

ATC Futures - ATC Energy Collaborative - Michigan

February 8, 2010 (Stakeholder Comment Draft) (High Retirement Version 2(Rev 1.0))

UP Micro-Drivers	Load Assumptions												Generation Assumptions											New Generation in Northern Lower Michigan	
	Demand Growth Within UP (Demand MWs)			Energy Growth Within UP (Energy MWHrs)			Total Point Loads MW added in the UP (2018/2024)			Total UP Growth (2018)	Total UP Growth (2024)	Demand Growth Outside UP (MWs)	Existing UP Generation Profile (Changes in Dispatch Characteristics)			UP Generation Additions			UP Generation retirements			Wind Generation			
	West	Central	East	West	Central	East	West	Central	East	U.P.	U.P.		West	Central	East	West	Central	East	West	Central	East	West	Central		East
Very Low							(-14/0)							Fossil (-511)											
Lower	-0.10%	0.08%	0.10%	-0.10%	0.08%	0.10%	(-6 / 0)	(-111 / 0)	(-2 / 0)			0.5%	Fossil (-69 MW)	Fossil (-151 MW)	9.4MW Diesel Available			5 MW			116 MW				
Mid-Lower	0.36%	0.48%	0.40%	0.36%	0.48%	0.40%	No Change	-40 MW	No Change	-0.24%	-0.05%	1.0%	Fossil (-51MW)	Fossil (-134)											
Mid	0.73%	0.84%	0.75%	0.73%	0.84%	0.75%	(+5 / 0)	(+29 / 0)	(+33 / 0)	1.14%	0.84%	1.75%	Fossil (-40MW)	Fossil (-65 MW)	11.4MW Diesel Available		10MW	29 MW				25MW	50MW	50MW	
Mid-Upper	1.23%	1.25%	1.25%	1.23%	1.25%	1.25%	(+16 / +3)	(+79 / +20)	(+35 / +5)	2.00%	1.60%	2.0%	Fossil all available	Fossil (-40 MW)	11.4MW Diesel Available		35MW	93MW				50MW	100MW	100MW	
Upper	1.93%	2.00%	2.00%	1.93%	2.00%	2.00%	(+19 / +22)	(+134 / +50)	(+46 / +10)	3.00%	2.58%	3.0%	Fossil all available	Fossil all available	Diesel 100% Available (16MW)		50MW	101 MW			138 MW				

2018 Futures

Descriptions

Robust Economy	Upper	Upper	Upper	Upper	Upper	Upper	Upper	Upper	Upper	Upper		Upper 3%	Fossil all available	Fossil all available	20MW Hydro	W)	(+10MW)	(+101 MW)	(none)	(-116 MW)	(none)	(+25 MW)	(+50 MW)	(+50 MW)	Upper 600MW
High Retirements	Mid	Mid	Mid	Mid	Mid	Mid	Mid	Mid	Mid	Mid		Mid 1.75%	Fossil (-69 MW)	Fossil (-151 MW)	32MW Hydro	Mid-Upper	Upper	Upper	Lower	Lower	Lower	Mid	Mid	Mid	Upper 600MW
High Retirements (Version 2)	Mid	Mid	Mid	Mid	Mid	Mid	Very Low	Mid	Mid Lower	Mid		Mid 1.75%	Fossil (-69 MW)	Fossil (-511 MW)	20MW Hydro	Lower	Lower	Mid	Lower	Upper	Lower	Mid	None	(+50 MW)	Upper 600MW
High Environmental	Mid-Lower	Mid-Lower	Mid-Lower	Mid-Lower	Mid-Lower	Mid-Lower	Mid-Lower	Mid-Lower	Mid-Lower	Mid-Lower		Mid-Lower 1%	Fossil (-51MW)	Fossil (-134)	20MW Hydro	Lower	Lower	Fossil (+5 MW)	(none)	(-116 MW)	(none)	(+50 MW)	(+100 MW)	(+100 MW)	Lower 0
Slow Growth	Lower	Lower	Lower	Lower	Lower	Lower	Lower	Lower	Lower	Lower		Lower 0.5%	Fossil (-40MW)	Fossil (-65 MW)	Hydro 100% (44MW)	(none)	(+10MW)	(+5 MW)	(none)	(-116MW)	(none)	(+100MW)	(+200MW)	(+200MW)	Lower 0
DOE 20% Wind	Mid-Upper	Mid-Upper	Mid-Upper	Mid-Upper	Mid-Upper	Mid-Upper	Mid-Upper	Mid-Upper	Mid-Upper	Mid-Upper		Mid-Upper 2%	Fossil (-69 MW)	Fossil (-151 MW)	20MW Hydro	Mid	Mid	Lower	Lower	Lower	Lower	(+100 MW)	(+200 MW)	(+200 MW)	Mid 100MW
Fuel and Investment Limitations	Mid	Mid	Mid	Mid	Mid	Mid	Mid-Lower	Mid-Lower	Mid-Lower	Mid-Lower		Mid-Lower 1.3%	Fossil (-40MW)	Fossil (-65 MW)	Hydro Off Line (0MW)	(none)	(+10MW)	(+5 MW)	(none)	(-116 MW)	(none)	(none)	(none)	(none)	Lower 0

