

## Proposed Coal-Fired Power Plants Summaries

Information	Consumers Energy	Wolverine Power Supply Cooperative, Inc.	Mid-Michigan Energy, LLC.	Holland Board of Public Works
Site Location	Essexville, 48732	Rogers City, 49779	Midland, 48640	Holland, 49423
Area	Attainment for all Criteria Pollutants	Attainment for all Criteria Pollutants	Attainment for all Criteria Pollutants	Attainment for all Criteria Pollutants
Boiler Type	Advanced Super Critical Pulverized Coal	Circulating Fluidized Bed	Super Critical Pulverized Coal or Ultra Super Critical Pulverized Coal	Circulating Fluidized Bed
Boiler Capacity, MW	930	600 (2 units 300 MW each)	750	78
Fuel	Primary: Sub-Bituminous Coal Secondary: Blend Eastern Bituminous Coal	Primary: Powder River Basin (PRB) Coal with a blend of up to 70% Petroleum Coke, 20% Biomass. Secondary: Illinois Basin Coal	PRB Coal, Low Sulfur Bituminous Coal, and Biomass, as well as start up on Natural Gas	Multiple fuels including coal (both bituminous and sub-bituminous), Petroleum Coke, sewage sludge, tires, and wood waste, 90% of the heat input will be based upon coal.
Auxiliary, Emergency, & Additional Equipment	Natural gas-fired auxiliary boiler, a diesel fuel-fired emergency generator, a fire pump, other misc engines & pumps, 2 multiple cell mechanical draft cooling towers, a new fuel and material handling facility.	Low sulfur fuel oil-fired auxiliary boiler, an emergency low sulfur oil-fired generator, 3 diesel fuel-fired fire pumps, a low sulfur fuel oil-fired turbine, and other necessary ancillary equipment for fuel processing, material handling, storage and disposal, and condenser water cooling.	Natural gas fired auxiliary boiler, 3 natural gas-fired back up steam generators and other necessary ancillary equipment for fuel processing, waste handling, and condenser water cooling	Ancillary equipment for solid fuel handling and condenser water cooling.
Permit Number	341-07	317-07	297-07	25-07
State Registration No.	B2840	N7867	N7863	B2357
Submittal Date	October 15, 2007	September 26, 2007	September 12, 2007	January 17, 2007
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<b>NO<sub>x</sub></b>				
Control	Low NO <sub>x</sub> burner, Over Fire Air, Selective Catalytic Reduction (SCR)	Limestone Injection + Selective Non-catalytic Reduction (SNCR)	Low NO <sub>x</sub> burner, Over Fire Air, SCR	Selective Non-catalytic Reduction (SNCR)
Control Efficiency	up to 97%	90%	90% or greater	90% (approx)
<b>SO<sub>2</sub></b>				
Control	Limestone Forced Oxidation and Wet Flue Gas Desulfurization (FGD)	Limestone Injection Polishing Scrubber (SDA)	Dry Scrubber (FGD)	Limestone Injection
Control Efficiency	95% to 98%	95%	94.40%	98%
<b>CO</b>				
Control	Process Design; Efficient Combustion (EC)	Process Design; EC	Process Design; EC	Process Design; EC
<b>VOC</b>				
Control	Process Design; EC	Process Design; EC	Process Design; EC	Process Design; EC
<b>PM</b>				
Control	Fabric Filter (FF)	FF	FF	FF
Control Efficiency	99% to 99.9%	99%	99%	99%
<b>PM<sub>10</sub></b>				
Control	FF	FF	FF	FF
Control Efficiency	99% to 99.9%	99%	99%	99%
<b>H<sub>2</sub>SO<sub>4</sub></b>				
Control	Hydrated Lime Injection	Limestone Injection Polishing Scrubber (SDA)	FGD, Lime Injection	Lime Injection
Control Efficiency	43% + control by FGD	95%	95%	
<b>Fluorides as Hydrogen Fluoride (Hf)</b>				
Control	Hydrated Lime Injection	Limestone Injection Polishing Scrubber (SDA)	FGD	Limestone Injection
Control Efficiency	43% + control by FGD	95%	95%	90%
<b>Mercury (Hg)</b>				
Control	Activated Carbon Injection	Activated Carbon Injection	Activated Carbon Injection	Activated Carbon Injection
Control Efficiency	up to 90% + benefit of control from FGD, FF, SCR	90% + benefit from Limestone Injection, SNCR, SDA, FF	90% + benefit from FGD, FF, and SCR	90% + benefit from SNCR
<b>Lead (Pb)</b>				
Control	FF	FF	FF	FF
Control Efficiency	99% to 99.9%	99%	99%	99%
<b>Opacity</b>				
Control	FF	FF	FF	FF