

Weston G4 Upgrades and Associated Projects

Item	Facility	Description	TSR and/or GIR	Project Impact on W4	Inservice Status	Required In service
1a	Gardner Park Substation (Weston) – AW	Install new 345 & 115kV switchyards and 2 - 345/115kV transformers	GIR	A,C,D	Complete	May-06
2	Arrowhead Substation – AW	Expand 230kV switchyard, install phase shifter, 345/230kV transformer and 345kV line terminal	GIR	A,C,D	Ahead of Schedule	Jun-08
3	Arrowhead-Gardner Park (Weston) 345 kV line - AW	New 220 mile 345kV transmission line	GIR	A,C,D	Ahead of Schedule; Possible Livening Jan 08	Jun-08
4	Morgan Substation – M-WW	Add 345 kV line terminal	GIR/TSR 500 MW	A,D	On Schedule	Dec-09
5	Werner West Substation	Install new 345 & 138kV switchyards and a 345/138kV transformer	GIR/TSR 500 MW	A,D	Complete	Jun-06
6	MGN – WW 345kV line	New 47 mile 345kV transmission line	GIR/TSR 500 MW	A,D	On Schedule	Dec-09
7a	Weston Substation	Upgrade all 8 ATC owned 115 kV breakers to 2-cycle, 50 kA	Pre-existing condition	A	Complete	Dec-06
8	Butte Des Morts, Rocky Run, Whiting	10 Breakers 3 at Butte Des Morts (50632, Bus 1-2 and 43022) Scheduled for 12/06. 2 at Whiting Avenue, 1 (H-138) already completed, 1 (1151) scheduled for 11/1/08 - Maintenance has determined that this is acceptable. 5 at Rocky Run, 2 (N-92 and T-20) already completed, 3 (166, 266, and 1151) scheduled for 5/15/07	Pre-existing condition	A	Butte Des Morts - Complete Rocky Run December 2007 and Whiting by June 2008.	Jun-05
10	WES-SHS-HLT 115kV line	Upgrade line and subs	TSR to 550 MW	A,B,C	Complete	Jun-07
11	Weston-Morrison Ave.-Sherman St. 115kV line	Upgrade line and subs	TSR to 500 MW	A,B,C	Complete	Jun-07
12	T-20 Weston-Northpoint 115kV line	Reconductor line and subs	TSR 500 MW	A,C	Complete	Apr-07
13	F-110 Weston-Kelly 115 kV line	Upgrade line and subs	TSR 500 MW	A, C, D	Complete	Jun-06
14	J-36 Kelly-Whitcomb 115 kV line	Upgrade line and subs	TSR 500 MW	A,C	In Progress	Jun-08
15	Morgan-Falls 138 kV line	Rebuild/reconductor	TSR 500 MW	A,D	Complete	Jun-05
16	Weston – Rocky Run 345 kV line	Uprate line to 1200 amps by moving 345 kV termination to the Gardner Park substation	TSR 500 MW	B,C,D	Complete	May-06

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17	Plover-Whiting 115kV line	Upgrade line and subs	TSR 500 MW	C	Plover-Whiting Ave. line uprate: This project was listed in the original TSR (#75000492) dated 8/27/2003 as an interim project needed to allow G4 to generate at full output prior to the completion of the Gardner Park - Central Wisc. 345 kV line (assumes transfer trip protection scheme implemented). This project was removed as a required upgrade in the revised TSR dated 1/2/2005. The reason for change listed in the revised TSR as "re-examination of this 115 kV line has determined that the existing line capacity meets the TSR requirements".	Jan-08
1b	Gardner Park Substation (Weston)	Expand 345 kV switchyard to connection G4 and new 345 kV line to Central Wisconsin substation	GIR/TSR 500 MW	B,C,D	Complete	Jan-08
18	Gardner Park (Weston) -Central Wisconsin 345 kV line	New 50 mile 345 kV transmission line	GIR/TSR 500 MW	D	On Schedule	Dec-09
19	Central Wisconsin SS (HWY 22)	New 345 kV switchyard	GIR/TSR 500 MW	D	In Progress	Dec-09
7b	Weston Substation	Upgrade all 8 ATC owned 115 kV breakers to 63 kA	GIR	B,C,D	Complete	Mar-06
1c	Gardner Park Substation (Weston)	Upgrade all 11 ATC owned 115 kV breakers to 63 kA	GIR	B,C,D	Complete	Jan-06
20	North Appleton Substations	7 Breakers (6832, 6853, I-113, BS56, 6845, 6855, 6842 and 6865) already completed	GIR	B,C,D	Complete	Jun-07
Project Impact on W4 Operation						
A. ATC project required for system reinforcement independent of Weston G4						
B. ATC project required to allow W4 interim operate at 250 MW						
C. ATC project required to allow W4 interim operate at 400 MW						
D. ATC project required to allow W4 to operate at full generator output, 500 MW						