Bank Lending for Electric Power in Africa: Time for a Reappraisal

World Bank lending for power development in Sub-Saharan Africa has been distinctly less successful than in other regions. The poor performance of power utilities adds to public deficits and diverts resources from spending on social sectors such as basic education and public health. A new OED study* examines the record of completed power projects in 22 Sub-Saharan countries and makes recommendations for improved performance, within the framework of the Bank’s 1993 policy.

Since 1978 the Bank has invested $2.3 billion and attracted $2.5 billion of cofinancing for power in Sub-Saharan Africa (SSA). Physical implementation has been no worse in SSA than in other regions. But the Bank’s impact on the technical and commercial performance of the sector has been limited.

Projects of the 1970s and 1980s. Most SSA power utilities benefiting from Bank loans have been state-owned enterprises. The 41 projects completed by 1993 supported least-cost power development programs through investments in physical capacity and institutional strengthening. They sought to strengthen power institutions and improve their efficiency, increase local resource mobilization and catalyze cofinancing, and improve access to electricity by disadvantaged groups. New generation and transmission had priority over the expansion of distribution.

Policy revision. By the late 1980s, it was clear that power projects were not meeting their goals well—especially those with respect to financial sustainability. A new sector policy, introduced in 1993 and in force today, identifies five guiding principles for Bank support: transparent regulation, commercialization and corporatization, imports of services, borrower commitment to reform, and greater private sector involvement.

Of the 25 current power projects supported by the Bank in SSA, 11 were approved after the new policy was introduced. They stress rehabilitation and distribution rather than major investments in new generation and transmission. About half include elements of the new policy, particularly for regulatory reforms and for management contracts by private operators.

The record

Out of the 69 power projects in 26 SSA countries approved since 1978, the study analyzed 41 completed projects in 22 countries (see figure).

- Nearly two thirds were rated uncertain or unlikely to sustain their benefits, compared to the Bankwide average of less than one third. Often the main reason was lack of effective maintenance arrangements, including access to foreign exchange.
- Project cost and time overruns, while substantial, were no worse in SSA than in other regions.
- Borrowers’ compliance with covenants was negligible in more than 60 percent of cases. Compliance was especially weak on important financial covenants—for collection of accounts receivable, approval of tariff increases, and the financial return on fixed assets.
- Among recently completed operations, only 27 percent substantially achieved their institutional development goals, compared with the average of 38 percent for power projects Bankwide.

Environment and resettlement. Power projects in SSA seldom raised critical environmental and

resettlement issues. Thermal generation in several countries is based on small diesel-fueled sets, a relatively clean technology. Coal-fired power plants, developed only in Botswana and Zimbabwe, use appropriate technology to abate pollution. In nine of the 15 hydroelectric projects, the environmental impact was considered insignificant at the outset. But in three of the five cases where projects displaced people, resettlement was not handled according to the Bank guidelines in force. Early lessons from Ghana—that resettlers' productive systems and social environment need to be restored—were not systematically applied.

Program impact

Least-cost development. The Bank’s encouragement of least-cost power development was largely successful. The Bank did refuse to finance several hydroelectric projects that were uneconomical. The relatively large hydroelectric plants that it supported in the 1980s would still be good investments today, even at today’s lower oil prices, but gas-based alternatives now look more attractive in Côte d’Ivoire, Nigeria, and Tanzania.

Efficiency. Bank assistance achieved very little improvement in the technical and commercial efficiency of SSA power utilities. Electricity losses in the early 1990s were higher than the Bankwide median in more than two-thirds of the SSA countries. Productivity was low; the number of customers per employee was about 30 percent of the Bankwide median.

Cost recovery. As a result of low tariffs and/or poor collection on bills, cost recovery in SSA has generally been inadequate and below that in other regions. In the early 1990s, the median level of outstanding accounts receivable, at 131 days, was 56 percent higher than the Bankwide median (84 days); most of the arrears came from the public sector.

Financial performance. The financial performance of power utilities in SSA has generally been inadequate. In about 60 percent of SSA countries, rates of return on revalued net fixed assets in operation—and debt service coverage—were lower than the Bankwide median. On self-financing, three out of four SSA countries performed much more poorly than the Bankwide median. High to acceptable rates of return (as in Malawi and Zimbabwe) reflect operating efficiency as much as the adequacy of tariffs.

Access by the poor. With few exceptions—Burundi, Côte d’Ivoire, Ghana, Guinea, and Nigeria among them—the provision of electricity to low-income households was pursued weakly or not at all. Where it was pursued, through power distribution or rural electrification components of projects, it proved unsustainable. Generously subsidized tariffs, often directed to low-voltage customers, favored existing customers more than new ones. But the overriding factor, depressing incomes and demand for new connections, was the poor macroeconomic environment.

