

## **EIR Feature**

# **South Africa: a powerhouse for regional development**

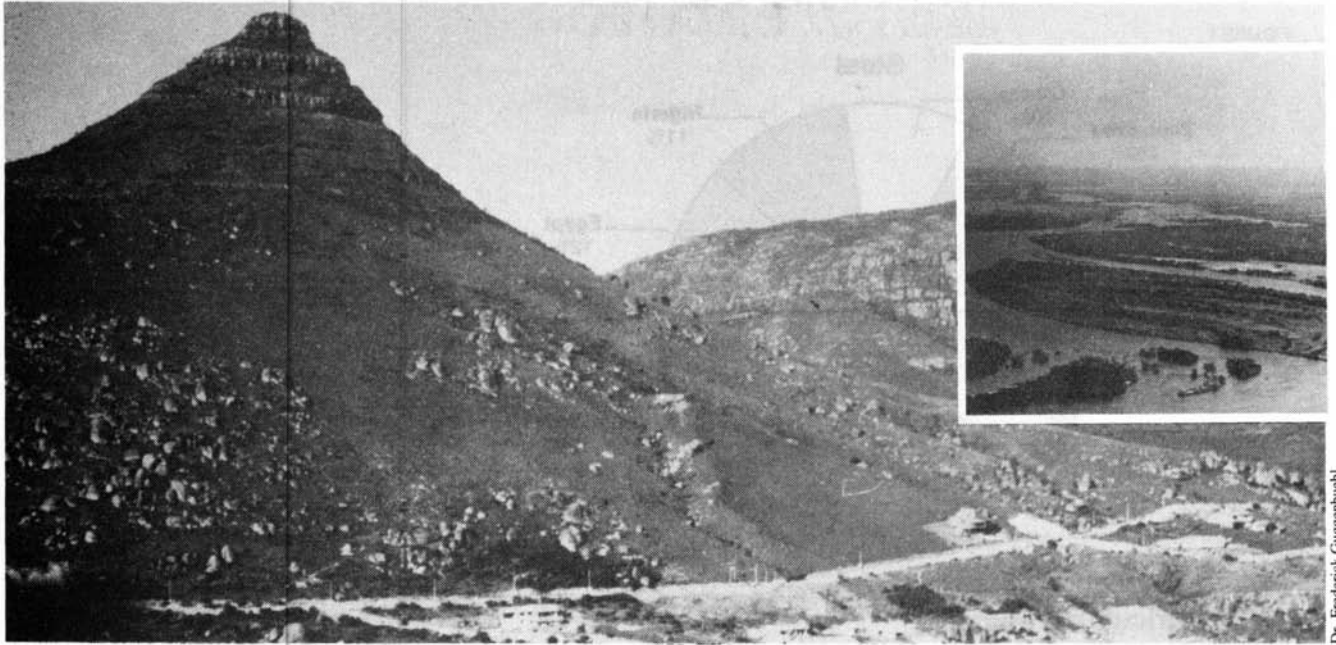
by Roger Moore

The recent dramatic developments in the Republic of South Africa, with the legalization of the African National Congress and the freeing of Nelson Mandela, have brought that nation to the point that, if its leaders act wisely and with vision, South Africa can not only resolve its racial and tribal conflicts, but can become a powerhouse for the economic development of southern Africa as a whole.

As Lyndon LaRouche commented upon hearing of Mandela's release (*EIR*, Feb. 23, 1990), "The problem is developing a high-technology structure, to build up the basic economic infrastructure and the social, that is, educational and medical infrastructure, required to elevate the entirety of the population of the region, beginning with South Africa itself, to a level of cultural potential and economic potential for proliferation of small, relatively high-technology firms, and including the development of an independent flourishing African agriculture to match the quality of the Afrikaaner farms in that region." Unless this is done, LaRouche warned, a "Dionysiac explosion" will be the result.

