

High Value from "Low-Rank" Coals

The Clean Coal Technology Program has also led to new advances in producing high-value fuels from the nation's vast wealth of "low rank" coals, found predominantly in the West. The Rosebud SynCoal Project in Colstrip, Montana has demonstrated a way to upgrade low-quality subbituminous and lignite coals into a high heating-value, low sulfur fuel.

In December 1996, binding written agreements between Western SynCoal Company, Minnkota Power Cooperative, Square Butte Electric Cooperative, BNI Coal, Ltd and Center SynCoal Partnership were signed for the construction of a \$32.8 million, 100 ton/hour (feed rate) scale up of the Rosebud SynCoal Partnership's Advanced Coal Conversion Process technology at Center, North Dakota. The Center SynCoal Project would be integrated into the existing Minnkota Milton R. Young lignite-fired power plant that houses a 250 MW unit and a 438 MW unit.

Rosebud SynCoal Partnership has also signed a technology marketing agreement with Ube Industries, Ltd., of Tokyo, Japan. Under the agreement, Ube Industries has been granted a non-exclusive right to represent Rosebud in marketing and commercialization of the SynCoal technology outside the United States.

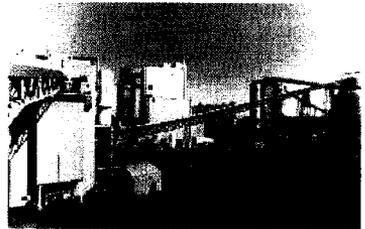
The Rosebud SynCoal Project in Montana has demonstrated a way to upgrade low-quality subbituminous and lignite coals into a high heating-value, low sulfur fuel.

The "Coal Refinery" of Tomorrow

Raw coal can be a rich source of a valuable liquid and solid fuels and chemicals. Much like an oil refinery produces a slate of products by processing crude oil, future "coal refineries" could produce a variety of products from the nation's most abundant fossil fuel. The government cost-shared ENCOAL™ project near Gillette, WY, has demonstrated that such future plants are feasible.

ENCOAL™ has successfully demonstrated the Liquids-From-Coal, or LFC, process, which converts low-rank western coals into two products: Process Derived Fuel, a low-sulfur clean coal product with a higher heating value than the unprocessed coal; and Coal Derived Liquid, a low-sulfur hydrocarbon liquid that has similar properties to distillate fuel oil.

On October 22, 1996, ENCOAL™ Corporation announced that it was beginning the permitting process for a full-scale



By producing a multiple slate of value-added fuels and other products from coal, the ENCOAL™ plant near Gillette, WY, could be the forerunner of future coal "refineries."