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Electrifying Africa: power through the public sector

By

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Preface by David Boys, PSI

Africa needs electricity: it does not need privatisation. This report sets the record straight on the failures of privatisation in Africa. Instead it advocates policies based on proven successes.

The success of extending electricity systems across the north, and much of the south, using public sector electricity companies.

The success of using public finance to invest in systems, so that the living conditions of people and the needs of industry can be met fast enough to accelerate development.

The success of using subsidies and cross-subsidies to ensure that the poor can afford to use electricity once they are connected to it.

The success of insisting on transparency, public participation and debate, and accountability to ensure that electricity is developed in the public interest, not as another way of enriching large corporations and powerful individuals in the north and south.

PSI is working with its affiliated unions all over the world to develop better electricity systems and better public policies. PSI trade unions in Africa are working with other civil society organisations, including consumer groups and environmentalists, to develop effective policies that work in the public interest. This includes developing ways of dealing with corruption at all levels – including the multinational companies and top government officials and politicians.

PSI is pursuing demands for these policies in global forums – at the meetings of UN organisations, and at global energy conferences, and in dialogue with the international banks and financial institutions.

The most important element in this activity is the organised strength of the unions together with the organised strength of civil society. That is why the World Social Forum at Nairobi in January 2007 is such an important event.

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1. Executive summary

In Africa as elsewhere there are three key issues with electricity systems.

- The need for sufficient power generating capacity (and an efficient transmission system to use it)
- Extension of systems to all households and businesses
- Efficiency and reliability of the system

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In Africa as elsewhere, the private sector has been promoted as the solution to all these problems, but the empirical evidence shows that the private sector does not deliver these benefits.

- The state has to protect private investors against risks with guarantees which increase the burden on public finance
- Private power stations are very vulnerable to corrupt deals which make the state liable for long-term power which is unaffordable to consumers
- Private distributors do not invest private capital in extensions to the poor
- Private companies are no more efficient than public operators
- Attempts to create competitive ‘liberalised’ markets in electricity have not worked eg USA, EU

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In Africa as elsewhere, development through the public sector is a viable and proven way forward

- The government pays lower interest rates and so the cost of capital is lower – even in Africa
- Development of affordable electricity and other services has been done in almost all countries through the public sector, financed through subsidy and cross-subsidy
- The public sector is in principle more accountable and responsive to public interest

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In Africa as elsewhere policies to develop the electricity sector need to be based on

- Open public debate to set democratic public objectives
- Electricity needs to be treated as a developmental public service
- An effective public sector authority is the key instrument for this
- Investment needs to be accelerated by using public finance including state and utility borrowing
- Subsidy must be built in to finance extensions and make electricity affordable
- New transparent governance need to be developed for the public sector

2. The need for electricity in sub-Saharan Africa

Africa needs more generating capacity. It needs for affordable electricity. Above all, it needs more extensions of the system.

The percentage of households connected to electricity supply in sub-Saharan Africa is lower than in any other region of the world. The gap between rural and urban electrification is larger than in other regions. And the poorest sections of the population are far less connected than the highest income groups. The numbers connected to electricity in Africa are growing, but more slowly than in other countries of similar income levels. Average electricity consumption per capita in sub-Saharan Africa is about 456 kWh – about two and half times less than the per capita consumption in Latin America and Caribbean region (1,493 kwh).¹

Table 1. Proportion of African households connected to electricity supply

Total		14.9%
By rural/urban		
	Rural	8.3%
	Urban	54.0%
By income		

	Poorest 20%	0%
	Next poorest 20%	4%
	Middle 20%	12%
	Next richest 20%	28%
	Richest 20%	71%

Source: Estache 2006A.

Electricity policies, including privatisation, have to be judged against this overriding objective: what can they contribute to extending electricity to the poor of Africa?

3. The record of electricity privatisation in Africa and elsewhere

Electricity privatisation has been heavily promoted by the World Bank and other donors since the 1990s. Companies are encouraged to invest in power stations and so increase generating capacity. Private companies take over ownership or management of networks and are expected to make the investments necessary to extend the system, and improve its efficiency and reliability. And power pools are created, linking systems together so that different power stations can 'compete' to sell their outputs.

The private sector has been introduced in a number of ways. In some cases, the existing vertically integrated monopolies were sold to the private sector in Cape Verde and Senegal; in six countries the integrated systems were handed over as long term concessions, in some cases in combination with the water system: Cameroon, Comoros, Côte d'Ivoire, Gabon, Guinea, Guinea-Bissau, and Mali. Most privatisation has been by the privatisation of power stations, either through the sale of existing facilities, or through the creation of new Independent Power Producers (IPPs), with their finance guaranteed through long-term power purchase agreements (PPAs).²

It is now recognised by most observers – including the World Bank – that private sector investment energy has not delivered significant investment, and many multinational companies have withdrawn, due to losses and uncertainty.³ There have been problems of corruption, overpricing and inefficiency in both generation and distribution.

