	December 2006	\$14.2M	Project Complete.
G: Cranberry – Conover – Plains Project	Transfer capability; Transmission service; Reliability, physical condition	See below	\$125.9M (was \$118.7M)	
• Phase 1: New 115 kV Cranberry – Conover		June 2008	-	Design/procurement activities and ROW acquisition underway.
• Phase 2, 3 & 4: Rebuild 69 kV Conover – Plains to 138 kV		June 2010	-	Design/procurement activities started. Will design/construct from west to east.
H: New Morgan – Werner West 345 kV line & Clintonville – Werner West 138 kV line	Transfer capability, reliability, and network service.	2009	\$132.3M	Engineering and ROW activities continuing on Werner West – Hwy 22 and Morgan – White Clay temp line complete and permanent under construction.
I: New Gardner Park – Central Wisconsin 345 kV line & Central Wisconsin 345 kV switching station	Required for new Weston 4 generation	2009	\$131.5M	Engineering and ROW activities continuing on Gardner Park – Whitcomb. Construction complete on Belle Plain Tap – Hwy 22 and Caroline – Belle Plain.



Northern Umbrella Plan Summary

- Current estimated cost for all projects is \$565 million
- Total project spending to date is approximately \$238 million (through May 2007)
- Of the 9 projects –
 - 5 are complete and in-service
 - 4 are in various stages of design and construction
- Construction and completion of all projects is expected in mid-2010