The role of South Africa's industry and scientific agriculture in uplifting the surrounding nations, must complement the project to build a Paris-Berlin-Vienna triangle of high-technology development in Europe, as LaRouche has specified. From this European center, spokes will radiate outward into the nations of the Third World. One key example of how this will work is nuclear energy: German nuclear technology can provide the necessary input for rapid development of southern Africa. This was the kind of vision that was blocked by the murder of Dresdner Bank's Jürgen Ponto and industrialist Hanns-Martin Schleyer in 1977.

The material on South Africa's economic potential which we present below was developed by *EIR*'s bureau in Wiesbaden, West Germany, in 1987, as part of a campaign to prevent the imposition of international economic sanctions on South Africa. Such sanctions, we argued—as did moderate black leaders such as KwaZulu Chief Mangosuthu Buthelezi—would hurt blacks the most, and would do nothing to eliminate apartheid. Now, with the freeing of Mandela, the sanctions



Dr. Frederick Guggenbuehl

*Water projects are the key to the development of southern Africa. On the left are the arid hills along Capetown Road in South Africa; inset is the Zambezi River, flowing through Zimbabwe. South Africa has energy, industry, and technology—but little water; its neighbors have plenty of undeveloped water resources, but lack energy resources and know-how. It's a natural basis for a community of principle for economic development.*

must be lifted immediately, and South Africa given the international support required to implement a comprehensive development program.

### Can Africa be saved?

*EIR* has one overriding criterion for analyzing South Africa, its internal dilemma, and its relations with its neighbors: Can this economic powerhouse become the cornerstone for saving Africa? Africa is dying. The future of southern Africa depends on the further industrial development of something the world unfortunately knows little about, the Pretoria/Witwatersrand/Vereeniging region (PWV). Being the location of the major gold reefs, large coal reserves, and the minerals of the bushveld igneous complex, the area had a head start in the generating of wealth. But this is only secondary to the fact that the surplus from this wealth was reinvested into the creation of the biggest industrial economy on the African continent. It was the political battles of republican-oriented elements which ensured that the profits from the raw materials were rechanneled within the country for the creation of infrastructure, industrial jobs, and new wealth production.

From Zaire to Mozambique, the fate of black African nations depends on the unleashing of further wealth production in the industrial regions of South Africa, their natural ally in building and financing the essential infrastructure projects denied them by the International Monetary Fund (IMF) and World Bank. South Africa itself needs a new sense of nationhood, uniting all groups in the great task of bringing prosperi-

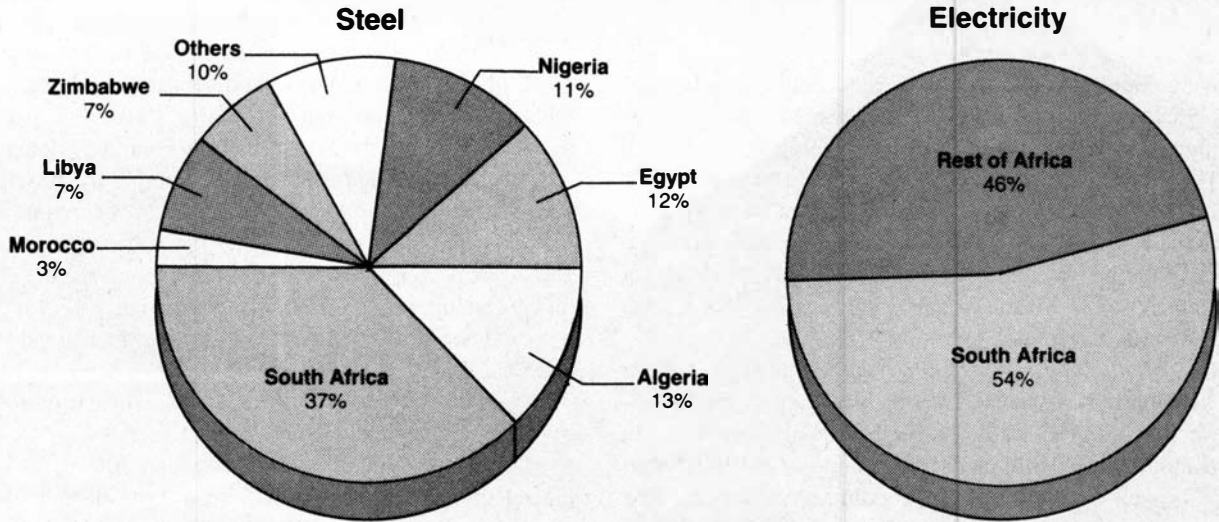
ty to sub-Saharan Africa.