This part of the paper includes two sections on the experience with privatisation in Africa with examples from Kenya, Nigeria, Tanzania and Uganda⁴:

- problems in private generation
- problems in private distribution

Five further sections discuss the general evidence on the impact of privatisation

- lack of evidence for the efficiency of the private sector
- impact on investment
- impact on prices
- impact on labour
- impact on economy

3.1. Private generation (IPPs) in Africa: corruption and overcharging

The experience with private power stations (IPPs) shows repeated evidence of corruption and overcharging by multinational companies.

3.1.1. Kenya

There have been three main IPPs in Kenya: Tsavo Power (owned by a consortium including the UK-owned Globeleq, the USA company CMS, and the World Bank); Iberafrika (80% owned by Spanish multinational Union Fenosa); and Westmont Power (owned by a Malaysian company).

An audit report in 2004 on the state-owned distributor Kenya Power and Light Company (KPLC) exposed improper dealings, inflated prices and profiteering by the IPPs, which had caused great financial problems for KPLC.⁵ The cost of electricity from the IPPs was far higher than the prices charged by the parastatal generating company, Kengen.⁶ The contracts of both Ibrafrica and Westmont were improperly awarded in breach of tendering procedures, Westmont's PPA was backdated to start 13 days before it was signed, KPLC agreed to buy expensive fuel for Westmont and then re-purchase it at 'exorbitant prices', and Ibrafrica's contract stipulated that the company should be paid in US dollars.⁷

The IPPs: "raked in Ksh18.4 billion (\$235 million) as profits since they began their operations in 1997.... The committee has written to the Kenya Anti-Corruption Authority to investigate weekly withdrawals at Ibrafrica banker, Banque Indosuez, by a bodyguard of a former top official. Ibrafrica has several hidden costs which are catered for by a flawed power purchase agreement. KPLC engaged the overpricing IPP, Ibrafrica, in 1997 without any advertising for tendering. the speed of the transaction indicated that the former managing director had some vested interests in these particular firms and the board may have been used only to rubber stamp the decision".⁸

Westmont Power, which operated a barge power station at Mombasa, was accused in 2003 of paying bribes to Samuel Gichuru, former chairman of the Kenya Power and Lighting Company. It was ordered to cut its tariffs in half, and left Kenya when its contract expired in 2004.

In 2004 the government decided to 'phase out' IPPs because of the inflated prices: "The Government will begin a gradual phasing out of independent power producers this year... who have in the past been accused of selling power to the electricity distributor at higher prices compared to state-owned KenGen."⁹

3.1.2. Tanzania

There are currently two independent power producers (IPPs) in Tanzania.

One is the 110MW Songas plant gas-fired plant, originally controlled by AES (60 per cent) but taken over by Globeleq in November 2002. In 2006 this experienced technical problems and failed to deliver power (see below under Globeleq).

The other IPP is a US\$150m, 100MW diesel-fired independent power plant located at Tegeta in Dar-es-Salaam, owned by Independent Power Tanzania Ltd (IPTL), which is majority-owned by the Malaysian company Mechmar. The plant has been very profitable for Mechmar, accounting for over half of the Malaysian company's total sales in 2002. It sells its output under a 20-year power purchase agreement signed with Tanesco in 1995, which was soon exposed as too costly:

"The deal provoked controversy as soon as it was sealed, with donors and energy experts saying that it was too expensive, the choice of technology doubtful and the projected demand for power exaggerated. Tanesco was forced to pay a steep price for electricity it did not require, since its major problem was not insufficient generating capacity but lack of gridlines. IPTL's electricity is said to cost 12 US cents per unit compared with the 7 US cents and 9 US cents per unit for power supplied by Tanesco. Additionally, Tanesco pays \$3 million a month in statutory costs."¹⁰

Tanesco brought a successful court case against IPTL to compel it to reduce the cost of building the power plant by \$27 million from \$150 million.¹¹

In 2006 the government was in discussions to nationalise IPTC, which would result in significant savings by reducing the cost of power:¹²

"If the deal is successful, the government will save as much as \$1.5 million per month. The Tanzania Electric Supply Company (Tanesco) currently pays Songas and IPTL a total of \$18 million from the \$21 million it collects every month."

