Oil is the one key resource which South Africa does not possess and for which it has been almost totally dependent on foreign sources. This is an alarming state of affairs for the white minority government, which aims at achieving self-sufficiency in all areas in order to reduce the threat posed by possible international sanctions.

Without oil the ability of South Africa's economy to function would be considerably impaired. Furthermore without oil the minority regime would be unable to employ the tanks, police vans and airplanes on which it relies to maintain control.

Determined to reduce its vulnerability to oil sanctions, South Africa has embarked on a major coal-to-oil conversion program. By the end of 1982, the regime expects to be meeting up to 50 percent of its projected oil needs from this process.

The Western countries, which have talked the most about their interest in helping to bring about non-violent change in South Africa, are chiefly responsible for this development. In the past, they have helped South Africa acquire and develop the technology needed to move ahead with an oil-from-coal program.

The Fluor Corporation of California is now playing the key role in building the necessary facilities. Under a $4.2 billion contract, Fluor is overseeing an immense expansion of South Africa's first, limited efforts at coal conversion. In so doing, Fluor is lending direct support to apartheid.
SOUTH AFRICA AND ENERGY

While lacking oil, South Africa is coal-rich with estimated recoverable reserves of 25 to 38 billion tons—enough for up to 250 years. South Africa is unique among industrialized nations in that it has developed an economy which relies on oil for less than one-quarter of its total energy needs, compared with the United States' more than 40 percent. Coal and its derivatives fill the major portion of South Africa's energy needs.

Oil consumption in South Africa is classified as "strategic information" and not disclosed. However Bernard Rivers and Martin Bailey estimated in a report prepared for the UN Centre Against Apartheid that South African and Namibian consumption together (Namibia accounting for only a small portion) totalled 247,000 barrels a day in mid-1978. Rivers and Bailey estimate that another 77,000 barrels a day are exported for ships' bunkers and to neighboring countries which depend on South Africa for a part of their oil needs. Other detailed estimates approximate those of Rivers and Bailey.

Under a $4.2 billion contract, Fluor is providing the engineering and overseeing the construction of an immense extension of South Africa's first, limited efforts at coal conversion. In doing so, Fluor is lending direct support to apartheid.

Transportation consumes some 75 percent of the oil South Africa has at its disposal. The remainder is used by industry and mining, the highly mechanized agricultural sector and households.

South Africa's access to oil has been greatly reduced in recent years. All OPEC members except Iran placed an oil embargo on South Africa in 1973, due to South Africa's apartheid policies and its pro-Israel sympathies. Following this action, Iran became South Africa's chief supplier providing more than 90 percent of the country's imported oil. In February 1979, after the fall of the Shah, Iran announced that it, too, was joining the oil embargo.

South Africa responded by introducing a massive oil conservation and education campaign aimed at cutting consumption by 20 percent while at the same time being forced to pay an unusually high price for whatever oil it could get through open or illicit means. It may also have drawn on oil stock-piles—estimated at between 18 months and two years' supply—which it had been building up.

But the most important long-term action South Africa took with regard to its oil problem was to decide on a huge increase in oil-from-coal facilities.

SASOL AND THE PRODUCTION OF OIL FROM COAL

SASOL—the South African Coal, Oil and Gas Corp. Ltd.—is a state controlled company which was formed to oversee South Africa's oil-from-coal program. SASOL I, as the first oil-from-coal plant in South Africa was called, began production in 1955 using a process developed by the Germans between the World Wars and sold to a South African firm. SASOL I has an output of approximately 4,500 barrels a day.

For many years, the availability and relatively low cost of imported oil coupled with the high cost of extracting oil from coal, prevented expansion of the SASOL program. However, in December, 1974, following OPEC's quadrupling of oil prices and its imposition of a ban on South Africa, plans were announced for a second SASOL plant. In early 1979, it was decided to extend this second plant and to concentrate production on transport fuels.

