

Industrial Energy Efficiency & Conservation

Energy Efficiency

Implement technology to get more output from the similar energy input

Energy Conservation

Optimize facilities, equipment and processes to get the same, or better, output with less energy input.



- National Non-Profit Trade association formed 1953
- Represents all facets of the trade
- Provides education, training, resources and networking opportunities
- Created Insulation Inspection and Appraisal Certification Programs



Assets That Appreciate vs. Costs That Evaporate

A typical refinery has 20-50 miles of high temperature piping.

If just 1 mile of piping is properly insulated (8" line, 500F), that \$147,576 dollar investment returns \$1,049,265 in energy savings in year 1.

Over ten years, that return is over \$10 million!!



**EVERY DOLLAR INVESTED IN AN INSULATION SYSTEM
RETURNS \$7-\$16 EACH YEAR – YEAR AFTER YEAR.**

Summary

Facilities can lose between \$2,400 and \$197,400 per year per 100' of uninsulated/under-insulated pipe



- **Solution:** Proper insulation specification, installation and maintenance
- **Added Benefits:**
 - 88-98% emissions (CO2, Nox) reduction (on-site or remote fuel combustion)
 - 100 feet of an 8" pipe at 500F insulated with 1.5" of insulation saves about 514,900 lbs. of CO2 emissions per year.
 - <1 year payback, perpetual returns
- **Action:** Audit current systems with a Certified Insulation Appraiser, prioritize high-temp/large-diameter pipe