3.1.3. Uganda

The government commissioned a 50-megawatt thermal power plant at Mutundwe in Kampala from a Norwegian company, Jacobsen AS, but in July 2006 the Inspector General of Government, Justice Faith Mwendha, cancelled the contract for impropriety and recommended the sacking of Engineer Dr Frank

Sebbowa, the Chief Executive Officer of the Electricity Regulatory Authority (ERA) together with the regulator's Legal Counsel Mr J. Kwesigabo in relation to the deal because it was full of irregularities and illegalities: "the procurement of the 50MW, meant to relieve the country of its biting power shortage, had been conducted in a manner that disregarded the law and set down procedures"¹³

The deal also involved illicit obtaining of a grant from Norway and a bank loan which the government of Uganda would have been liable to repay: "...ERA, Jacobsen, and Energy officials had "engaged in soliciting for a grant of Euros 3.4 million on behalf of the government of **Uganda**" without the explicit approval of the Minister of Finance and later tried to cover it up..... the government would [also] have been saddled with a loan of Euros 49.63 million from the Standard Chartered Bank in London after Energy officials failed to act against the company for altering the terms under which it submitted its bid. She said she was told all that was needed was for the Ministry of Finance to accept the debt in writing."

The majority of the generating capacity in Uganda, including the Nalubaale hydro-electric plant (177MW), is owned by UEGCL, formerly part of the old parastatal company. In 2002 a concession to operate UEGCL for 20 years was given to the South African company Eskom won. It was the only bidder.

A number of temporary power plants have been installed and are operated by Aggreko, including a 50MW thermal plant at Lugogo, a 100MW thermal plant at Kiira power station in Jinja, and another 50MW thermal plant at Mutundwe. Aggreko has also been given a contract for a 40MW temporary gas-fired power station in Tanzania.¹⁴ These do not contribute to a long-term sustainable solution, and are very costly, but very profitable to the companies. In 2006 Aggreko's sales grew by 40%, and its profits grew by 20%.¹⁵

A variety of other schemes are being promoted by the government or the World Bank.

The Bujagali hydro-electric plant (250MW) has been promoted by the World Bank for many years, despite strong opposition on environmental grounds and repeated allegations of corruption. It was to have been built by a consortium led by the US company, AES, but AES abandoned the project in 2003. In 2005, the government contracted with a new firm to build the project, the Aga Khan's IPS Ltd. based in Nairobi. In 2006, the project was being considered for financing from the World Bank and EIB; decisions are expected in the first quarter of 2007.

The Ugandan government is also handing over some of its limited taxation income as a handout to the private companies. The government has waived import duty, excise duty and withholding tax on most equipment used in the electricity sector, a policy announced in a paper on 'Meeting the needs of the energy sector investor through conducive tax policy,' at a workshop organised by the Energy Institute of Uganda in July 2006.¹⁶

3.1.4. Nigeria

In 1999 Enron agreed to develop an IPP in Lagos, involving supplying 290MW from nine barge-mounted gas turbines at Egbin Power Station, to provide electricity for industrial consumers in the state. The deal was based on a 13 year power purchase agreement (PPA) which specified that NEPA would buy power at USD\$0.032/kWh. This deal formed part of the prosecutions against former Enron executives, who had misrepresented the status of the barges.¹⁷

In January 2001 Enron sold the project to another USA company, AES. A Nigerian partner, YF Power, a division of Nigeria's privately held Yinka Folawiyo Group, was given an unknown stake in the project.¹⁸ The National Electric Power Authority (NEPA) had to continue paying in accordance with the PPA contract, which caused massive losses for NEPA. In 2003 NEPA demanded that Lagos State should renegotiate the contract due to the financial burden imposed by the contract terms, particularly since the state government was failing to pay its 15% share of the guaranteed price. A NEPA director, Sam Agbogun, said that the contract term is one sided in favour of AES because "we [NEPA] were not involved in the negotiations, otherwise we would have straightened out all the grey areas in the contracts.we have had to abide by the contract terms because the integrity of the country is involved and any attempt to do otherwise would send wrong signals to some foreign investors What we are trying to do now is to call all the parties and lay the cards on the table, because the contract terms are now threatening our survival".¹⁹ The integrity of the IPP deal was further questioned in 2005 by National Union of Electricity Employees (NUEE) representatives, who implied that AES was exaggerating the amount of electricity it was actually supplying

to NEPA: "How do we know the quantity of energy delivered to us by the IPP, that is, AES and AGIP? Where is the meter measuring the consumption of the zone from the IPP, and who reads the meter to know the actual energy delivered to the zone from IPP every month?"²⁰ In 2006, the Peoples Democratic Party (PDP) called for on the Economic and Financial Crimes Commission (EFCC) to probe the Lagos/AES power project claiming that it has cost the state over \$500 million.²¹

3.2. Distribution in Africa: problems with management contracts

Electricity distribution companies have been privatised in a few places around the world, usually with poor results. In Africa, the main forms of privatisation have been not by sale but by management contracts. These are simply contracts to manage and run the company, usually for a period of 2-5 years, but do not involve any investment by the private company. In one case, Uganda, there is a concession contract, lasting for 20 years, under which the private company collects the income from customers but is expected to make investments in the system before taking the rest as profit.

