

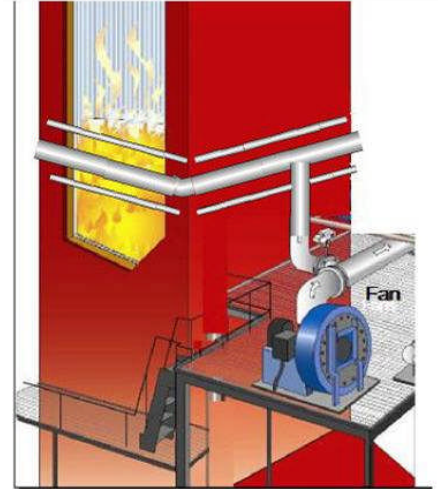
EcoJet System

Advanced Combustion Improvement & Emission Reduction System

The EcoJet System Offers Solutions:

- Combustion Improvement
- Reduce Fuel Costs
- Reduce Fly Ash/ Particulate Carryover
- Reduce Corrosion
- Reduce Erosion
- Reduce Emissions (NOx, SOx, CO)

The **EcoJet System** is an advanced, separated over-fired air system integrated with a reagent injection system designed to improve combustion and reduce emissions in utility and industrial boilers. The **EcoJet System** consists of one or more rows of variable direction, tunable secondary air injection ports located high in the boiler above the primary combustion zone. For grate fired boilers, it also includes the state-of-the-art "grate master" to improve fuel distribution and reduce "fuel crusting". Using the EcoCam boiler combustion camera system and the best-of-breed EcoSmart Combustion Optimization Control System, the **EcoJet System** provides dramatic improvement in boiler combustion completion. The variable direction wall ports inject extremely high velocity, high energy secondary combustion air into the furnace at the best location for optimizing combustion efficiency. The EcoJet System is designed to dramatically improve the mixing of combustion air, partially burned gases and fuel particulates to provide extremely efficient operation.



EcoJet's Low Cost Approach to Combustion Improvement & Emission Reduction Solves:

- Inefficient Combustion
- Excessive Fuel Use and Fuel Cost
- High Rates of Fly Ash and Unburned Fuel Carryover
- Corrosion and Erosion Issues
- NOx, CO, and SOx Emissions Compliance Issues

EcoJet System's Key Benefits:

- Improves Combustion Efficiency
- Reduces Fuel Use
- Dramatically Lowers Emissions (NOx, SOx, and CO)
- Reduces Corrosion and Erosion
- Lowers Maintenance Costs
- Decreases Particulate Carryover
- Reduces Fly Ash

New Combustion Improvement Revenues

The **EcoJet System** is designed to dramatically improve the mixing of combustion air, partially burned gases and fuel. Using advanced combustion improvement processes, **EcoJet** offers a new technology to reduce fuel burn and increase steam production. O&M costs can also be reduced by; 1) improving distributions across the total furnace volume for gases, aggressive chemical element concentrations, and temperatures; 2) lowering gas velocities and total mass flow, 3) reducing particulate carry over (up to 35%); and 4) reducing parasitic station service power (5-10%). A combination of reduced fuel burn (5-15%), increased steam generation / power sales revenue (3-5%), reduced parasitic station service power requirements and lower maintenance cost gives the **EcoJet System** a quick return on investment.

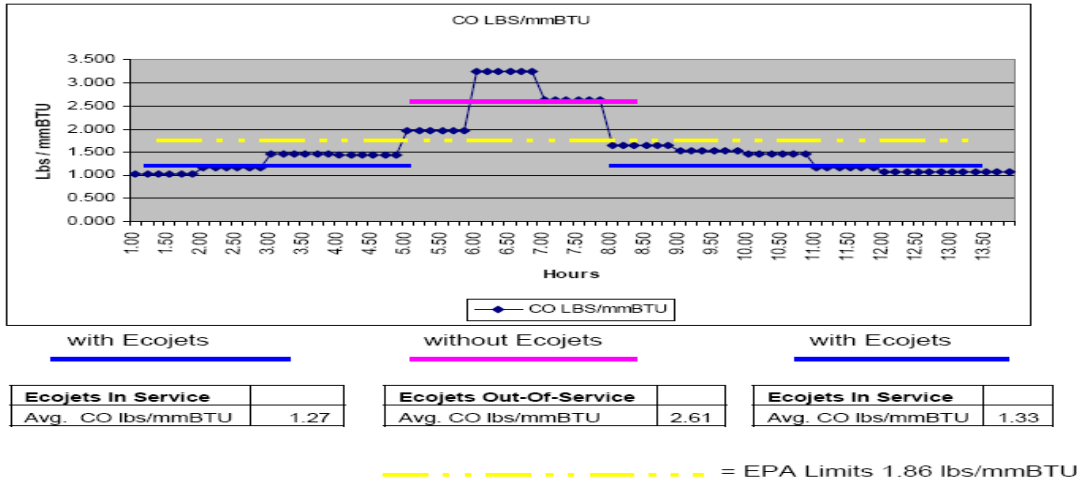
NOx and CO Emission Reduction

The **EcoJet System** is also an excellent emissions reduction system. NOx emissions are dramatically reduced by the unique advanced, separated over fired air process and CO is reduced and stabilized as well. The **EcoJet System** completes the combustion process and stabilizes boiler operation and CO, allowing reduction of excess air, thus reducing NOx formation. Without adding reagents, **EcoJet** can reduce and stabilize CO emissions and reduce NOx emissions from 20-40%. In most instances, plants can dramatically reduce or completely eliminate the injection of expensive reagents for NOx control to meet existing emission regulations. Where regulations require deeper emissions reduction, the **EcoJet's** optional reagent storage and delivery system make double use of your combustion improvement investment. The **EcoJet System's** advanced reagent injection system makes it easy and affordable to deliver reagents for further NOx and SOx reduction, up to 70%.

EcoJet System Case Studies

Reference Site #1

In early 2007, the EcoJet System was installed at a 15.85 MW Biomass Plant in Northern California. The EPA had restricted the utility's CO emissions to 1.86 lbs/mmBTU. Before the EcoJet was installed, the site's CO emissions averaged at 2.61 lbs/mmBTU. With the EcoJet System installed and fully functional, the large utility was able to not only meet the EPA set limit, they were able to surpass it by reaching 1.27 lbs/mmBTU. Their CO emissions were reduced by 48.6% almost immediately. This dramatic reduction in CO was done without the optional reagent injection. Currently, the utility runs only enough EcoJets to meet the EPA CO emission limit, but they rest assured that they will be able to meet increasingly aggressive environmental restraints.



Reference Site #2

In 2005, the Synterprise team installed an EcoJet System at a 36 MW Biomass Plant in the North East. This plant was dangerously close to the NOx emission limit for their state. With the help of Synterprise and our EcoJet technology, the utility was able to reduce their NOx emission level from about .21 to a .17 by injecting air alone. With the EcoJet System installed they have the option to use the high energy, variable direction wall ports to atomize the reagent and target reagent injection at the optimal location to increase molecule to molecule mixing for further NOx reduction. The EcoJet System can reduce NOx emissions up to 70% by injecting reagents such as urea, aqueous ammonia, or anhydrous ammonia. No other combustion improvement system can provide such significant business benefits, providing substantial additional revenues while at the same time reducing emissions to meet existing regulations and providing a state-of-the-art platform for future, deeper emission reduction requirements.