Performance factors

External and country factors. High international interest rates and adverse currency movements and shifts in terms of trade depressed power sector performance in SSA as in other regions. Until 1986, high international fuel prices hurt the finances of power companies with mainly thermoelectric systems. In Sahel countries, the drought of 1978-85 depleted reservoirs and eroded utilities’ financial reserves.

Africa’s shortages of skilled people have posed serious difficulties, but the greater obstacles have been institutional: government interference in power companies’ day-to-day operations, power companies’ inability to make and enforce decisions on manpower, bill collection, and procurement of parts, and stubborn political opposition to justified tariff increases. The guiding principles of the Bank’s current policy for power lending make good sense in these circumstances.

Power sector and adjustment operations. In some cases, the Bank’s goals in assisting the power sector took second place to the resource transfer and other broad goals of adjustment operations. Conversely, some adjustment loans included energy sector conditions. But many missed opportunities to address in a sustainable way the fiscal burdens created by power utilities.

Borrower ownership. Typically, borrowers strongly favored physical expansion but were less keen on institutional and policy reforms. They were least committed to autonomy for utilities, large tariff adjustments, and reductions in staff or adjustments in remuneration. In some cases, Bank assistance helped perpetuate traditional approaches even where there were signs that bolder ones would have been acceptable.

January 1996
Often the Bank avoided penalizing borrowers that repeatedly breached lending covenants. The large loans that it approved failed to elicit even modest policy adjustments.

**Technical assistance.** The most frequent and most successful type of TA was assistance from engineering consultants for project design and construction supervision. Management assistance was most effective where contracted experts were given executive authority. Again, borrower ownership was the key influence on whether TA met its goals. Ghana’s twinning program for management assistance succeeded because of the good interaction between a few expatriates and a new management team of young, ambitious people who were eager to learn (see Précis no. 89, ed.).

Bank staff are often too remote or lack the skills to supervise TA. Other assistance agencies are more present and effective in the field, but their expertise is mostly in supplying assistance for technology. The challenge is to find innovative TA approaches to help governments build their role as regulators and policymakers.

**Cofinancing and donor coordination.** The Bank has been very successful in catalyzing cofinancing, but less so in coordinating the roles and actions of other lenders and donors. Its influence on sector performance was undermined where donor agencies financed projects it had rejected as uneconomical. And sometimes the design of TA from different sources was not closely coordinated—so that it became diffuse, included conflicting elements, and left gaps and inconsistencies.

**Implementing the new policy**

Success was generally modest in establishing a transparent regulatory process, introducing a business orientation, and attracting finance from the private sector. But substantial progress has recently been made through effective imported management services. And more countries are showing concrete signs of up-front commitment to project goals.

**Transparent regulatory process.** In all the SSA countries studied, the responsibilities of power regulating authorities are too close to those of operating companies. To enhance transparency, the Bank has promoted performance contracts (“contrats de plans”) between the governments that own power utilities and the management teams that operate them. These contracts have clarified goals, stimulated dialogue between government and enterprise management, and introduced better management, accounts, and audit systems. But because contract targets are not legally enforceable, they have not enhanced the autonomy of state enterprises nor resolved their major difficulties.

**Imported services.** Services from abroad have included expertise for long-term planning, project design, construction, construction supervision, tariff studies, and a variety of technical advice and training. Côte d’Ivoire’s experience shows that contracting out operation and maintenance can substantially improve a utility’s technical and commercial performance (Box 1).

**Sector restructuring, private sector involvement.** Most power utilities in SSA are government-owned integrated monopolies responsible for transmitting and distributing all the electricity they produce. At this stage, the small size of the power systems and the weakness of the regulatory framework make it inappropriate, in general, to recommend their break up.

Privatizing some segments of power operations seems possible—as a few SSA countries have shown. Allowing the entry of independent power producers and unbundling distribution from transmission and generation can open the field to operators who lack the technical and financial means to invest large sums. Where distribution can be managed separately from generation and transmission, it should be decentralized into service areas designed to make the bidding for the franchise attractive. Forthright implementation of the

---

**Box 1: Successful lease contract in Côte d’Ivoire**

In the 1980s, low operating efficiency and weak financial management left Côte d’Ivoire’s large government-owned power company, Energie Electrique de Côte d’Ivoire (EECI), unable to service its debt. Late in the decade, the power sector was reorganized.