**Figure 1** shows how the South African economy dwarfs that of neighboring nations. The energy production figure is one of the most revealing. Throughout the postwar period, South Africa's Electricity Supply Commission (ESCOM) pursued a policy of rapidly expanding energy production as one of the key infrastructural prerequisites for the creation of an urbanized industrial workforce. Electricity supplies are increasing at the rate of 6% per year. Throughout black Africa, though, the word from the IMF and World Bank, is that Africa should not engage in large capital projects. Per capita and per hectare energy consumption figures are disastrously below levels required for modern agricultural and industry sectors, thus condemning most of the population to "appropriate technology" subsistence agriculture.

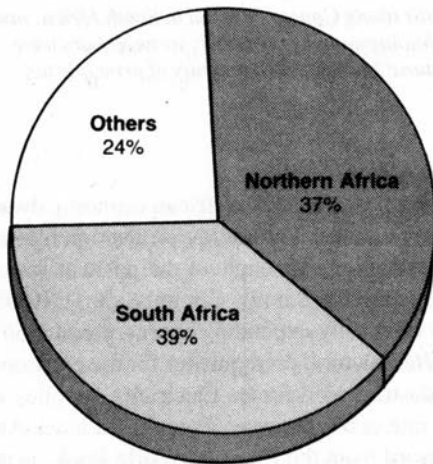
The steel production figure reflects the commitment, since 1928, to pull South Africa's economy out of the grip of being a colonial dependency on the British Empire. In a manner similar to the Hamiltonian economic policy of the young United States, leading strata implemented their right to develop domestic manufactures. The 1928 founding of the state steel company, ISCOR, was the first phase. Tariffs and protectionism were used for a systematic policy of import substitution.

The tractor figure is a useful measure of energy and capital intensity in agriculture, of the move away from subsistence agriculture. In the land mass between the Sahara Desert and the borders of South Africa there were only 113,000

FIGURE 1



**Agricultural tractors**



	Steel (000 metric tons)	Electricity (million kWh)	Tractors (000s)
Africa	17,445	201	471
South Africa	6,467	109	182
Algeria	2,291	7	45
Egypt	2,064	18	40
Ghana	—	5	—
Libya	1,155	6	16
Morocco	594	6	25
Nigeria	1,930	8	9
Tanzania	—	—	19
Tunisia	—	—	36
Sudan	—	—	12
Zambia	—	11	—
Zaire	—	4	—
Zimbabwe	806	4	21

Figures are for 1982.  
Sources: U.N., FAO

tractors as of 1982.

**Agriculture: no to Malthus**

The World Bank, the IMF, the Club of Rome, the U.N. Food and Agriculture Organization, the International Institute for Applied Systems Analysis, and the U.S. State Department's AID all promote the dogma that the cause of collapsing per capita food production in Africa is overpopulation. The malthusians of these institutions dream of a permanently rural, idyllic Africa, whose population is held in balance by famine, disease, and war. As Prince Philip of the World Wildlife Fund stated in 1986, "The human population

needs to be culled." In this sense, real apartheid means maintaining people in their primitive, "self-subsistence" state, the situation imposed on colonial and post-independence Africa by international financial institutions.

Africa needs modern agriculture, simultaneous with infrastructure and urban industry. South Africa is proof positive that modern agriculture is possible on the African continent. Its low and unreliable rainfall means that only 12% of the country is suitable for dry land crop production (suitable soil with a slope under 15%, and sufficient, reliable rain that the soil can store and release for the crop). It would seem to be a most unlikely candidate to be self-sufficient in food

production—but today, it almost is. Seventy thousand farming units employing 1 million rural inhabitants virtually feed the country of over 30 million.