3.2.1. Management services contracts

Management services contracts have been introduced in electricity distribution in a number of African countries. They have a poor record: in 6 countries (excluding Kenya where the contract is just starting) there have been two terminations, one disputed attempt to terminate, and significant problems in the other cases. The cases include:

- In Tanzania, the World Bank insisted, as a condition for granting a loan, that Tanesco should be run under a management services contract, which was awarded in 2002 Net Group Solutions of South African, a private consultancy. In September 2004, under pressure from the World Bank, the contract was extended for a further two years, despite criticism of the high salaries paid to Net Group managers. In 2006 the Tanzanian government decided not to renew the contract because of poor performance: "Tanzania was dissatisfied with the quality of management provided by Net Group Solutions and added that the government was obliged to listen to the views of the public following complaints about the quality of service being offered by Tanesco."²²
- In Namibia in 2001, the town of Keetsmanshoop awarded a "lucrative"²³ 15-year management contract to SelCo, a South African owned company listed on the Johannesburg stock exchange. The contract has been controversial and there is strong local opposition, criticism of poor performance and a High Court case over the legality of the lengthy contract. In November 2005 the municipality said it was terminating the contract, but this was overturned by a court ruling (which increased the company's share price by 300%).²⁴ The municipality argues that "SelCo conned the previous Town Council into the power supply deal with a lucrative royalty offer of N\$160 000.... the town had received between N\$80 000 and N\$90 000 in royalties."²⁵ In July 2006 SelCo was publicly: "accused of 'exporting' two electricity transformers to Mozambique: SelCo reportedly uses the equipment on one of the projects it secured with the government in Mozambique."²⁶
- Madagascar contracted the management of its electrical utility to German infrastructure firm **Lahmeyer** International in February 2005, under pressure from the World Bank, which demanded staff cuts.²⁷ The company increased tariffs by 30% in July and 35% in November 2006, and another 10% increase was expected in 2007: in December 2005 however the new chief executive was sacked "not sufficiently specialised to lead Jirama out of its deep financial water into recovery".²⁸

Outside Africa, Azerbaijan issued two separate management contracts for its distribution grids. Barmek, a Turkish-owned company was given a 25-year contract to manage the distribution grids of Baku and Sumqayit; Bayva was given a similar contract for the other distribution grids. In December 2005 the Bayva contract was ended, with the government claiming that Bayva had failed to deliver. In March 2006 the Azeri government started criminal proceedings against Barmek for "a failure to fulfil its contractual obligations, misappropriation state funds and involvement in financial frauds", and terminated the contract.²⁹

Other countries have considered these contracts but not introduced them. Senegal, after two failed attempts at privatizing its electricity by sale, also failed in an attempt to set up a management services contract for its electricity system: "a management contract was offered to Vivendi, but the French company's demands were considered too stringent and the offer was withdrawn."³⁰ The state of Karnataka, in southern India, has

considered using management contracts because there was no prospect of the state receiving good bids for the distribution companies; however there was even less interest in the management contracts, and in November 2006 neither privatization nor service contracts had been introduced.³¹ The government of Ecuador was also discussing, in 2006, the possibility of management contracts for the country's electricity distribution services, as an alternative to privatization by sale.³²

Table 2. Management service contracts for electricity distribution

Country	Electricity distributor	Date	Yrs	Terminated	Private company	Country of private group	Results
Albania	KESH	2000			Enel	Italy	Problems: price rises, disconnections
Namibia	Keetmanshoop	2001	15		SelCo	South Africa	Disputed termination: alleged theft, invalid contract
Azerbaijan	Baku and others	2002	25	2006	Barmek, Bayva	Turkey,	Terminated: fraud, non-performance
Tanzania	Tanesco	2002		2006	Net Group	South Africa	Terminated: non-performance
Madagascar	Jirama	2005	2		Lahmeyer	Germany	Problems: CEO sacked
Kenya	KPLC	2006			Manitoba Hydro	Canada	

Source: PSIRU database

3.2.2. World Bank experiment in Uganda

Uganda's distribution company, UEDCL, was privatised in May 2004 under a 20 year concession contract to a consortium known as 'Umeme' which is 56 per cent owned by CDC Globeleq (a financial investment arm of the UK government) and 44 per cent owned by Eskom (the publicly owned integrated South African electric utility). The assets remain owned by UEDCL, but Umeme has a 20 year concession, under which it is responsible for investment, charges and management of the distribution system.

