

**Comparison Between Arrowhead-Weston and the Generation Sensitivity Scenario<sup>1</sup>**

<sup>1</sup> Relative to the other alternatives the generation sensitivity scenario includes 720 MW of additional generation, which is sufficient along with imports to meet the LOLE criterion. The energy cost savings associated with this additional generation is captured by the LMP analysis. Using the EIA's capital costs for combined cycle and coal plants, this additional generation would cost around \$686 million dollars or \$58.3 million per year. Fixed operating and maintenance (O&M) costs on the 720 MW of generation would add another \$19 million per year. These estimates are low because the capital and O&M costs associated with the 90 MW uprate of Point Beach were not included because they were unavailable. The "yearly transmission cost to support new generation" is based on the transmission upgrades required for Weston (500 MW) (using the transmission option without Arrowhead-Weston), Walnut (130 MW) and Point Beach (90 MW) identified in the corresponding Facility and Generator Interconnection studies.

Generation Sensitivity Scenario 2002 Dollars		Generation Sensitivity Scenario
	Item	
Capital cost (\$/kW)		Various
Needed LOLE Generation Capacity (MW)		-50
Total construction cost of additional generation (millions)		\$686.4
Yearly capital cost (millions)	A	\$58.3
Yearly transmission cost to support new generation (millions)	B	\$23.6
Fixed O&M of additional generation (millions)	C	\$14.3
Missed opportunity for LMP savings relative to A-W (millions)	D	-\$37.3
Super peak energy cost to meet the LOLE (millions)	E	\$0.0
Total yearly costs (millions) F=A+B+C+D+E	F	58.97
Difference in PVRR relative to the A-W Scenario (millions) <sup>2</sup>	G	\$415.1

PVRR Factor	Gen. Sen. PVRR <sup>2</sup>
0.948	24.5
0.898	23.2
0.852	22.0
0.807	20.9
0.765	19.8
0.725	18.8
0.687	17.8
0.652	16.9
0.618	16.0
0.585	15.1
0.555	14.4
0.526	13.6
0.499	12.9
0.473	12.2
0.448	11.6
0.425	11.0
0.402	10.4
0.381	9.9
0.362	9.4
0.343	8.9
0.325	8.4
0.308	8.0
0.292	7.5
0.277	7.2
0.262	6.8
0.249	6.4
0.236	6.1
0.223	5.8
0.212	5.5
0.201	5.2
0.190	4.9
0.180	4.7
0.171	4.4
0.162	4.2
0.154	4.0
0.146	3.8
0.138	3.6
0.131	3.4
0.124	3.2
0.117	3.0
<b>PVRR Relative to the A-W Alternative (millions)</b>	<b>\$415.1</b>

**Generation Capacity Needed to Meet the LOLE Criterion in 2008**

	Generator Sensitivity, MWs of Additional Generation Needed
Capacity Needed to Meet the LOLE Criterion <sup>3</sup>	1,760
Maximum Simultaneous Import Capability <sup>4</sup>	1,810
Difference ("Needed LOLE Generation Capacity")	-50

<sup>3</sup> These values are from Ron Harsevoort's June 2003 Loss-of-Load Expectation (LOLE) analysis, which used MAIN's reliability criterion of no more than 0.1 days/year.

<sup>4</sup> Wisconsin's maximum simultaneous import capability is estimated at 1,810 MW (when more imports are coming from the south than the west) as indicated on page 19 of Wisconsin Public Service Corporation's (WPSC's) CPCN application for Arrowhead-

<sup>2</sup> The difference in the "Total yearly costs" between the A-W Alternative and generator sensitivity scenario is calculated. This yearly difference is discounted using a 5.5% real discount rate (the PSCW-approved value from Advance Plan 8) over 40 years. This is the same approach as used in the A-W FEIS, P. 160.