

Alberta Oil 2011

## Freight Sale

### A seafaring energy idea born in landlocked Calgary garners big support

MORE THAN A DECADE OF STRIVING TO CARRY OUT AN IDEA – an invention that is patented, backed by three corporate giants, and yet still not in action - has made David Stenning a stone realist. "It 's very hard - harder than I ever imagined." he says.

In the international energy transportation arena where he works as president of Calgary-based Sea NG Corp, he says. "It's a lot harder to put together commercial deals than I ever imagined. There are many companies involved. There are countries. There are a lot of people you have to get lined up."

His experience with Sea NG's elegantly simple brainchild- a natural gas counterpart to marine container shipping – has convinced him that technology's heroic age is over. He sees no room left for adventurers to try out rickety prototypes of great advances in a modern era of obsessions with profits, safety and environmental and socio-economic precautions. "The Wright brothers would never be successful today." Stenning says.

But he is not disillusioned. His firm's innovation is no improvised rattletrap of bicycle tubes, baling wire, cloth and a shaky motor.

Sea NG's design for a world first – an ocean-going compressed natural gas (CNG) freighter – is approved by the American Bureau of Shipping. A 10-hectare (25-acre) ship construction site is reserved in South Korea's Gunsan Free Trade Zone. The key design element – steel carousels, trademarked Coselles, that each hold four million cubic feet of methane compressed at 4,000 pounds per square inch into 2,100 meters of coiled pipe 15 centimeters in diameter – has been vetted by Det Norske Veritas, the Norwegian counterpart to the Lloyd's of London insurance exchange and watchdog.

Stenning cut his professional teeth with a model of successful engineering innovation. He worked for the late Dome Petroleum Ltd.'s 1970s and '80s Beaufort Sea oil exploration armada, Canadian Marine Drilling. Financial recklessness sank Dome, not technological folly.

Sea NG's chief executive officer, serial oil company builder Barrie Wright, adds, "This feels like its really doable." He gives the firm a good chance of landing its first commercial development in 2011.

Stenning and Wright are in good company. As of September, Enbridge Inc. added its weight as Canada's top oil pipeline and gas distribution enterprise to a project alliance led by Sea NG. The other members are Japanese conglomerate Marubeni Corp. and Teekay Corp., owner of a global tanker fleet that carries about 10 per cent of the world's ocean-going oil supplies aboard a fleet of more than 150 vessels.

The group has scored a tantalizing near-hit. In mid-2009 an Egyptian and Greek energy transportation partnership, Medcarrier SAE, selected Sea NG to deliver Middle East gas across the Mediterranean Sea

to a power station in Crete. The deal was foiled by a financial crisis that left Greece teetering on the brink of national bankruptcy.

Optimism that the dormant Greek deal will be replaced is rooted in the emerging shale gas revolution. The new production method is expected to eventually make the cleanest fossil fuel plentiful and stabilize its previously violently fluctuating prices into a reasonable, predictable range everywhere.

“There’s a huge driver for people to change from oil to natural gas.” Stenning says. He points to a continuing, wide divergence between prices for the two fuels.

They traded as equals with their value set according to their comparative energy content, the standard gas sales unit of 1,000 cubic feet would cost one-sixth as much as a barrel of oil. Instead, gas consistently fetched only one-eighteenth or less of the oil price across North America for the last two years as shale output grew while consumption stayed flat. In effect, the market value of gas as energy is about 66 to 70 per cent less than oil.

The Paris-based International Energy Agency IEA predicts the discount will spread to the rest of the world as shale production expands. Growing supplies are expected to cause irresistible economic pressure to break European and Asian commercial traditions of indexing gas to oil prices with an energy content formula.

The specialty of Calgary’s aspiring shipping magnates is catching international eyes. In its latest annual World Energy Outlook, a bible among experts and forecasters, the IEA identifies marine CNG delivery as an attractive alternative for gas from the Caspian Sea and Black Sea regions.

As in Canada and the United States, international pipeline projects run into business, political and environmental obstacles. The traditional ocean transportation method, liquefied natural gas (LNG) tankers, is uneconomic over the short distances to markets from Caspian and Black wells, the agency says. The old technique requires multibillion-dollar plants to chill production into a stable liquid at -168°C, massive tankers to transport it, and big “regasification” operations to warm the gas back up into usable form. The IEA calculates that marine CNG delivery would be more expensive than pipelines but potentially less than half the cost of an LNG system.

Sea NG is not revealing a replacement for the foiled Greek plan until a new deal is done. The Caribbean Sea is the firm’s early favorite target. Gas production is strong in Trinidad and Tobago. There are potential customers that are too small to support LNG terminals but big enough to justify CNG deliveries such as oil-fired power stations in Barbados, Panama and Martinique.

“We’re trying to break a new idea into two conservative industries [energy and shipping],” says Stenning. “We’re getting close. The key is to get one contract, and get it up and running.”

Stenning, 58, vows to be on his first CNG vessel’s maiden voyage well before he hits retirement age. “This is my cabin – right there,” he says, pointing to a deckhouse porthole on an artist rendering of a Coselle freighter displayed in his downtown Calgary office. “That ship won’t sail without me.”