In 2005 Umeme increased prices by 24%, and again in 2006 by a further 37%.³³ An unsuccessful court case was brought on behalf of all Ugandans belonging to the Uganda Electricity Users Association (UEUA), claiming that the procedures used did not involve consumers and were not transparent as they are required to be under Ugandan law.³⁴

The contract allowed its international shareholders to opt out after 18 months in June 2006, and by then Umeme was making a loss: Globeleq denied it was pulling out³⁵, but unfortunately Eskom at the same time was reported as saying that it would pull out of all its investments in Africa outside South Africa. The 18-month 'trial period' was extended to December 2006, so Globeleq and Eskom could still decide to leave without suffering any penalty.³⁶ To improve profitability, Umeme demanded further price rises.³⁷

Umeme has used other techniques to boost its profits. It started to dispute the size of the lease payment it makes for use of the Ugandan network, and delayed payment of the \$24.3m due for the first 18-months until October 2006.³⁸ It has also been demanding a tax break, claiming it should benefit from half of the tax allowances of the state holding company UEDCL, which means a windfall to Umeme of \$6m.³⁹

In the first 18 months Eskom and Globeleq invested only \$5m in the system. In September 2006 they promised to invest a further \$100m., using loans rather than the shareholders' equity capital of Eskom and Globeleq. Much of these loans will in reality be money from donors, rather than Eskom or Globeleq. Umeme has already benefited from: "an \$11 million loan from the World Bank affiliate International Development Agency to buy materials, which are now being turned over to Umeme. ... These materials were all supposed to be installed in the initial 18-months period, but were not."⁴⁰

3.3. No efficiency advantage of the private sector

There is a widespread belief that the private sector is always more efficient than the public sector, in electricity as in other sectors.

This belief is not supported by empirical evidence, either in Africa or elsewhere.

A global review of this evidence in 2005 by the World Bank concluded:

“For utilities, it seems that in general ownership often does not matter as much as sometimes argued. Most cross-country papers on utilities find no statistically significant difference in efficiency scores between public and private providers. As for the country specific papers, some do find differences in performance over time but these differences tend to matter much less than a number of other variables.”⁴¹

The evidence includes a global study in 1995 by Pollitt, which compared dozens of public and private electricity operators all over the world, and found no significant systematic difference between public and private in terms of efficiency.⁴² A study in Cote d’Ivoire, after private management electricity was introduced in the 1990s, was similarly ambivalent: “efficiency improved but irregularly and was never as efficient as when under public management and tight budget constraint.”⁴³ Some studies found that the public sector was much more efficient: an early study in the USA in the 1970s found that private electricity companies had consistently higher costs, and that private firms charge higher prices.⁴⁴

It is also widely believed that utilities in developing countries, whether public or private, are far less efficient than in rich regions like North America and Europe. More surprisingly, the empirical studies by economists do not support this assumption. The global study of electricity companies by Pollitt in 1995 found that in terms of efficiency “there were no significant differences for LDCs from the average of other countries in the early part of the 1990s”; other studies of electricity companies confirmed this, finding that “efficiency levels in developing countries were very roughly equivalent to those in Australia and Japan, the United States, lower than in Europe, but much higher than in Canada”.⁴⁵

Privatisation does not eliminate technical failures either. Blackouts have been common following privatisations – two of the largest cities in south America, Buenos Aires in Argentina and Rio de Janeiro in Brazil, suffered blackouts lasting for many days following privatisation.⁴⁶ Liberalisation may also worsen the risk of blackouts: both Europe and North America have experienced major blackouts following liberalisation of energy markets, associated with transmission systems being unable to cope with complex volumes of power trading.⁴⁷ An official report on the total blackout in Italy in 2003 identified a simple conflict: “The underlying causes of the incident that occurred on 28 September 2003 are the unresolved conflict between the trading interests of the involved countries and operators and the technical and legal requirements for safe and reliable operation of the networks.”⁴⁸

The use of private sector operators also exposes electricity systems to further risks which do not exist under public sector operators. The first of these is the risk of corporate exits: unlike state-owned companies, private companies may decide to abandon a contract because it becomes unprofitable, for example when Globeleq abandoned the Kelvin power station in South Africa, or when AES abandoned a distribution system in Orissa, India. The second is the danger of monopoly or cartels, a risk vividly demonstrated in California in 2000 when Enron and other private companies colluded to force up electricity prices to unaffordable levels in the richest part of the world.

3.4. Investment

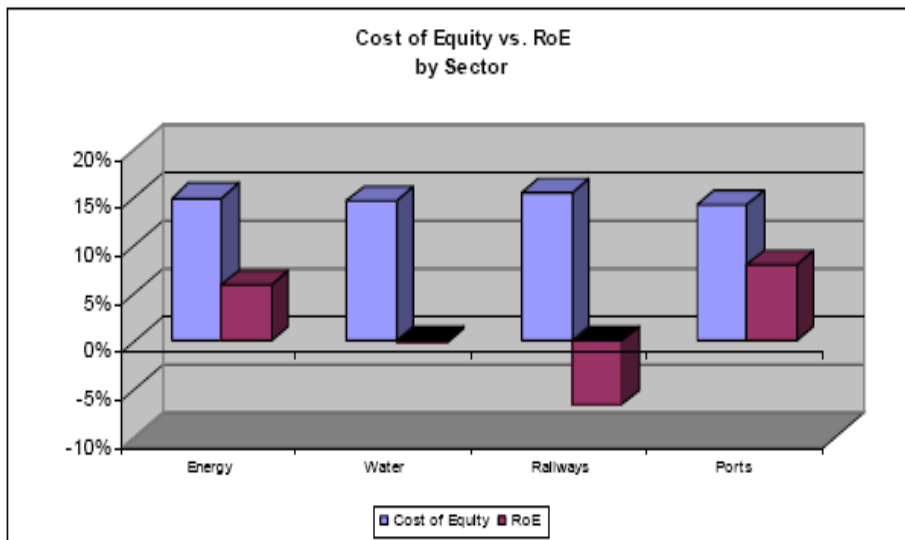
It is highly unlikely that the private sector will invest significant amounts of money in electricity in Africa, or indeed infrastructure in developing countries in general. So far, only 10% of Africa’s investment needs for infrastructure have been financed by the private sector, and neither private sector participation nor regulation makes any significant contribution to the extension of access to network services⁴⁹: ““The emphasis on profitability appears to have relegated expanded electrification of the poor to the bottom of the priority list.”⁵⁰