Output of SASOL II, to be completed in late 1981, will be nearly 10 times that of SASOL I, or approximately 40,000 barrels a day, at a conversion exchange rate of one metric ton of coal for one barrel of oil. SASOL III will produce an additional 40,000 barrels of oil a day.

According to these figures, the three SASOL plants should be producing about 85,000 barrels a day, or some 35 percent of South Africa's projected petroleum demand by the end of 1983. The South African government claims, however, that the three SASOL plants will meet 50 percent of the country's oil needs.

SASOL II and III together constitute the largest and most expensive project ever undertaken by the South African government. The total cost of the project, located about 100 miles southeast of Johannesburg and slated to cover three and a half square miles, is an estimated $6.7 billion. By way of comparison, the South African budget for the 1979-80 fiscal year was $13 billion.

Now that the South African government has firmly established the oil-from-coal industry, it is encouraging the private sector to continue its development. In October 1979, the government issued SASOL shares to the public for 70 percent of the formerly state-owned company. Although there are still no definite plans, the South African chemical giant, AIEC, and other South African firms are investigating the possibilities of building their own synfuel plants.

THE ROLE OF FLUOR

Fluor, a US multinational based in Irvine, California, is one of the largest engineering and construction firms in the world with revenues of $3.5 billion and profits of $98.7 million in 1979. Among its current or recent projects, spanning over 23 countries, is the building of a $5 billion oil complex in Saudi Arabia, work on the Alaska pipeline, and construction of an $800 million copper mine in the People's Republic of China.
In recent years, Fluor has been heavily involved in the nuclear industry both in the US and abroad. It was also a member of a consortium which built a refinery in Sasolburg, South Africa for the Natref National Petroleum refiners. Its work for the US government has included conversion of a coal research plant into an oil-from-coal test plant for the Department of the Interior in 1974 and a design and feasibility study of a coal conversion plant for the Energy Research and Development Administration.

Fluor was awarded a contract in 1975 for engineering and construction work on SASOL II. With the announcement of SASOL III Fluor's contract was revised to include "management and coordination of the total project, including a major portion of the engineering, design, procurement, construction and a multitude of other supportive functions." In addition to work on the oil-from-coal facilities themselves, Fluor is also building a town called Secunda, five miles away from the plant, to house SASOL workers.

Fluor's total contract for both SASOL II and SASOL III is valued at $4.2 billion. Details have not been released, nor is it known what percentage of the $4.2 billion will be Fluor profit.

However, Fortune magazine said in February 1979, that "seldom will the [Fluor] company take chances of losing money in an inflationary situation by bidding for jobs at lump-sum guaranteed prices. ... As much as half the total cost of a typical project will be billed by subcontractors or suppliers directly to the client." Fluor is working with several other multinational corporations from West Germany, France and the US in building the SASOL facilities. US firms known to be supplying equipment or engineering and construction skills include Babcock and Wilcox, Badger Corporation (a subsidiary of Raytheon), Chicago Bridge, Honeywell and Goodyear.

Fluor operates on a "turn-key" basis: it builds a project and moves out. All the owner must do is "turn the key" for the new plant to operate. In building the SASOL plants, Fluor is providing the South Africans with engineering and construction technology they do not presently possess, but need, in their struggle for self-sufficiency.

In an indirect way, Fluor is also helping South Africa develop its chemical industry. The coal-to-oil process produces a number of chemical by-products, such as ammonia, butadiene, and propylene, which are basic materials in production of such items as fertilizer and rubber. The chemical industry is a rapidly expanding sector of the South African economy.

Seeking to ensure a role for itself in this and other growing industries, Fluor joined with General Erection (a South African company) in early 1980 to form Fluor-Genrec S.A. (Pty) Ltd. The new company will specialize in performing engineering, design, procurement and construction functions for the petroleum, chemical, mining, and related industries.

