



P3 Series Proven Practical Performance **New** Six high performance thermal imagers **FLUKE** Find out more »

**ELECTRIC
LIGHT & POWER**

POWERGRID
INTERNATIONAL
THE POWER DELIVERED MEDIA SOURCE

Hello Log In | Register

Advanced Search

Search

Powered by Moxa

Subscribe: [Newsletter](#) [Magazines](#)

Home Generation T & D Metering Policy & Regulation Renewable Energy Energy Efficiency/DR Utility Products Customer Service Smart Grid

Print Email Save A A A A

Tweet 530 Like Share

Dallas firms test emerging emissions technology

JIM LANDERS, jlanders@dallasnews.com
THE DALLAS MORNING NEWS
March 29, 2011

Once in a while, a game-changing technology emerges to upend worries about productivity, scarcity and cost.

Air pollutants from coal-fired power plants, refineries and cement factories are a health hazard. The Environmental Protection Agency has new regulations designed to significantly clean up these emissions. Industry says the cost of the regulations is beyond what business can bear.

To cut this Gordian knot, some Dallas area companies are experimenting with a technology that greatly reduces emissions while turning the pollutants into valuable products.

Cefco Global Clean Energy Co. of Frisco and Peerless Manufacturing Co. of Dallas are testing a prototype of the new emissions reactors in Wichita Falls. Cefco came up with the technology, while Peerless is working on manufacturing. They hope to start marketing the equipment to cement makers and refiners by the end of the year.

"The technology is not in doubt," said Robert Tang, Cefco's president and CEO. "We are currently testing for cost and effective engineering integration to make this usable for industry."

Game-changing technologies can seem near at hand, only to disappear over the horizon. Engineers have long worked on desalination as a way to fight water scarcity. The big desalination plants of the Middle East burn crude oil and natural gas to distill sea water, creating enough water for large populations in Kuwait and Saudi Arabia. But that energy-intensive technology doesn't travel well to other parts of the world.

Photovoltaic solar panels and film seem to cost less every year, still without making solar cost-competitive with other forms of electricity generation.

Game changers can bring other problems. Four years ago, natural gas prices were soaring. Now gas is cheap and abundant. That reversal came from drillers using hydraulic fracturing of the Barnett, Marcellus and other shale formations with injections of water and chemicals. Many communities feel hydraulic fracturing is a threat to ground water, however, and have told drillers they are unwelcome.

Cefco's emission reactors have to prove their economic effectiveness. But Tang said they've already shown that it's possible to clean emissions from cement plants and refineries while extracting valuable byproducts such as chrome and manganese, fertilizers made of potassium sulfate and potassium nitrate, and bicarbonate or pure carbon dioxide.

The basic difference between Cefco's reactors and existing pollution control devices is energy. Conventional scrubbers require heat to create chemical reactions to capture a mass of pollutants. Cefco uses waste steam to create supersonic shock waves. Tang said the shock waves separate and capture four types of pollutants: metals and particulates, sulfur dioxide, nitrous oxide and carbon dioxide.

Though their scrubbers create sonic shock waves, Tang said the scale is such that the sound is like a steady hiss rather than a series of booms.

"It's almost like a vacuum cleaner in the room next door to you," Tang said.

Several specialty publications have written about the emerging technology, including Manufacturing Today and Power Engineering International.

Tang said the technology is recognized by the government as a maximum achievable control technology. He said it has been used by the U.S. government for chemical weapons incineration, and by the Department of Energy to burn certain radioactive substances.


"So it should work in power plant requirements," Tang said.

Copyright 2011 THE DALLAS MORNING NEWS
THE DALLAS MORNING NEWS

Wire News provided by

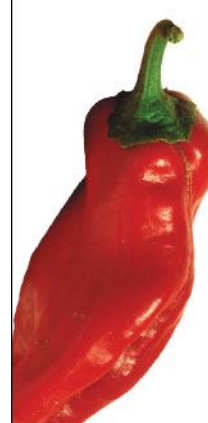



**NO
VAPORWARE**
elster 800.338.5251




THE POWER TO KNOW.

ANALYTICS
Know what's hot.



CLICK FOR VIDEO



THE POWER TO KNOW.



Bulwark FR

LEADER IN
FLAME-RESISTANT
INNOVATION
FOR 39 YEARS
WWW.BULWARK.COM

New white paper

Learn how utilities can set up an SMS/Text messaging program for outage reporting.

Download Now  **TFCC**
Twenty First Century Communications