The private sector will not invest unless they can make sufficient profit to cover all the risks. But they have been unable to do this: “Even apparently risk-free investments in generation have proved economically disastrous when it became clear that the companies involved had not understood the risks they were actually taking. Currency risk, demand risk (demand can go down as well as up), and political risk (a government cannot stand by and allow electricity consumers to be priced out of the market) have all derailed apparently

safe investments and power purchase contracts have turned out to be not worth the paper they were written on when the buyer went bankrupt.”⁵¹

The brutal arithmetic of the multinationals’ failure to find profitable investment opportunities is shown in a review of their rates of return. The graph shows, for a number of sectors, including electricity, the rate of return required by multinational corporations (return on equity – RoE), adjusted for the risks of investing in developing countries. For energy, as for other sectors, the rates of return actually achieved have fallen far short of the requirements of shareholders.

Chart A. Multinational utilities fail to make big enough profits in developing countries



Source: Estache et al 2004.⁵²

The investment failure of the private sector has been made worse by donors and IFIs who have cut back on funding in general and focussed their support on the private projects. This obsession with the private sector distorts aid by giving preference to projects that may be profitable for companies: “The large scale suppliers have tended to get a large share of the attention of the international community and of the donors even if they cater to only a small share of the population and most typically the rich.”⁵³

3.5. Prices

Electricity privatization does not normally lead to price reductions, partly because one of the main objectives is to increase the amount paid by consumers in order to reduce subsidies – from the government’s viewpoint – and in order to maximise profits – from the private company’s viewpoint.

Cross-subsidies have been reduced, and price increases are used as a way of restoring the financial health of electricity companies: “power sector reform is typically associated with price increases aimed at making the utility more financially sound. In order to attract private investors, most reform programs have included measures to increase tariffs to cost reflective and commercially profitable levels”.⁵⁴ Even institutions advocating privatization now agree that: “the message is that privatisation will not lead to lower prices.”⁵⁵

As a result, electricity has become more expensive for the poor – in Africa, the poor are paying about 7.5% of their income on energy.⁵⁶ A World Bank paper says that “this suggests that tariff structures may not have paid enough attention to the ability to pay of the users”⁵⁷, but these pricing policies are central to privatisation and commercialisation: each user is expected to pay the full cost of their own electricity, and so the poor household using little electricity has to pay much more than the industrial company.

A recent example of the effect of giving market pricing a higher priority than cross-subsidies for the poor can be seen in South Africa. Government policy allows for cross-subsidy, but also calls for the impact on industry to be minimised: in Nelson Mandela Metropole (formerly Port Elizabeth), cross-subsidies to help poor consumers through cross-subsidisation from industry were ruled out because of the impact on companies. Instead, a new industrial development has involved companies being guaranteed electricity for 25 years at a price far below the prices charged to households.⁵⁸

3.6. Labour

Electricity privatisation has usually had the effect of cutting large numbers of jobs and fragmenting the workforce amongst a number of different private owners. Jobs were cut by up to 66% by electricity privatisations in Latin America in the 1990s⁵⁹; in Argentina alone 78,000 jobs were lost in just three years⁶⁰; and the private companies casualised workers and reduced their conditions by terminating their employment and rehiring them through short-term outsourcing contracts.⁶¹

This damages the ability of countries to develop and sustain their own skills and resources: “developing countries have seen national companies that were a centre for skills and good employment practices destroyed at the command of the IFIs.”⁶²

3.7. Economic impact

The economic impact of privatisation of electricity companies is also negative. The money paid by multinationals for the companies helps the state budget in the short term, but even this is usually a poor deal, because assets built up by public investment are usually sold below their true value. In any case the payments do not add to the investment in the system. Future profits are lost to the system and to the country, and so the overall effect is a net loss of capital. This is made worse because the privatised companies are invariably able to exploit a monopolistic position, and so users of electricity suffer.