FLUOR'S ASSISTANCE TO SOUTH AFRICA IN THE US

Once Fluor was involved in SASOL II, it began lobbying to loosen US Export-Import Bank restrictions on extending credit to South Africa. The South Africans were seeking $225 million in loans and $225 million in loan guarantees from Ex-Im, using jobs for American workers and large contracts for US firms as incentives. Ex-Im strictures prohibited direct loans to the South African government.

Fluor applied for the credit on SASOL's behalf in 1975. Ex-Im was slow in moving on Fluor's request and it wasn't until 1976 that the campaign to eliminate the restrictions came to a head. In the final days of the Ford administration, 20 US senators, led by John Tower of Texas, gave a letter to the White House asking the President to "fundamentally re-examine our policy toward South Africa." The letter also said that restrictions on US ties to South Africa "are contrary to our goal of normalizing relations with other countries and tend to limit our influence in South Africa."

Following public disclosure of the pressures in February, 1976, a counter campaign was launched and the Administration decided against lifting the ban on direct loans. The Ex-Im Bank, however, decided it would extend the guarantees and circulated a defense of the decision on Capitol Hill. The day after the beginning of the Soweto uprising in June, 1976, Ex-Im rescinded its decision.

However, Fluor's involvement in SASOL II was not affected by the failure to abolish Ex-Im limitation. Export credits eventually were obtained in Europe.

Fluor and Fluor officials also have been active politically in other ways which have been of direct or indirect benefit to South Africa. J. Robert Fluor, chairman, president and chief executive officer of Fluor, sits on the board of the Heritage Foundation, a conservative organization which has distributed material sympathetic to South Africa. Fluor is also a member of the well-funded Business Industry Political Action Committee, many of whose contributions have gone to conservative candidates who are sympathetic to South Africa.

Fluor's own political fund, Fluor-PAC has contributed to a number of conservative politicians with pro-South African views. In 1978, it gave $1,000 to Roger Jepsen, the Iowa Republican who defeated Senator Dick Clark, who served as head of the Senate Subcommittee on African Affairs, is said by South Africa's former Information Secretary Eschel Rhodde to have been the target of a South African campaign to unseat him.

SASOL, FLUOR, AND THE INDIVIDUAL WORKER

Fluor is building a poor reputation for its labor policies in the US. The company has come under fire, for example, for coercing its employees into political
lobbying in the company's interests. And through its open shop subsidiary, Daniel International, Fluor is attempting to build synfuel plants in the US with non-union labor.

It is not surprising, therefore, that the company has declined to provide any detailed information about its labor practices in South Africa. SASOL II and III employ about 25,000 on-site workers, approximately 7,500 of whom are expected to remain when the plants are in full operation.21

There has been a critical shortage of skilled labor for the completion of SASOL II and the construction of SASOL III. This is due to the entire economy's skilled-labor shortage, but also because the site is a remote and relatively unattractive place to work. Blacks, however, who have few choices of jobs, have been willing to go there particularly since many of them have been promised decent wages and training.

There are indications, however, that Fluor has proven itself to be less than a model employer. For example, while some training of blacks is going on—in large part because of a shortage of skilled whites—the numbers do not appear substantial. Of the 4,500 black workers hired for the first part of the SASOL II project, some 3,200 are to be engaged in mining coal—one of the lowest paid and most exploited positions for blacks in South Africa.22

Simmering tensions at the SASOL II construction site over what workers described as low pay and security personnel harassment erupted in the summer of 1980 into wildcat strikes and riots in which 3 workers were reportedly killed and number of others injured.23 The press was not allowed near the site and both the government and Fluor refused to comment on the incidents.

Although Fluor has committed itself publicly to paying equal wages for equal work through its endorsement of the Sullivan Principles, a code of conduct signed by a large number of US firms, the Johannesburg Sunday Times reported that welders at the SASOL plant were in arms early in 1979 over the fact that after being promised $3.45 an hour plus a daily bonus, they were being paid only $2.20 an hour and no bonus. Meanwhile, whites were getting $4.00 plus bonus, or about double for the same work. When the workers took their complaints to Fluor, the paper quoted a black employee as saying, they were told the matter would be looked into. Four months later nothing had changed.25

The Sunday Times report also indicates that Fluor appears unwilling to challenge South African officials. The same worker is quoted as saying that when the employees approached a SASOL official, the official "dismissed their grievances and told them they were being paid at rates laid down by the State last year."