2024 Futures

Descriptions

Robust Economy	Upper	Upper	Upper	Upper	Upper	Upper	Upper	Upper	Upper	Upper		Upper 3%	Fossil all available	Fossil all available	20MW Hydro	W)	(+10MW)	(+101 MW)	(none)	(-116 MW)	(none)	(+25 MW)	(+50 MW)	(+50 MW)	Upper 600MW
High Retirements	Mid	Mid	Mid	Mid	Mid	Mid	Mid	Mid	Mid	Mid		Mid 1.75%	Fossil (-69 MW)	Fossil (-151 MW)	32MW Hydro	Upper	Upper	Upper	Lower	Lower	Lower	Mid	Mid	Mid	Upper 600MW
High Retirements (Version 2)	Mid	Mid	Mid	Mid	Mid	Mid	Very Low	Mid	Mid Lower	Mid		Mid 1.75%	Fossil (-69 MW)	Fossil (-511 MW)	20MW Hydro	Lower	Lower	Mid	Lower	Upper	Lower	Mid	None	(+50 MW)	Upper 600MW
High Environmental	Mid-Lower	Mid-Lower	Mid-Lower	Mid-Lower	Mid-Lower	Mid-Lower	Mid-Lower	Mid-Lower	Mid-Lower	Mid-Lower		Mid-Lower 1%	Fossil (-51MW)	Fossil (-134)	20MW Hydro	Lower	Lower	Fossil (+5 MW)	(none)	(-116 MW)	(none)	(+50 MW)	(+100 MW)	(+100 MW)	Lower 0
Slow Growth	Lower	Lower	Lower	Lower	Lower	Lower	Lower	Lower	Lower	Lower		Lower 0.5%	Fossil (-40MW)	Fossil (-65 MW)	Hydro 100% (44MW)	(none)	(+10MW)	(+5 MW)	(none)	(-116MW)	(none)	(+100MW)	(+200MW)	(+200MW)	Lower 0
DOE 20% Wind	Mid-Upper	Mid-Upper	Mid-Upper	Mid-Upper	Mid-Upper	Mid-Upper	Mid-Upper	Mid-Upper	Mid-Upper	Mid-Upper		Mid-Upper 2%	Fossil (-69 MW)	Fossil (-151 MW)	20MW Hydro	Mid	Mid	Lower	Lower	Lower	Lower	(+100 MW)	(+200 MW)	(+200 MW)	Mid 100MW
Fuel and Investment Limitations	Mid	Mid	Mid	Mid	Mid	Mid	Mid-Lower	Mid-Lower	Mid-Lower	Mid-Lower		Mid-Lower 1.3%	Fossil (-40MW)	Fossil (-65 MW)	Hydro Off Line (0MW)	(none)	(+10MW)	(+5 MW)	(none)	(-116 MW)	(none)	(none)	(none)	(none)	Lower 0