EECI kept responsibility for sector planning and investments. A private company newly created for the purpose, Compagnie Ivoirienne d’Electricité (CIE), was awarded a lease contract for operation and maintenance. One of CIE’s main shareholders, Société Africaine Urbaine is also a major shareholder of the private company that has successfully run Côte d’Ivoire’s urban water supply since 1959, and CIE has substantially adopted the working methods and corporate culture of this water company. CIE is decentralized, has detailed descriptions of responsibilities, a good reward and training system for staff, and a strong budgeting and time management system.

Results have been impressive. Between 1989/90 and 1993/94, power losses fell from 20 percent to 17 percent, while power outages per customer/year dropped from about 50 hours to 18 hours. The number of employees per thousand customers was reduced from ten to seven. The collection of accounts receivable rose from less than 96 percent to 98 percent. The company has trained some 2,000 of its 3,200 employees.
Bank’s policy would reduce the risks perceived by potential private investors.

More selectivity needed

The Bank’s Africa regional office is optimistic about the development impact of ongoing power projects in SSA. But experience emphasizes the risks associated with these countries’ deficient institutional and policy frameworks, and the fact that “contrats de plans” cannot be legally enforced. Thus OED recommends a more rigorous approach to lending (Box 2).

Bank management, responding to the study, agreed to review lending and nonlending activities for power in SSA to ensure programs were consistent with country assistance strategies, and to assess the most appropriate ways to develop power sustainably, within the framework of the key principles underlying the Bank’s current power sector policy. It agreed to define acceptable technical and financial benchmarks applicable to the power sector in SSA countries. It agreed to review internally, and to discuss with governments, the feasible options for restructuring and privatizing power suppliers in SSA. Management agreed that strategic alliances should be forged with other lenders and donors, and pointed to examples in the Central African Republic and Mali where approaches to power sector reform have benefited from coordination with donor agencies.

The Committee on Development Effectiveness of the Bank’s board of executive directors discussed the study. While many speakers agreed that the Bank should avoid lending for power where performance is below acceptable benchmarks and where little progress has been made on reforms, the consensus was that the Bank should be proactive in helping its developing member countries overcome policy and institutional constraints. They noted comments by management that independent regulatory agencies, designed to ensure the autonomy of utilities, do not succeed in Africa and that efficient performance is better sought through other means, including contracts. Unease with the notion that Bank policy no longer emphasizes provision of basic electricity to the poor was prevalent, even though members noted that power lending was not the most effective way to reduce rural poverty unless it formed part of an integrated rural development strategy. Here again, the Committee wished to see a proactive posture by the Bank. Speakers asked how management treated violations of loan covenants, and the Chairman noted that this important issue was part of the broader question of management accountability which the committee planned to examine in 1996.

On coordination with donor agencies, the committee suggested and management agreed that power sector issues should be discussed at consultative group meetings, to be chaired by borrower governments locally, so as to ensure issues were thoroughly addressed. A speaker said that both the OED study and the management response were too cautious on the scope for private sector involvement. The Committee requested management to act on its comments and the OED recommendations.

Box 2: Recommendations

- Be more selective in country assistance for power. Designers of the Bank’s country assistance strategies for SSA should examine the justification for power lending, and should ensure that assistance for power is compatible with assistance for broad economic adjustment and with the development and rational use of other energy resources. Except for small operations for institution building or rehabilitating facilities, the Bank should not lend for power in countries where sector performance is below acceptable benchmarks in key technical and financial areas, unless reforms are already in progress, at the time of appraisal, on (1) the establishment of a transparent, arms-length regulatory framework with legal guarantees of autonomy for power companies, and (2) the enforcement of regulatory principles to ensure financial discipline, adequate tariffs, and incentive-based, competitive contracting of services.

- Require up-front activities that show commitment to reform, combined with effective capacity building efforts and coherent external support, to reduce the risks of lending for power in SSA and to assure the sustainability of benefits.

- Use nonlending instruments to nurture borrower ownership and to build domestic capacity. Effective dissemination of practice, and of other countries’ experiences with reforms, and efforts to build up stakeholders’ support should be integral parts of project preparation.

- Promote expanded role for private sector and for local communities. When promoting power sector restructuring and privatization in SSA, the Bank should explore setting up purchase tariffs, decentralizing distribution, and unbundling it from generation and transmission, using concession contracts for private operators, and providing guarantees for independent power producers.

- Strengthen alliances with development partners. The Bank should forge strategic alliances with other lenders and donors to obtain agreement on policy goals and criteria for involvement in SSA countries.