When the issue was raised at the Fluor annual meeting in 1979, William McKay, President of Fluor Constructors International, said, "The blacks are not getting equal pay to the whites. This is not saying that they do not get equal pay for equal work. You cannot produce a journeyman worker overnight." He added, "We do not have too much control over the actual wages paid, because they are controlled by forces beyond our control."

But wages and living accommodation are not the crux of the debate over whether US companies should continue to operate in South Africa. The issue is whether they are assisting in the perpetuation of a system which denies basic human and political rights to black South Africans. In the case of Fluor, one has only to consider what would happen to the current regime if it were to be denied all access to oil to recognize the importance of Fluor's activities.

SELLING THE US ON SASOL TECHNOLOGY

While Fluor is making money building SASOL facilities in South Africa, the two companies are also trying to market the coal-to-oil technology in other countries which are developing synthetic fuels. In the US, Fluor has already advanced two major steps in this direction.

First, in April 1979 the Department of Energy announced that it had obtained State Department clearance to offer to buy SASOL technology from any private corporation that can arrange a deal with South African authorities.

The Department of Energy's move was widely heralded in South Africa. The Rand Daily Mail reported that "the United States dramatically brushed aside scruples [in deciding] to allow American firms to seek vitally needed oil from coal technology from South Africa."

Second, Fluor and SASOL reached an agreement four months later to jointly market the SASOL technology in the US. In this way Fluor will act as an intermediary between South Africa and the incipient US synfuels industry.

SASOL has sole or joint licensing rights over three processes basic to its coal-to-oil process: the Synthol process, the Lurgigasification technology and the Fischer-Tropsch technology. Two of these are already being contracted for synfuel plants in the US. In June of 1980 the Carter administration established the US Synthetic Fuels Corporation as part of the government's energy program and authorized it to spend up to $20 billion in allocated funds for the 1981 fiscal year. The funds, intended to provide incentives for private corporations to develop the synthetic fuels industry, will take the form of grants for feasibility
Fluor was the leading recipient in the first round of these synfuel awards. The September 29, 1980 issue of Business Week reported that, "Fluor beat out all newcomers, getting Energy Department money for seven projects totalling $49 million."

Although the full details of these projects are yet to be known, it is likely the joint marketing agreement will mean that SASOL will have to be involved in all of them. As an indication of this involvement, the SASOL 1980 annual report stated that "of the first $100 million allocated by the US Department of Energy for design work on synfuel projects, $60 million will go to projects with which SASOL is involved either as a consultant or a potential licensor."

SASOL is already acting as a consultant to three planned synfuel plants in the US. Fluor is the main contractor for the first plant, planned by Texas Eastern Corporation, which will use the Synthol and the Lurgi processes and the third plant, planned by Panhandle Utility in Wyoming, will also use the Lurgi process. Meanwhile, coal and oil firms interested for many years in oil-from-coal conversion have recently been test running various types of US coal in SASOL plants.

The question is not whether the SASOL process could be used in the US but whether it is worth the cost both in money terms and in terms of the level of dependence on South Africa that it would entail. Dr. John Deutsch, acting Assistant Secretary of Energy under Carter, told a House Subcommittee on Economic Stabilization hearing, "I would not characterize [South African technology] as being more advanced than ours. What I would characterize is that because it is in operation, it has the benefit of practical experience."

