

The changing energy landscape

The coming crisis in natural gas **Interviewed by Dale W. Hlaves**

The well-documented facts are that crude oil production has peaked across the world and that countries — the hit list is included — must find alternative sources of energy before the supply of oil runs out.

Along with crude oil, North American natural gas has reached its peak. From this point, dwindling supply ultimately could affect the U.S. as critically as crude oil, given that importing natural gas is more difficult.

“The past few North American peak on natural gas,” says John Barnes, chairman and CEO of B&R Energy LLC in Dallas. “The U.S. has crested, and Canada seems to have just about passed its highest point. Current supply is barely even, with demand on the rise.”

Smart Business spoke with Barnes about natural gas prices, its availability after two hurricanes in 2005 and alternative energy sources.

Why is natural gas so popular as an energy source?

For the past 15 years, as new electric utility power plants have been built, natural gas was abundant, cheap and cleaner than other types of energy. But those dynamics are changing. Today, 1,000 cubic feet of natural gas contains 1 million BTUs and costs around \$4. Equivalent BTUs in coal sold for about \$1. So, by the BTU, the price of coal is cheaper. The problem is that a coal-based plant costs five times more to put in. And natural gas is still cleaner and friendlier to the environment.

Where does the United States get its natural gas, and why is the supply weather-dependent?

The U.S. produced 60 percent of the natural gas it consumed until last year, with the rest being imported, primarily from Canada. After hurricanes Katrina and Rita hit the Gulf of Mexico last summer, much of the Gulf production was damaged and most of the treatment plant was destroyed. Before gas can be sold and run through pipelines, it must be treated — liquids and vapors



John Barnes
Chairman and CEO
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removed, along with butane and propane gases. Twenty percent of the country's supply comes from in or around the Gulf Coast, and it took five to six months before the plants were back up and running on line and able to produce again.

How did the weather affect the supply and price of natural gas?

Since the last year, the price of 1,000 net cubic feet (necf) of natural gas actually dropped 60 percent. Just before the hurricanes hit, the price was \$7/necf; after the storms, prices jumped into the teens. Today they're back down to about \$1/necf. Several chemical manufacturing plants along the coast depended on the natural gas, and many of those plants were forced by the high prices to take their production overseas.

This year's warm winter saved us from exhausting our stored supply of natural gas, which unquestionably would have sent costs sky high. We likely would have had to price ration gas to places such as chemical and fertilizer plants — and eventually schools and businesses — and brought on serious economic dislocation.

“At the residential front, we must maintain home gas supplies. You can't shut

down gas supply to homes. Therefore, severe conservation adjustments would be required based on limited supplies and increased costs. We can only hope residents would voluntarily adjust their thermostat settings to conserve energy and prevent heating “brownouts.”

Could liquefied natural gas (LNG) replace some natural gas?

You hear a lot in this country about building LNG terminals that can buy overseas gas as LNG, but that takes time and money. Similar expensive plants must be built in a foreign country to convert natural gas to LNG. After gas is converted into LNG, there is the expense of building huge special ice ships able to hold the LNG and keeping it highly pressurized and extremely cold. None of this is an overnight project — and everyone faces the NIMBY (not in my backyard) factor. To further complicate the situation, everybody is competing to buy the same LNG. A couple of years ago, for example, Australia discovered two new fields with more than a trillion cubic feet of gas in each. China bought the output of both fields.

What are some alternatives to natural gas?

For our economy to grow we need to find more resources of energy and be more efficient with what we find. As different forms of energy reach their limits, we need to explore different supply mechanisms. Coal can generate electricity, but we are still a ways from developing clean coal. Renewable energy technologies including biomass power, geothermal power, hydropower, ocean power, solar power and wind energy should factor in the equation.

Like any other situation, the difference between a problem and an opportunity is how a person reacts to the situation. We can direct their solutions to this problem going to win. You can bet the victor.

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