South Africa tackles the problem of feeding its rapidly growing population by using modern technology and irrigation. South Africa is a world leader in the use of surface water resources for irrigation—78% in 1972, compared to 46% in the United States. On lands irrigated with state water, 70% is surface distributed, 29% by sprinkler, and 1% by drip. Since the very beginning of European settlement in the Cape in the 1650s, the question of capturing water for agricultural and other uses has been a central concern. Of the 52,000 million cubic meters of water flowing in South Africa's rivers, potentially only 31,000 million cubic meters per annum can be captured with dams for urban, irrigation, and hydroelectric use. Ground water (through drilling of wells) can yield another 1,100 million cubic per annum. In 1980, South Africa's well-developed and expanding water capture and dam system was already capturing and distributing 40%—over 13,000 million cubic meters—of this potential for all purposes, of which 9,600 million cubic meters per annum was for irrigation. In order to remain self-sufficient in food production, by the year 2020 South Africa intends to double the volume of water available for irrigation. If extremely dry South Africa can feed its population, than almost anybody can—with technology and skills.

## Industry and apartheid

Compared to its neighbors, South Africa is characterized by a high percentage of labor employed in industry—29% in 1980, compared to 15% in Zimbabwe and 16% in Angola. By 1980, manufacturing and construction combined provided more employment than either mining or agriculture. It is this creation of an urbanized, increasingly skilled, industrial work force, backed up by an expanding infrastructure, that makes South Africa the hope of the entire region.

The single most important factor creating the conditions for the end of apartheid has been the postwar infrastructure and industrial boom. It has been the increasing demand for more and increasingly skilled labor in the industrial centers of the PWV region, Durban, and the Eastern Cape, that brought blacks out of the rural, subsistence agricultural existence, typical for most of Africa. Almost 80% of Africa's population is non-urban, whereas for South Africa, the figure is 50%, with 39% of blacks urbanized. With the end of the apartheid system's Pass Laws, South Africa began to plan major investments into urban infrastructure, housing, and education, for the expected increase in black urbanization. For this reason, most industry and trade associations in South Africa realized early on that apartheid was becoming an economic irrationality, slowing down economic growth. The architects of this industrial growth became the political lobby for many of the reforms that are being implemented.

The approach of these circles is very similar to the ap-

proach of the U.S. Republican Party toward slavery, after the party's founding in 1854. The most important architect of the policy was party co-founder and later economic adviser to the Lincoln administration Henry C. Carey. Carey was a protectionist and founder of the Iron and Steel Association, who developed a program for ending slavery by extending industry deep into the South, thereby creating a demand for industrial labor which could only be filled by the progressive end of the mono-crop chattel slave economy of cotton. Manufactures were to be promoted into the South, using the coal and water power of the region. The policy was not one of a dictate ending slavery, but of holding the Union together with industrial development, in a way which would itself wipe out the blight of slavery. It was only the joint parallel deployment of radical Abolitionists and British Empire backing for the slaveocracy which forced the civil war.

The composition of South Africa's labor force is without precedent in Africa. The growth from 1945-65 and 1965-75 represents the postwar takeoff. In 1948, with the coming to power of the National Party, new import controls were implemented to create import substitution industries. Thus, at the same time that the National Party began perfecting the bureaucratic apparatus of apartheid, they also created the demand for black labor that created the leverage for ending apartheid.

Imports as a percentage of total production declined from 62.5% in 1945 to 40.3% in 1955 and 33.8% in 1965. Domestic industries for the production of consumer goods accounted for much of the industrial growth, but the expansion of heavy industry and machinery was also taking place in parallel. Employment in production of metal products grew from 54,100 in 1951 to 135,500 in 1982—a 250% increase.

The growing importance of industry is also reflected by the fact that since the beginning of the 1980s, it has consumed more electricity than mining.

