

Uncertainty	Unit	Low	Mid/Low	Mid
Capital Costs				
Coal Fired Capacity	(\$/KW)	2,113		2,452
CC	(\$/KW)	912		1,059
CT	(\$/KW)	620		737
Nuclear	(\$/KW)	3,485		3,947
Wind-Onshore	(\$/KW)	1,857		2,195
IGCC	(\$/KW)	2,356		2,750
IGCC w/Sequestration	(\$/KW)	2,869		3,669
CC w/Sequestration	(\$/KW)	1,583		1,879
Storage	(\$/KW)	2,400		3,000
Photovoltaic	(\$/KW)	5,190		6,434
BioMass	(\$/KW)	3,237		4,013
Hydro	(\$/KW)	1,927		2,389
Wind-Offshore	(\$/KW)	3,310		4,104
Distributive Generation-Peak	(\$/KW)	1,414		1,753
Demand and Energy				
Demand Growth Rate	%	0.3		0.75
Energy Growth Rate	%	0.3		1.0
Fuel Prices (Starting Values)				
Gas	(\$/MBtu)	4.35		6.22
Oil	(\$/MBtu)	Powerbase - 20%		PowerBase Default
Coal	(\$/MBtu)	Powerbase by unit - 20%		PowerBase Default (by unit)
Uranium	(\$/MBtu)	0.90		1.12
Fuel Prices (Escalation Rates)				
Gas	%			2.91
Oil	%			2.91
Coal	%			2.91
Uranium	%			2.91
Emissions				
SO ₂	(\$/ton)			Powerbase default
NOx	(\$/ton)			Powerbase default
CO ₂	(\$/ton)	20		50
z	(\$/ton)			60000000.00
Economic Variables				
Discount Rate	%			8.39
Inflation Rate	%			2.91
Potential Coal Retirement		To be determined by MISO - report back at CARP VI		To be determined by MISO - report back at CARP VI
Renewable Penetration as a percentage of total energy delivered				

Midwest ISO	%			Use existing state requirements in the MISO footprint
National	%	0.0	10	20
Carbon Reduction Requirements from Baseline Level				
CO2	%	0.0		1/2 of Waxman-Markey Bill: 2012 - 1.5%; 2020 - 8.5%; 2030 - 21%

*All costs in 2010 dollars

Key

Variables decided at 5/28 meeting are in GREEN

	Use existing standards or pending proposals as well as goals; for those without a standard, use an average of other state requirements
	25.0
	Waxman-Markey Legislation up to 2030; 2012 3%/2020 17%/2030 42%

Use an average of other mandates for states without mandate

Uncertainties

Uncertainties																				
				and	Fuel Cost				Emissions Cost				Economic			Wind	Carbon	Storage		
BioMass	Wind Offshore	Distributive Generation - Peak	Hydro	Demand growth Rate	Energy Growth Rate	Gas	Oil	Coal	Uranium	SO ₂	NO _x	CO ₂	Hg	Inflation	Discount Rate	Uneconomic Coal Retirement	MISO Wind Penetration Mandate	National Mandate	% Reduction	Forced Penetration
M	M	M	M	M	M	M	M	M	M	M	M	0	M	M	M	L	M	L	L	L
M	M	M	M	M	M	M	M	M	M	M	M	0	M	M	M	L	M	M	L	L
M	M	M	M	L	L	H	M	L	H	M	M	L	M	M	M	L	M	L	H	L
M	M	M	M	L	L	M	M	L	M	M	M	H	M	M	M	L	M	L	L	L
M	M	M	M	L	M	M	M	M	M	M	M	0	M	M	M	L	M	L	L	L
M	M	M	M	L	L	H	M	L	H	M	M	L	M	M	M	L	M	M	H	L
M	M	M	M	L	M	M	M	M	M	M	M	0	M	M	M	L	M	M	L	L
M	M	M	M	M	H	H	L	L	H	M	M	L	M	M	M	L	M	L	H	L
M	M	M	M	M	H	H	M	L	H	M	M	L	M	M	M	L	M	M	H	L
M	M	M	M	H	H	M	M	M	M	M	M	0	M	M	M	L	M	L	L	L