

Royal Dutch/Shell taking minority stake in logen

By SIMON TUCK

TECHNOLOGY REPORTER

Wednesday, May 8, 2002 – **Globe&Mail** Print Edition, Page B3

OTTAWA -- **Royal Dutch/Shell Group** is taking a minority stake in a small Canadian technology company as part of what is expected to become a broader partnership, a deal that marks the oil industry's first major investment in the bioethanol industry and a dramatic boost for the growth of the alternative fuel.

Sources say the deal between Ottawa-based **logen Corp.** and Royal Dutch/Shell is a first step in what the two companies hope will eventually lead to the use of bioethanol -- fuel made largely from corn stock, hay and other agricultural waste -- in North America's millions of automobiles.

logen sources say that under the deal the Anglo-Dutch oil giant will provide the privately held Canadian company with the much-needed capital to create a faster path to commercialization, a guaranteed customer and, eventually, the distribution network that bioethanol and other alternative fuels now lack.

"You've got to figure out how to get it in people's cars," an logen official said.

The deal, the result of about two years of discussions between the two companies, could also mark the leap that is required to create the supply needed for any alternative fuel to support its market.

Brian Purdy, an analyst at Acumen Capital Partners Ltd. in Calgary, said distribution is a significant barrier for any alternative fuel. "That's going to be the real key for penetration."

For Royal Dutch/Shell, the deal gives the oil giant a step ahead of rivals such as Exxon Mobil Corp. and BP PLC in the tepid struggle to control the fuel sources of the future. "It's an opportunity for these guys, but it's not a very expensive foray," said William Lacey, a research analyst at FirstEnergy Capital Corp. in Calgary.

The growth of bioethanol would also create a major boost for the agricultural sector, which could find a market for organic material now largely left in fields. The use of bioethanol in automobiles would also go a long way toward fulfilling Canada's commitments to the Kyoto Protocol of 1997 -- an international agreement to fight global warming through the reduction of fuel emissions -- and toward creating a market for agricultural waste. Bioethanol differs from ethanol, which is now available as a small part of a gas mixture at many Canadian retail stations, because it uses farm waste instead of corn and other food sources, and because it can be used in much greater quantities.

The development of an alternative fuels market has been a long, slow process that first generated widespread attention following the 1970s oil crisis. After fading during the 1980s, when oil prices tumbled, alternative fuels made a resurgence in the early-1990s with the growth of the environmental movement.

Interest in alternative fuels sputtered again later in the decade as oil prices fell and technological hurdles proved stronger than had previously been believed. The Kyoto Protocol added new interest.

Since then, legislators, particularly in the United States, have been moving toward the mandatory use of alternative fuels.

"The world is now ready for a greenhouse gas-reduction fuel," said an logen source.

Royal Dutch/Shell has predicted that renewable energy will make up 50 per cent of global energy demand by 2050, and has earmarked \$500-million over the next five years for renewable investments.

logen, which has earlier received investments from the federal government and Petro-Canada, expects it will start to build commercial plants in 2004 and be able to provide a commercially available product in 2006. logen has about 100 employees but expects to increase that by about 50 within a year.

and from the Royal Dutch Shell web site:

Shell invests in green fuel technology

8 May 2002

The Royal Dutch/Shell Group of Companies (Shell) announced today that it has purchased an equity stake in logen Energy Corporation, a world-leading bioethanol technology company. The US\$29 million investment will enable the Canadian based company to develop more rapidly the world's first commercial-scale biomass to ethanol plant.

Mark Gainsborough, Vice President of Fuels, Shell Oil Products, said: "This is another positive development for Shell. Bioethanol, when blended with gasoline, is one of a range of environmentally friendly fuels Shell is exploring as it has the potential to significantly reduce greenhouse gas emissions of vehicles.

"Bioethanol can become commercially viable, and we will be using our skills in fuel production and plant operations with logen's globally recognised technology to reduce the cost of future production. This work will be channelled through our technology business, Shell Global Solutions."

Brian Foody, logen's President added: "Shell is a leader in the field of sustainable development and in producing clean fuels. We are delighted that after an extensive global search they decided to invest in our company. At logen we believe bioethanol has the opportunity to deliver the most cost-effective and consumer friendly way to reduce greenhouse gas emissions."

Unlike conventional fuel ethanol, a high-octane alcohol produced from the fermentation of sugar derived from the starch in grains such as corn and wheat, bioethanol is made from the fermentation of sugars derived from the plant fibre in renewable feedstocks such as wood and straw. Compared with gasoline, ethanol made from plant fibre releases over 90 percent lower carbon dioxide emissions - a greenhouse gas that may contribute to climate change. In certain countries for example, Sweden, USA and Brazil, ethanol is already blended into gasoline, but bioethanol potentially offers a more economic and sustainable blending component.