

IAQCS OEM Cost Summary

	1.75 w/o ESP	3.0 w/o ESP	4.5 w/o ESP	7.5 w/o ESP	Comments
WFGD Reagent Prep	\$ 11,425,000	\$ 13,430,000	\$ 15,167,000	\$ 16,936,000	Vendor scope: - Limestone feeders from the day silos through the slurry storage tanks - Structural steel integral to the support of the vendor's equipment - Piping inside buildings to terminal points - Transfer pumps and all motors required by vendor scope of supply - Process instruments and control logic By others: - Piping from terminal points out to the plant - Conduit, cables, etc... to vendor's motors - Site grading, roads, foundations, etc... - Limestone unloading, belt conveyors, stacking storage areas, etc... - All required DCS upgrades
WFGD Absorber Island	\$ 40,589,000	\$ 41,029,000	\$ 41,363,000	\$ 41,668,000	Vendor scope: - Absorber module (A2205) with internals and wet ESP integral to the absorber - Inlet duct only through the C22 wet/dry interface - Piping inside buildings to terminal point - Recycle pumps, oxidation compressors, mist eliminator wash pumps, etc... with motors - Structural steel integral to the support of the vendor's equipment - Process instruments and control logic By others: - New ID fans - Duct from ID fans to wet/dry interface and duct from absorber module to stack breach - New wet stack - Piping from terminal points out to the plant - Conduit, cables, etc... to vendor's motors - Site grading, roads, foundations, etc... - All required DCS upgrades
Absorber Alloy	\$ 14,940,000	\$ 14,940,000	\$ 14,940,000	\$ 14,940,000	Additional cost for C276 absorber above the price of a A2205 absorber
Dewatering	\$ 5,688,000	\$ 7,250,000	\$ 8,701,000	\$ 10,267,000	Vendor scope: - Primary & Secondary Dewatering from the hydroclone feed tanks to the hydroclones through the belt vacuum filters - Structural steel integral to the support of the vendor's equipment - Piping inside buildings to terminal point - All motors required by vendor scope of supply - Process instruments and control logic By others: - Piping from terminal points out to the plant - Conduit, cables, etc... to vendor's motors - Site grading, roads, foundations, etc... - Gypsum conveyors, stacking storage areas, etc... - All required DCS upgrades

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DFGD Reagent Prep	\$ 5,560,000	\$ 7,985,000	\$ 2,663,000	\$ 3,198,000	Vendor scope: - Rotary feeders, chain conveyors, and slakers through the lime slurry pumps and lime slurry storage tanks - Structural steel integral to the support of the vendor's equipment - Piping inside buildings to terminal point - All pumps and all motors required by vendor scope of supply - Process instruments and control logic - Trolleys and Hoists By others: - Piping from terminal points out to the plant - Conduit, cables, etc... to vendor's motors - Site grading, roads, foundations, etc... - Lime unloading, storage silo, etc... - All required DCS upgrades
DFGD Absorber Island	\$ 39,438,000	\$ 39,438,000	\$ 39,438,000	\$ 39,438,000	Vendor scope: - Absorber modules and atomizers with lube oil system - Duct work from the absorber inlets to the fabric filter outlet - Recycle storage silo, recycle slurry mix tanks, slurry storage tanks, and all ancillary systems with piping inside FGD buildings - Structural steel integral to the support of the vendor's equipment - Piping inside buildings to terminal point - All pumps and all motors required by vendor scope of supply - Process instruments and control logic - Trolleys and Hoists By others: - Conduit, cables, etc... to vendor's motors - Site grading, roads, foundations, etc... - All required DCS upgrades
Fabric Filter	\$ 19,980,000	\$ 19,761,000	\$ 19,761,000	\$ 19,585,000	Vendor scope: - A single fabric filter unit for all of the flue gas - All internal fabric filter elements such as bags, cages, ash hoppers, 2 broken bag detectors per compartment - Ash conveying system from the fabric filter to the recycle silo - Structural steel integral to the support of the vendor's equipment - Piping inside buildings to terminal point - All motors required by vendor scope of supply - Process instruments and control logic - Trolleys and Hoists By others: - Air compressors for the pulse-jet cleaning system - New ID fans - Duct from fabric filter to new ID fans - Piping from terminal points out to the plant - Conduit, cables, etc... to vendor's motors - Site grading, roads, foundations, etc... - Byproduct conveying, storage, etc... - All required DCS upgrades

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Fabric Filter	\$ 19,409,000	\$ 19,276,000	\$ 19,232,000	\$ 19,099,000	Vendor scope: - A single fabric filter unit for all of the flue gas - All internal fabric filter elements such as bags, cages, ash hoppers, 2 broken bag detectors per compartment - Ash conveying system from the fabric filter to the recycle silo - Structural steel integral to the support of the vendor's equipment - Piping inside buildings to terminal point - All motors required by vendor scope of supply - Process instruments and control logic - Trolleys and Hoists By others: - Air compressors for the pulse-jet cleaning system - New ID fans - Duct from fabric filter to new ID fans - Piping from terminal points out to the plant - Conduit, cables, etc... to vendor's motors - Site grading, roads, foundations, etc... - Byproduct conveying, storage, etc... - All required DCS upgrades

Costs for the reagent preparation, absorber island, and dewatering equipment are based on a 2009 quote from Alstom. The previous quote was factored for the AEP Big Sandy Unit 2 capacity (865 MW) and adjusted for each sulfur.

Costs for the reagent preparation, absorber island, and fabric filter equipment are based on a 2009 quote from Alstom. The previous quote was factored for the AEP Big Sandy Unit 2 capacity (865 MW) and adjusted for each sulfur and ESP operation.