

*Table ZS-5
ATC Day Ahead Market Most Limiting Elements, 2010*

Severity Index	Hours	Constraint Element	Potential Solution
37.58	2,975	Pleasant Prairie - Zion 345-kV	Upgrade equipment at Zion Substation in ComEd system (In-Service March 2011) Pleasant Prairie - Zion Energy Center 345-kV line (Proposed 2014)
12.56	512	Minnesota to Wisconsin Exports Interface (MWEX)	Monroe County - Council Creek 161-kV line (Proposed 2014) Badger Coulee 345-kV line (Proposed 2018)
7.93	3,473	Nordic - Felch Tap 69-kV	Chandler 138/69-kV T2 (Proposed 2012) Flow Control Device (Proposed 2014) Arnold 345/138-kV Transformer (Proposed 2015)
7.52	415	Granville - Butler 138-kV	Upgrade equipment at Butler Substation (Planned 2012)
5.34	794	Oak Creek 345/230-kV Transformer T884	Area transmission outages may have contributed to this constraint
5.09	123	Rocky Run 345/115-kV Transformer T1	Monroe County - Council Creek 161-kV line (Proposed 2014)
4.56	313	Spring Green - Arena 69-kV	Rockdale - West Middleton 345-kV (Planned 2013)
3.69	977	Indian Lake 138/69-kV Transformer T2	Flow Control Device (Proposed 2014)
3.04	1,441	Flow South PTDF	Flow Control Device (Proposed 2014)
2.57	1,420	Chandler - Delta 69-kV CKT 1	Chandler - Delta 69-kV Ckt 1 and Ckt 2 Line Uprate (In-Service 2010)
2.56	1,403	Chandler - Delta 69-kV CKT 2	Chandler - Delta 69-kV Ckt 1 and Ckt 2 Line Uprate (In-Service 2010)
1.71	61	Arcadian 345/138-kV Transformer T2	Replace Arcadian Transformers T2 and T3 (Provisional 2020)
1.53	144	Saukville - Edgewater 345-kV	ATC is investigating a future 345-kV N-S path in the Fox Valley corridor
1.34	292	McCue - REC Harmony Tap 69-kV	Construct 69-kV double-circuit line between McCue and Lamar (Provisional 2019)
1.16	109	Arpin - Sigel 138-kV	Monroe County - Council Creek 161-kV line (Proposed 2014) Badger Coulee 345-kV line (Proposed 2018)
109.19	18,403	Total for All ATC Day Ahead Constraints - 2010	