

# Economizer Pays for Boiler & itself in Less Than 7 Years!

Take a new or existing steam boiler, install a Cain Industries economizer and great things happen...

Let's start with a new 500 HP (150 psi design) steam boiler at a cost of \$200K. Now we're going to place a Cain RTR rectangular economizer into the exhaust stack at a cost of \$38K. With a conservative fuel cost of 50¢ per therm and 6,000 annual operating hours our economizer is going to yield almost \$39K of fuel savings per year for approximately 20 years.

**Boiler \$200K + Economizer \$38K ÷ Fuel Savings \$39K = 6.1 Years Payback**

Here's the heat recovery science behind it all:

#### Combustion Source:

##### 500 BHP Steam Boiler

Boiler Feedwater Heat Sink

Waste Exhaust Temp.	463°F
Water Temp. Inlet	180°F
BTU/hr Burner Input	20,956,000
Fuel Type	Natural Gas
O2 Content	4.5%
Excess Air	24.7%
Combustion Efficiency	80.74%
Fuel Cost per Therm	\$.50
Annual Operating Hours	6,000

#### Cain Model Installed:

##### RTR Economizer

Liquid Flow Rate	35 gpm
Final Exhaust Temp.	269°F
Liquid Temp. Outlet	241.7°F
Pressure Drop, Water	0.11 psig
Pressure Drop, Exhaust	0.49" WC
BTU/hr Recovered	1,048,000
BTU/hr Saved	1,298,000
Total Cost	\$37,556

#### Life Expectancy Savings:

**\$778,800** (20 years)



Every economizer application is unique and will provide different payback results. Contact Cain Industries today to evaluate your specific exhaust heat recovery requirements and to receive a **FREE Savings Analysis Study with Guaranteed Performance!**