A report by the Engineering Societies Commission on Energy supports the idea that several processes are more economical than the SASOL process, and the Department of Energy is itself funding several small

---

**STOCKHOLDERS OF THE FLUOR CORPORATION**

The Corporate Data Exchange (New York) has identified approximately 50 percent of the stockholders of the Fluor Corporation between 1975 and 1979. Listed below are the top ten stockholders plus some of the more interesting and significant ones.

**TOP TEN STOCKHOLDERS**

<table>
<thead>
<tr>
<th>Shares</th>
<th>% of Stock</th>
<th>Shareholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>921,262</td>
<td>5.76</td>
<td>Manufacturers Hanover Trust Co. + Retirement Plan</td>
</tr>
<tr>
<td>801,386</td>
<td>5.009</td>
<td>California Canadian Bank (Trustee of Fluor Employee Trust Fund)</td>
</tr>
<tr>
<td>655,000</td>
<td>4.094</td>
<td>Kirby Family Corp.</td>
</tr>
<tr>
<td>511,332</td>
<td>3.196</td>
<td>BankAmerica Corp.</td>
</tr>
<tr>
<td>393,000</td>
<td>2.456</td>
<td>Prudential Insurance Co.</td>
</tr>
<tr>
<td>355,125</td>
<td>2.220</td>
<td>Provident National Bank</td>
</tr>
<tr>
<td>279,135</td>
<td>1.745</td>
<td>Sears Savings and Profit-Sharing Fund</td>
</tr>
<tr>
<td>273,000</td>
<td>1.706</td>
<td>Bankers Trust Co.</td>
</tr>
<tr>
<td>201,272</td>
<td>1.258</td>
<td>New York City Teachers Retirement System</td>
</tr>
<tr>
<td>186,320</td>
<td>1.165</td>
<td>Pittsburg National Bank</td>
</tr>
</tbody>
</table>

**UNION-RELATED PLANS** (Pension plans over whose funds unions have some degree of authority.)

<table>
<thead>
<tr>
<th>Shares</th>
<th>% of Stock</th>
<th>Shareholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>277,500</td>
<td>1.736</td>
<td>Six different Bell Telephone Pension Plans</td>
</tr>
<tr>
<td>104,100</td>
<td>0.651</td>
<td>Union Carbide Pension Plan</td>
</tr>
<tr>
<td>42,000</td>
<td>0.263</td>
<td>Chrysler Corp-United Auto Workers Pension Agreement</td>
</tr>
<tr>
<td>30,000</td>
<td>0.188</td>
<td>Ford Motor Co. General Retirement Plan</td>
</tr>
<tr>
<td>19,000</td>
<td>0.119</td>
<td>NYSA-International Longshoremen's Pension Fund</td>
</tr>
<tr>
<td>15,000</td>
<td>0.094</td>
<td>Sheet Metal Workers National Pension Fund</td>
</tr>
<tr>
<td>5,000</td>
<td>0.031</td>
<td>Mobil Oil Corp. Retirement Plan</td>
</tr>
<tr>
<td>4,700</td>
<td>0.029</td>
<td>General Tire &amp; Rubber Non-contributory Pension Plan</td>
</tr>
</tbody>
</table>

**PUBLIC PENSION PLANS**

<table>
<thead>
<tr>
<th>Shares</th>
<th>% of Stock</th>
<th>Shareholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>201,272</td>
<td>1.258</td>
<td>New York City Teachers Retirement System</td>
</tr>
<tr>
<td>10,000</td>
<td>0.063</td>
<td>Oregon Public Employees Retirement System</td>
</tr>
<tr>
<td>2,000</td>
<td>0.013</td>
<td>Utah State Retirement Investment Fund</td>
</tr>
</tbody>
</table>

**EDUCATIONAL INSTITUTIONS**

<table>
<thead>
<tr>
<th>Shares</th>
<th>% of Stock</th>
<th>Shareholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,500</td>
<td>0.028</td>
<td>Boston University</td>
</tr>
<tr>
<td>2,000</td>
<td>0.013</td>
<td>Tufts University</td>
</tr>
<tr>
<td>500</td>
<td>0.003</td>
<td>Albright College</td>
</tr>
</tbody>
</table>
plants using more advanced technologies. Meanwhile the Rand Corporation has warned in a recent report that all synthetic fuel programs are likely to be far more expensive than currently estimated and that “If we go too fast one way, we forego the opportunity to develop other technologies later.”