An assessment of the Latin American privatisations concluded that they actually helped create economic crises: “In the end, while countries surrendered part of their domestic capital stock, the benefit for the balance of payments was only temporary. Thus, even if the reforms resulted in more efficient running of the power industry compared to the pre-privatisation period, they are likely to have contributed to the severe financial and economic crises which hit Brazil and (more catastrophically) Argentina in the late 1990s and early 2000s.”⁶³

Selective privatisation may be just as problematic, because of the problem of ‘cherry-picking’. Private companies bid for the most profitable operations, and so “a profit center is amputated from a public sector business at a higher net fiscal cost. There is significant evidence of this in Latin America.”⁶⁴

3.8. Global summary

Privatisation has become widely unpopular, is seen as benefiting elite and corrupt interests at home and abroad, and as “*fundamentally unfair, both in conception and execution.*” Many private power stations (IPPs) have become expensive debt-like burdens because they are underpinned by government guarantees, which mean that the state has to pay for expensive electricity it does not need. Privatised distributors have created unsustainable price increases.

In many countries, liberalisation or privatisation has failed to deliver expected improvements for a number of reasons. In the Philippines, misconceived assumptions about what would happen in a privatised system prevented the consideration of better alternative policies;⁶⁵ in the Cameroon, IMF and World Bank conditions imposed a privatisation which resulted in the creation of a private, poorly regulated, vertically integrated monopoly, ignoring historical experience that development of electricity systems has always been state-led⁶⁶; in Pakistan, policies were successful in attracting private investors in IPPs but at the cost of negative impacts on the economy and the environment.

A wide-ranging review by an UNCTAD official concluded that “*in a long-run development perspective, full-scale privatisation of gas and power sectors in developing countries entails significant risks, and therefore a flexible policy approach is preferable to a rigid commitment to extensive liberalisation.*”⁶⁷ Other critiques of

the process have found that reforms focus on short-term financial issues, ignore social and environmental public interests, and may become locked in to an undesirable path that cannot be corrected. Public sector models have serious problems but these can be addressed through greater public participation and transparency.⁶⁸

4. Way forward: electrifying Africa

The way forward for Africa does not lie with privatisation. Alternatives are being developed across the world,⁶⁹ reflecting different circumstances, but there are certain core features for any alternative reform programme. These concern:

- the need for public debate, public goals and political processes
- treating electricity as a vital developmental sector and a vital public service
- using an efficient and effective public sector operator as the key to development
- using public finance to support investment
- providing subsidies and cross-subsidies for extensions and affordability
- ensuring that the public electricity operator is transparent and accountable

4.1. Public goals, public decisions and political processes

The first and most basic requirement is to base development of electricity on a transparent, participatory public debate. Many decisions concerning electricity system are taken in secret meetings, tied up with confidential negotiations with private companies and hidden pressures from donors and international institutions. A proper public debate can set public objectives and priorities, with democratic decisions forming a true national agenda for electricity.

As part of the process, the electricity sector itself must be made more transparent, accountable to the public. Communities and unions need to work together to eliminate corruption at all levels of the system. Public sector operations have serious problems but these can be addressed through greater public participation and transparency: the work of groups such as Prayas in India can be used as a model in this respect.⁷⁰

A democratic debate also allows for political activity, so that organisations looking for greater social and environmental justice can work together to develop new plans for the sector.

This outline is based on the concluding recommendations of a report by the World Resources Institute in 2002, based on detailed studies of six countries– including Ghana and South Africa.⁷¹

Table 3. WRI key recommendations for electricity policy

1. Frame reforms around the goals to be achieved in the sector.
2. Structure finance around reform goals, rather than reform goals around finance.
3. Support reform processes with a system of sound governance.
4. Build political strategies to support attention to a public benefits agenda.

Source: Dubash 2002 (see bibliography)

4.2. Electricity as a public service

There are a number of features of electricity which make it necessary to treat it as a public service and manage the sector as a whole in the public interest. It is economically and socially necessary; must be continuously provided and balanced; is not suited to market competition; and has major environmental impacts.

- Electricity supply has a vital role in modern economies and society. Businesses or public services cannot function without electricity, and household appliances also depend on it. There is a social and economic need for universal affordable access, regardless of the user's immediate ability to pay the full cost of connection or supply, or of corporate requirements for profitability.