The year 1975 represented for South Africa and southern Africa a breaking point in the postwar industrialization of the region. Three factors converged to slow down the rate of growth: 1) The early 1970s shift globally to the idea of a "post-industrial society," with the proliferation of the zero growth movement, malthusian institutions like the Club of Rome, and the brutal imposition of such policies on the Third World via institutions such as the IMF and World Bank. The result of this shift we see most viciously in Africa today, with starvation, the AIDS plague, and the locust infestation. 2) The conscious decision by Western policymakers of the stripe of Henry Kissinger to permit the Soviets and Cubans to implant themselves in the region, in Angola, as a permanent counterweight to South Africa's economic and military power. 3) The effect of apartheid on suppressing the rate of development of black skilled labor.

**Table 1** documents this turning point. In 1975, some 1,308,000 were employed in manufacturing and 484,000 in construction. In 1984, nine years later, 1.4 million were

TABLE 1

**Labor employment by sector**

	Year	Mining*	Manufacturing	Construction	Electricity	S.A. Transport Services	Commerce, finance	Services
	1945	473,000	353,000	34,000	10,500	150,000	—	—
	1955	540,000	632,000	107,500	18,000	210,500	—	—
Postwar takeoff	1960	—	—	—	—	—	642,500	1,137,000
	1965	634,000	913,500	193,500	17,300	227,000	—	—
	1970	—	—	—	—	—	898,000	1,596,000
	1975	639,500	1,308,000	483,500	33,000	250,000	—	—
Stagnation	1980	—	—	—	—	—	1,294,000	1,986,000
	1984	711,500	1,399,000	415,000	63,600	240,000	—	—

\*Does not include foreign migrant labor.

employed in manufacturing and 415,000 in construction—complete stagnation. By 1976, the steel company ISCOR had completed its last major expansion, with its Greenfield plant in Newcastle, Natal. The plant was to be the core of a vast industrialization scheme in Natal's Tugela basin. Metal industries using ISCOR's steel were supposed to be developed, but the plans were never realized, and expansion plans for the steel complex also never went into effect. The growth of large squatter slums surrounding Durban are a direct consequence of this.

Probably the most serious, long-term damage of apartheid has been its impact on education and black labor skills. In the original apartheid planning, blacks were to live in homelands under a largely subsistence economic mode, with limited numbers of them being permitted under an "influx control" and a pass system to function within the "white" economy, when necessary. Dormitory systems for mining are a product of this, as well the semi-dormitory status that prevailed in many townships.

In the words of apartheid architect former Prime Minister Verwoerd, blacks should be educated for their "place" in society.

Forty percent of the black population aged 20 years and older in 1980 had no formal schooling. Skilled labor demand in the 1950s and 1960s was originally met by immigration from Europe and by raising the skill levels of whites. In the 1960s, one-half of the skilled labor requirement was met by immigration from abroad, sustaining 9% per annum rates of growth in industrial production.

While one could acknowledge that per capita education expenditures for blacks in South Africa are above most African figures, they were way short of what was required to build an increasingly skilled labor force. Table 2 makes clear that between 1965 and 1983, there has been no substantial shift in the skill levels of employed blacks.

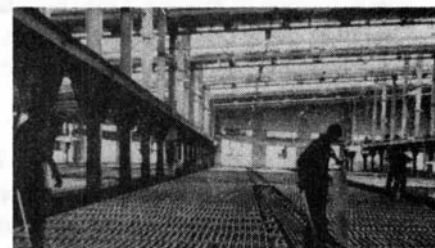
By the mid- to late 1970s, the South African economy had built up a physical infrastructure capable of sustaining a significant lunge forward in industrial capacity. Even if regional cooperation had been in place, the underinvestment in the "market basket" of consumption for blacks had created a mammoth skill deficit. As J.A. Lombard of the Development Bank of Southern Africa stated in 1981, "Because the South African production function will, to a far greater extent than ever before, have to rely on the supply of skills from the domestic black population, and because this means a costly and time-consuming process of industrial culturalization and urbanization of the available economically active population, the rate of increase of final output during the 1980s cannot for the time being reach the high levels of the 1960s." Because of the early recognition of this crisis, the architects of South Africa's industrialization began the process of reforms designed to make available to blacks the necessary access to modern industrial culture and its concomitant political rights.