On the other hand, a foothold in the US synfuels industry would be a great economic, technological and political boost to South Africa. The South Africans could earn significant foreign exchange in licensing fees and royalties. They would also stand to benefit by sharing in new technological developments in areas where they are involved. And the close government and business relationships necessarily growing out of such involvement in the US industry would lend the country political leverage in the US.

**ACTION AGAINST FLUOR**

Fluor’s most important contribution to apartheid is its role in helping South Africa to achieve energy self-sufficiency. Yet despite the SASOL plants, South Africa still remains dependent on foreign sources for at least 50 percent of its oil needs. With this understanding, the OAU and the UN have called for an international oil embargo against South Africa. The UN General Assembly passed resolutions in 1977, 1979, and 1980, requesting the Security Council to impose “urgently a mandatory embargo on the supply of petroleum and petroleum products” to South Africa. African heads of state at the 1980 annual session of the OAU also called for a mandatory oil embargo. An OAU report explained the reason: “The country [South Africa] would be very vulnerable to an effective international embargo … Oil sanctions probably represent the most effective form of external pressure that could be exerted.”

In the US, shareholders have pressed Fluor to withdraw from its South African involvement. A shareholder resolution introduced jointly at the 1979 Fluor annual meeting by the American Friends Service Committee and the Maryknoll Sisters of St. Dominic stated that “…as investors we believe that the US business investment and strategic contracts in South Africa, including Fluor’s, provide significant economic support, international credibility and moral legitimacy to South Africa’s apartheid government” and resolved that Fluor “make no further investments in or contracts with the government of the Republic of South Africa.”

In response, the company made clear its intentions not to cause any problems with the white government: “Historically the Company has always abided by the laws, regulations and social customs of the country in which it works, and the management intends for the Company to continue in this manner.”

Meanwhile, black South Africans have also taken the initiative in protesting Fluor’s South African activities. On June 1, 1980, the African National Congress, a South African national liberation organization, staged a successful bombing of the SASOL installation. The subsequent fire burned for two days, darkening the Johannesburg skyline, and causing more than $6 million in damages. Part of the operation involved the planting of an explosive at Fluor’s Johannesburg office. This attempted sabotage of the Fluor office served to dramatize the crucial role of US investment and technology, and Fluor corporation in particular, in supporting the apartheid system.

The looming threat of oil sanctions has driven South Africa into developing an oil-from-coal industry. Through its involvement, Fluor corporation has lent tremendous support to South Africa’s effort to become immune to possible future sanctions.

This perspective was originally prepared with the help of Heidi Tielen, an intern with the Africa Fund, the Inter-faith Center on Corporate Responsibility, and David McGloin, an intern with the Washington Office on Africa, in August 1979. Updated, February 1981 by William I. Robinson, Africa Fund staff assistant.

**FOOTNOTES**

4. Bailey and Rivers, p. 11 Table 1A.
9. Ibid.
12. Fluor Corporation 1977 Annual Report says that the SASOL II contract is worth $2.2 billion. The Fluor Corporation 1978 Annual Report states that the SASOL III is worth $2 billion.
23. Files: Fluor and SASOL, Interfaith Center on Corporate Responsibility (New York).
27. "Oil Embargo Against South Africa," Document, UN Center Against Apartheid (February, 1980).
30. Ibid.
31. The Ohio Attorney General filed suit against Fluor, Manufacturers Hanover in a New York brokerage house in 1976. The suit alleges that the three parties conspired to cover up the SASOL deal so Manufacturers could buy Fluor stock before the price went up after the contract was announced. Wall Street Journal (May 13, 1976).