

Washington deals synfuels a big blow

Two major developments stunned U.S. synthetic-fuels developers last week. First the Department of Energy (DOE) refused to renegotiate financial backing of the troubled Great Plains Coal Gasification project, thereby prompting sponsors of the \$2 billion facility to scuttle the venture. Then, the House of Representatives moved to ax nearly all of the U.S. Synthetic Fuels Corp.'s \$7.9 billion budget. The measures not only signal Washington's displeasure with the way the nation's synfuels development program has been managed, but also sound what could be a death knell for large synfuels projects in the United States.

Until its sponsors gave up on the Great Plains project last week, the coal gasification facility in Beulah, N.D., had been seen as something of a success. Built on schedule and within budget, it has been producing about 137 million cubic feet of pipeline-quality gas daily since it went into commercial operation a year ago.

What killed the venture was the recent, unforeseen oil glut and the accompanying fall in crude-oil prices (SN: 8/3/85, p. 68).

When Great Plains was planned, its developers expected to sell their product for about \$10 per million Btu of gas, notes DOE's Robert Porter. But since the price that can be charged for this synthetic gas is pegged to the price of oil, when world oil prices fell, so did the price of Great Plains gas — to \$5.50.

Even though that price was still twice the going price for ordinary gas, Great Plains' income was only about enough to cover its operating costs — roughly \$20 million a month. That left no money for profit or for repayment of its \$1.5 billion mortgage — a loan that had been backed by the federal government.

In reaction to the Arab oil embargoes, Synfuels Corp. was set up five years ago to offer federal loan, price and purchase guarantees to firms that develop commercial-scale plants manufacturing synthetic oil or gas from coal. Last year, realizing they were in trouble, the five companies that invested in the project approached Synfuels Corp. for \$790 million in additional price guarantees for their gas. (A price guarantee offers to compensate a synfuels plant sponsor for the difference between the cost of its product and the going-market price for that product.) Synfuels Corp. tentatively agreed.

Then Great Plains' sponsors came back to Synfuels Corp. this spring and said that in addition to the price supports, they needed to defer \$670 million in payments due on the government-guaranteed loan. Faulting the economy — not Great Plains' sponsors or Synfuels Corp. — DOE Secretary John S. Herrington responded last Tuesday that "the costs of continuing to

operate the plant significantly outweigh the benefits."

Though the government stands to lose \$1.5 billion, it is also in line to take ownership of the plant. DOE is now deciding whether to sell the plant, shut it down or continue operating it — something Porter says the agency could do for at least another year on a break-even basis because it would have no mortgage.

"The biggest fallout from Great Plains is that it's going to be difficult for private companies to cooperate with the federal government," says James Childress, research director for the Council on Synthetic Fuels, a Washington, D.C.-based trade association. "They've learned that it's hard to trust Uncle Sam to follow through." Even more "shortsighted," Childress believes, is the apparent abandonment of Synfuels Corp. by Congress.

Synfuels Corp.'s reputation for inefficiency, administrative largesse and scandals (SN: 8/4/84, p. 74) have won it more critics than supporters. With an intent to abolish the agency, Philip Sharp (D-Ind.) and Silvio Conte (R-Mass.) offered an amendment last week to the House Inter-

ior appropriations bill that would gut Synfuels Corp. of all but some money for administration and about \$500 million for a scaled-down synfuels-research program at DOE. The amendment passed the House by an almost 3-to-1 margin.

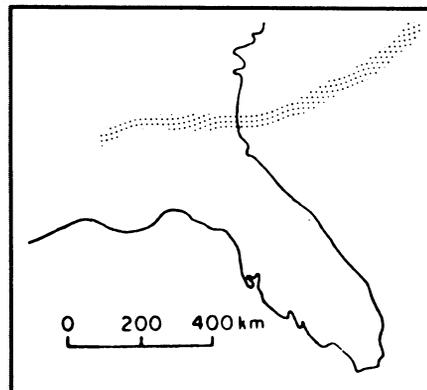
Among those who fought the amendment is John LaFalce (D-N.Y.). Though a critic of Synfuels Corp., LaFalce charged that killing it before a better alternative is in place risks leaving the United States without a synfuels development program — a precarious position when, he says, "within the next decade the United States will completely exhaust its supply of proven [oil] reserves." Costly as the program is, LaFalce says it may be a necessary national-security investment.

Childress agrees, adding that the Synfuels Corp. money that might be transferred to DOE would be enough to finance only one small demonstration plant — not the 8 or 10 he sees necessary to identify the most cost-effective technologies. Small projects won't identify scale-up problems, he notes. It was such larger, scaled-up experiments that Synfuels Corp. was created to back. —J. Raloff

Africa/America split: Back to the suture

Earth scientists mapping the United States at considerable depths have located the "suture" between North America and an African fragment — now called Florida — that was left behind when the two continents parted 190 million years ago, according to two papers to be published in *GEOLOGY*. This connecting seam, which runs roughly east-southeast beneath southern Georgia, probably first formed 300 million years ago when the drifting African and North American continents collided to form the supercontinent Pangea, says Douglas Nelson, an associate researcher for the Consortium for Continental Reflection Profiling (COCORP) at Cornell University in Ithaca, N.Y.

Because Florida's oldest rocks and fossils more closely resemble those of Africa than those of the rest of the United States, earth scientists have long suspected that Florida might have once been part of Africa. But no one knew until now exactly where the fragment's geologic boundary was. Using a sonar-like technique called seismic reflection profiling (SN: 12/8/84, p. 364), Nelson and his colleagues have detected the suture and mapped its course beneath the sedimentary layers of Georgia's coastal plain. The 68-kilometer-wide, wedge-shaped suture ranges from 5 to 35 kilometers deep and is inclined 15 to 25 degrees toward the south. Because the suture runs beneath the Brunswick Magnetic Anomaly — an area where the earth's magnetic field is unusually weak — researchers hope that other magnetic



COCORP seismic profiling revealed the African-North American suture running beneath the Brunswick Magnetic Anomaly, marked by stippling.

anomalies will also turn out to indicate crustal plate boundaries and other important geologic structures.

Because the suture is deeper than most wells are drilled, its exact composition is unknown. However, Nelson says it is probably made up of debris accumulated when the two crustal plates collided head-on, forcing one plate beneath the other. Sediments on top of the diving plate would be scraped up onto the leading edge of the overriding plate, he says.

The research, which is part of a larger mission to map in three dimensions the continental plates, will help explain plate tectonics. "If we can reconstruct the history of plate motion through time," says Nelson, "we may be able to understand the process." —J. Dusheck