Even with key aspects of the world economy in the hands of malthusian institutions, South Africa's dirigist commitment to bringing industrial culture to Africa could have made progress in the region, much the same way Japan has been able to be the motor for industrialization in the Asian Pacific Rim. By the beginning of the 1970s, plans were already being implemented for extending infrastructure north into the continent. Exploiting the fact that colonial Portugal had to seriously confront the question of developing its colonies, if it wanted to maintain any influence at all, South Africa negotiated the construction of the Ruacana Falls hydroelectric project in southern Angola and participated in the Cahora Bassa project in Mozambique. Built in part by South Africa companies, the projects were conceived as permitting the colonies (and later, countries) to develop their water resources by exploiting the economies of scale inherent in the

TABLE 2

**Skill levels of employed blacks in South Africa**

	1965		1975		1983	
High	51,062	3.0%	139,305	5.0%	159,679	5.0%
Middle	92,236	5.0%	201,923	7.0%	339,876	11.0%
Low	1,715,365	92.0%	2,467,541	88.0%	2,531,015	84.0%

*Copper refinery in Ndola, Zambia.*

Ulrich Nations Y. Lehmann

electricity demand of South Africa. Dependable electrical power and water use supplies would be available in those countries for economic development. Both projects exist now, but largely underutilized.

In 1974-75, in the context of seeking a negotiated settlement to the Rhodesia crisis, South African Prime Minister Vorster and his representatives were discussing détente and co-prosperity schemes with Kenneth Kaunda of Zambia. But by the mid-1980s, Kaunda was calling for economic sanctions against South Africa. The difference was the Soviet-Cuban takeover in Angola, a permanent destabilizing factor in the region.

The postwar development of the southern Africa region, centered on South Africa's increasing industrialization and urbanization, created a very favorable and necessary interdependency among the nations of the region. It is the basis upon which a community of principle could be constructed.

In the discussion below, we outline some of the principal features of this relationship today, which provide the basis for rapid expansion.

**Rail and ports**

Because of the pattern of railroad development at the end of the 1800s and the beginning of the 1900s, and the concentration of minerals in the Zairean (Shaba Province), Zambian, and South African mineral belts, southern Africa developed a fairly integrated, dense railroad grid, unlike the rest of sub-Saharan Africa. By World War I, most of the grid was in place. By 1922, with the incorporation of South West Africa's grid inherited from the former German colony, the South African Transport Services (SATS) became—and remains to this day—the anchor of the entire southern African rail grid and port system, also managed by SATS (see Table 3). With 24,500 kilometers of track under its management, SATS supervises 25% of all Africa's rail mileage. The present track density in Europe is 700 kilometers of track for every 1 million inhabitants; for Africa, without South Africa and Namibia, it is 150 km; but in South Africa-Namibia it is 766 km.

Before the 1975 takeover of pro-Soviet governments in Angola and Mozambique, this regional system functioned without any serious disruptions. The post-independence de-

TABLE 3

**Imports and exports via South African Transport Services**

%

	Imports	Exports
Zaire	57	45 (copper) 60 (lead and tin) 40 (cobalt)
Zambia	70	40
Malawi	60	50
Zimbabwe	68	65

cline of many sections of this grid outside of SATS was in part due to the outflux of Europeans and in part to the emerging financial squeeze under IMF policy. With the 1975 civil war in Angola, the Benguela line into Shaba Province of Zaire was closed. Otherwise, most sections of this grid have been functioning, with Zambia, Zimbabwe, Botswana, Lesotho, Swaziland, and Mozambique all having normal rail agreements with SATS. Civil war conditions in Mozambique, and poor quality of rail, harbor, and administration of the Tazara 1,800-kilometer rail link built in the 1960s by Communist China from Kapiri Mposhi in Zambia to Dar es Salaam, Tanzania, have created a situation where much of regional freight for export out of southern Africa ends up running over SATS rail and harbor facilities. In 1979, Zambia shipped 452,000 tons by the Tazara line, compared to 637,000 tons over the South African route.

Zambia is currently trying to diversify more of its freight traffic to non-South African rail lines. This has led to strong protests from Zambian companies dependent on imports, since when their exports are shipped out over non-South Africa routes, it can take 5-10 times longer, thus delaying the inflow of foreign exchange needed to procure replacement parts.

