

Direct Cost

Purchased Equipment		\$0.00	Vendor Quote Attached
Instrumentation	-		
Sales Tax		\$0.00	
Freight		\$0.00	
Purchased Equipment Cost		\$0.00	

Direct Installation Cost

Foundations & supports		\$0.00
Handling & erection		\$0.00
Electrical		\$0.00
Piping		\$0.00
Insulation for ductwork		\$0.00
Painting		0
Direct installatoin costs		\$0.00

Site Preparation \$0.00

Total Direct Cost \$0.00

Indirect Cost

Engineering		\$0.00
Construction and field expense		\$0.00
Contractor fees		\$0.00
Start-up		\$0.00
Performance test		\$0.00
Total Indirect Cost		\$0.00

Total Capital Investment \$0.00

Annual Costs

Hours of operation 8,760

Direct Annual Costs

Operating Labor	0.5 hrs/shift @ \$18/hr	\$	9,855.00
Supervisor 15% of operator		\$	1,478.25
Operating Materials - Maintenance			
Labor 0.5 hr/shift \$25/hr		\$	6,843.75
Materials 100% of maintenance labor		\$	6,843.75
Natural Gas	1.16 per therm	\$	1,597,425.47
Electricity	0.162/kwh	\$	7,759.46
Total		\$	1,630,205.68

Indirect Annual Cost

Overhead 60% of sum of operating supervisor, & maintenance labor & maintenance materials		\$	15,012.45
Administrative Charges 2% TCI - 9,650 17,800			\$0.00
Property Taxes 1% TCI - 4,830 8,900			\$0.00
Insurance 1% TCI - 4,830 122,700			\$0.00
Capital recovery (7% over 10 years)			\$0.00
Total IAC			\$15,012.45

Total Annual Cost	\$1,645,218.13
Precontrol Emissions	29
Controlled Emissions	24.2
Cost Effectiveness	\$67,984.22

Direct Cost

Purchased Equipment	\$1,706,542.07	Vendor Quote Attached
Instrumentation	-	
Sales Tax	\$102,392.52	
Freight	\$85,327.10	
Purchased Equipment Cost	\$1,894,261.69	

Direct Installation Cost

Foundations & supports	\$151,540.94
Handling & erection	\$265,196.64
Electrical	\$75,770.47
Piping	\$94,713.08
Insulation for ductwork	\$18,942.62
Painting	0
Direct installatoin costs	\$606,163.75

Site Preparation	\$18,942.62
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Total Direct Cost	\$2,519,368.06
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Indirect Cost

Engineering	\$189,426.17
Construction and field expense	\$94,713.08
Contractor fees	\$189,426.17
Start-up	\$37,885.23
Performance test	\$0.00
Total Indirect Cost	\$511,450.65

Total Capital Investment	\$3,030,818.71
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Annual Costs

Hours of operation 8,760

Direct Annual Costs

Operating Labor	0.5 hrs/shift @ \$18/hr	\$	9,855.00
Supervisor 15% of operator		\$	1,478.25
Operating Materials - Maintenance			
Labor 0.5 hr/shift \$25/hr		\$	6,843.75
Materials 100% of maintenance labor		\$	6,843.75
Natural Gas	1.16 per therm	\$	1,298,448.62
Electricity	0.162/kwh	\$	7,759.46
Total		\$	1,331,228.83

Indirect Annual Cost

Overhead 60% of sum of operating supervisor, & maintenance labor & maintenance materials		\$	15,012.45
Administrative Charges 2% TCI - 9,650 17,800			\$60,616.37
Property Taxes 1% TCI - 4,830 8,900			\$30,308.19
Insurance 1% TCI - 4,830 122,700			\$30,308.19
Capital recovery (7% over 10 years)			\$431,588.58
Total IAC			\$567,833.78

Total Annual Cost	\$1,899,062.61
Precontrol Emissions	129
Controlled Emissions	107.5
Cost Effectiveness	\$17,665.70

Direct Cost

Purchased Equipment		\$181,203.85	Vendor Quote Attached
Instrumentation	-		
Sales Tax		\$10,872.23	
Freight		\$9,060.19	
Purchased Equipment Cost		\$201,136.27	

Direct Installation Cost

Foundations & supports		\$16,090.90
Handling & erection		\$28,159.08
Electrical		\$8,045.45
Piping		\$4,022.73
Insulation for ductwork		\$2,011.36
Painting		0
Direct installatoin costs		\$58,329.52

Site Preparation \$2,011.36

Total Direct Cost \$261,477.15

Indirect Cost

Engineering		\$20,113.63
Construction and field expense		\$10,056.81
Contractor fees		\$20,113.63
Start-up		\$4,022.73
Performance test		\$0.00
Total Indirect Cost		\$54,306.80

Total Capital Investment \$315,783.95

Annual Costs

Hours of operation 8,760

Direct Annual Costs

Operating Labor	0.5 hrs/shift @ \$18/hr	\$	9,855.00
Supervisor 15% of operator		\$	1,478.25
Operating Materials - Maintenance			
Labor 0.5 hr/shift \$25/hr		\$	6,843.75
Materials 100% of maintenance labor		\$	6,843.75
Natural Gas	1.16 per therm	\$	254,061.95
Electricity	0.162/kwh	\$	7,759.46
Total		\$	286,842.16

Indirect Annual Cost

Overhead 60% of sum of operating supervisor, & maintenance labor & maintenance materials		\$	15,012.45
Administrative Charges 2% TCI - 9,650 17,800			\$6,315.68
Property Taxes 1% TCI - 4,830 8,900			\$3,157.84
Insurance 1% TCI - 4,830 122,700			\$3,157.84
Capital recovery (7% over 10 years)			\$44,967.63
Total IAC			\$72,611.44

Total Annual Cost	\$359,453.60
Precontrol Emissions	9
Controlled Emissions	8.1
Cost Effectiveness	\$44,376.99