

Husky Oil Operations Ltd.

Husky Lloydminster Ethanol Plant

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Presentation Summary

Husky is a pioneer in the production and marketing of ethanol-blended fuels in Western Canada. Our first ethanol plant was built in 1981 in Minnedosa, Manitoba, to produce ethanol for fuel and industrial use, and distillers dried grain with solubles (DDGS). Husky and Mohawk ethanol-blended gasolines are marketed under the "Mother Nature's Fuel" brand.

Ethanol is a high-octane, alcohol-based, fuel additive produced from wheat and other renewable feedstocks. It is produced utilizing proven technology to convert wheat starch into sugars with the addition of enzymes, and fermenting the sugars into alcohol with yeast. Distillation columns are used to separate the ethanol from the mash, and molecular sieves are used to further purify the ethanol. A small amount of gasoline is added as a denaturant to the final ethanol product to make it unfit for human consumption. The denatured ethanol is subsequently shipped by truck and rail to blending facilities.

With the decision by the Saskatchewan government in 2002 to proceed to mandate the use of ethanol-blended gasolines in the province, Husky began building an ethanol plant at Lloydminster, with a capacity of 130 million litres (34.3 million U.S. gallons) per year.

Construction on Western Canada's largest ethanol plant commenced in late 2004, and it is expected to be operational in the second quarter of 2006. Locating the ethanol plant at the site of the Husky's Lloydminster upgrader complex provides us with the ability to utilize the synergies offered by our existing facilities and build on the existing utilities and transportation infrastructure. Husky is capturing the excess steam and waste heat from the upgrader and cogeneration plants for use in the production of ethanol and DDGS. Total budget for construction is \$120 million (Cdn.). Husky received \$7.8 million (Cdn.) in funding under the Government of Canada's Ethanol Expansion Program to support and encourage the development of ethanol-blended fuels in Canada.

Ethanol-blended fuels offer several advantages over regular gasoline, including higher octane ratings, reduced vehicle emissions, cleaner engine operation, and protection from gas line freezing. Ethanol production provides grain producers with another market for their crops, supports the agricultural grain-based economy of the province, and offers consumers the benefits of using a renewable energy source for fuel.

Feedstock for the facility will be high starch wheat primarily Canadian Prairie Spring (CPS) Red and CPS White, winter wheat, durum and others produced in the Lloydminster area. Husky will purchase approximately 350,000 tonnes (385,800 tons) of grain or 13 million bushels annually from local producers.

The plant will also produce 134,000 tonnes (147,700 tons) per year of DDGS, a non-animal based, high-grade protein cattle feed supplement. DDGS is produced from the bottoms off of the distillation columns. The bottoms are passed through the centrifuges to remove the liquid stillage, and then to the evaporation systems and dryers to form the solid DDGS. Waste heat from the adjacent cogeneration plant will be captured to assist in drying the final product before shipment to markets. The DDGS produced at the plant will feed about 100,000 cows per year, based upon a 20 percent DDGS ration of total feed.

Future Outlook

Husky has established itself as a leader in the development of ethanol, and has received government recognition for the combustion emissions of its ethanol-blended fuel.

Increasing focus on environmentally-friendly and alternative fuels from a number of stakeholders including consumers, governments, agricultural groups and industry provides a positive outlook for the development of the Canadian ethanol industry.

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