South Africa and Mozambique work closely together in maintaining the rail line from the Pretoria-Witwatersrand



area to the port of Maputo. Up to one-third of Mozambique's foreign exchange earnings derive from the shipping of Witwatersrand freight overseas via Maputo.

## Power and water

The use of the financial surplus from South Africa's mines, the result of the region's labor and South Africa's mining skill and technology, is the legitimate object of negotiations for the region. The "Great Projects" for southern Africa that ought to be financed, center on power and water. South Africa has plenty of the former—primarily coal-generated—and a scarcity of the latter. South Africa's neighbors need energy, but have plenty of undeveloped water resources. South Africa's need for water is a vital strategic matter. If it cannot negotiate access to its neighbors' water, it will have a large shortage in 20 years and will have to begin implementing zero economic and population growth policies.

In the accompanying article by South African water engineer Desmond Midgley, we present one plan for aggressive regional development of water and hydropower resources. The buoyant optimism of his opening paragraphs should be contrasted with the malthusian pessimism of the IMF and World Bank on such matters.

There are currently two hydro-electric facilities in the region, aided by South Africa, that are largely unused due to political instability. Cahora Bassa, on the Zambezi River in northern Mozambique, is a 1,425 MW dam that is only intermittently in use because of Renamo guerrilla sabotage activities against the two transmission lines. Mozambique is committed by treaty to the delivery of 1,350 MW to South Africa.

In southern Angola, the Ruacana Falls project on the Cunene River, on the border with Namibia, is a 240 MW unit which is not producing much power, because the Angolans will not permit the regulating dam at Calueque to be completed. Both problems derive from the Soviet entry into the region with the collapse of the Portuguese colonies in 1974-75.

## Internal regional trade

Due to the fact that South Africa is surrounded by nations that for the most part are still dominated by typical colonial economy structures—raw material exports and subsistence agriculture—the volume of trade within the region is correspondingly constrained.

The only significant exception is the nation of Zimbabwe. During the Rhodesia crisis and after the country's Unilateral Declaration of Independence from the British, the industrial sector was built up in a dirigist manner, because of international sanctions. In 1964, a preferential trade agreement was signed with South Africa, such that 18.1% (in 1983) of total exports and 40% of its manufactured exports go to South Africa.

# Water and electric power to develop southern Africa

by D.C. Midgley

*The article excerpted here, by South African water engineer Desmond Midgley, which first appeared in Africa Insight (Vol. 14, No. 4, 1984), presents one possible plan for rapidly expanding the economic potential of southern Africa as a whole, through regional cooperation in the development of water and electric power resources. Professor Midgley was formerly a professor in the Faculty of Engineering at the University of the Witwatersrand.*

... It is by no means in South Africa's interests to be surrounded by less-developed impoverished neighbors, many of whom naturally resent their dependence on South Africa. Some make no secret of their steps to sever links and form an independent bloc. There are elements, too, who would aid and abet the undisguised Russian efforts to gain control of the South African economy. . . .

The southern subcontinent has enormous natural resources and South Africa has the technical know-how with which, provided there is cooperation, to bring southern Africa to a level of development comparable with that of the United States within a couple of decades. . . .

Secondary industry, both agricultural and manufacturing, must be expanded along with the necessary training facilities. Plants must be erected to beneficiate locally the raw materials in which these countries are so rich—rather than that they should continue merely to export and thus remain for too long reliant on primary industry, in some cases based on mining of a single ore—for example Zambia's copper.

Few countries are as well placed as South Africa to help expand the infrastructure and with it the prosperity of the southern subcontinent. The incentive to do so lies chiefly in the advantages to be gained from cooperation in the development of water and electric power resources.

## Resources and demands

South Africa's Electricity and Supply Commission (ESCOM) provides 80% of the country's electricity needs and much of the demand of several neighbor states. ESCOM's present installed capacity (1984) is about 20,000 MW and, if past growth rates persist, will by the year 2020 have to exceed 200,000 MW to meet an energy demand exceeding