- There are special features of electricity which require the entire system to be managed as a whole and at all times. It is not possible for users to store power on any significant scale, and so there is a need for continuous production; and electricity networks need supply and demand to match at all times, for technical reasons, and so there is a need for management of the system as a whole – generators and distributors cannot be allowed to switch on and off as they please.
- The possibility of normal market competition is limited by three features. Electricity is a standard product, so there is no scope for competition to provide ‘better quality’ electricity; there is no substitute for electricity in powering devices and machinery (although there are substitutes for heating); and electricity transmission and distribution networks are natural monopolies, so competing networks are never viable.
- The process of electricity generation and transmission and distribution has major environmental impacts. Generation may consume natural resources of oil, gas or coal, pollute the environment by emissions. The construction of dams or generation facilities, and of transmission and distribution lines, causes major environmental damage, as well as damage to people’s livelihoods. There is therefore a need for public policy to manage and minimise the impact on the environment.⁷²

For all these reasons, electricity has to be treated as a public service, and run under a ‘public service system of production’.⁷³ There is no significant role for ‘markets’ in this type of system, least of all in sub-Saharan Africa: even private companies operate under rules created by governments and international institutions, and are awarded contracts and licenses which are currently adjusted to meet the need of investors at the expense of consumers. Treating the system as a coherent public service managed by a public authority will deliver better results.⁷⁴

4.3. Effectiveness of public sector

The electricity systems of nearly all high income countries in the north were developed through the public sector, using municipal or state-owned vertically integrated systems, with subsidies used to finance expansion of the system to all households.

This is supported by similar experience in Africa. A report by the World Bank’s Energy Sector Management Assistance Programme (ESMAP) in 2005 on electrification in a sample of African countries found that extensions of electricity were not due to privatisation, but the major factor was active intervention by government based on equality-led policies, through public investment and subsidy: whereas full cost recovery resulting from privatisation can make electricity less affordable for the poor.⁷⁵

South Africa’s national electrification programme is the outstanding example of what is possible using public sector mechanisms. After the achievement of democracy in 1994, the government set a target to connect 2.5 million households to the electricity grid by 2000, through the public sector utility Eskom, financed by a cross-subsidy from electricity consumers. The percentage of the population with access to electricity rose from 40 percent in 1994 to 66 percent in 2002: 79 percent of the population in urban areas and 46 percent in rural areas had access to electricity.⁷⁶ By the end of 2006 over 3.3 million households had been connected, and the continuing programme is financed from a national government fund.⁷⁷

Governments now need to set about building on their existing companies not breaking them up.⁷⁸ A number of countries in Africa and elsewhere have already revised and reversed previous plans for privatisation and liberalisation.

- In 2006 Tanzania scrapped the plan to privatise its distributor Tanesco, and there will therefore be no privatisation for the foreseeable future.⁷⁹ Tanzania is also in the process of nationalising an IPP and thereby saving \$1.5m per year, based on the realisation that publicly owned and financed power stations are much cheaper, because public finance is cheaper.
- South Africa has abandoned its earlier plans for the privatisation of the electricity industry, and retained Eskom as an integrated parastatal electricity company responsible for generation,

transmission and distribution, and it is expected to retain its own in-house engineering and construction divisions.⁸⁰

- Elsewhere, countries such as Brazil, South Korea, Mexico, and Thailand have reviewed their previous policies of liberalisation and privatisation.

4.4. Public finance for investment

The cost of capital to the public sector is almost invariably cheaper than for the private sector, even in Africa, as pointed out by a World Bank economist:

“... it is only in Ethiopia, Mali and South Africa that public financing requires a higher rate of return than private financing for all sectors. In most of the other countries, it is only for specific projects in any sector that it will be cost effective to rely on the private sector.”⁸¹ But even specific private investment in IPPs are an expensive way for the government to borrow money. As Tanzania has worked out, in its plan to nationalise an IPP and save \$1.5m per year, publicly owned and financed power stations are much cheaper, because public finance is cheaper.

As acknowledged in a recent general paper by a World Bank economist: “..... the main responsibility for financing many of the investment needs will fall onto the taxpayers rather than the residential users.”⁸² A World Bank economist has recently accepted that the public sector role is crucial, and therefore that most attention has to be paid to building the capacity of public sector institutions:

“Once it is accepted that the public sector will be the main actor and that donors will have to scale up their commitments, everyone needs to accept that the dramatic scale-up in aid risks overwhelming fragile institutions. The ideal would that the efficiency and effectiveness of use of greater aid flows will improve the delivery of public services and be coordinated with the development of good institutions that increase the accountability of all the parties involved.”⁸³

The public sector needs to finance investment by issuing bonds, and even low-income African countries, including Kenya and Uganda, are now capable of doing that:

“When stockbrokers from around Africa met in Nairobi in late 2004 to discuss developments in the capital markets, they urged governments on the continent to encourage infrastructure bonds. They argued that Africa could only make a leap forward by surmounting the hurdles of decayed roads, slow telecommunication, unsafe airports, poor ports and railways services, among other infrastructural inefficiencies. A case study was presented by the Uganda Securities Exchange, which was experimenting with the bonds. At the USE, the bond in question was intended to finance power generation to plug a generation shortfall. The move to introduce infrastructure bonds in Kenya is likely to spur the next big move.... This logic is derived from the fact that the Central Bank of Kenya regularly advertises for Treasury bonds, which are often oversubscribed.”⁸⁴

The big constraint on using public sector finance for investment has been the policies imposed by the international institutions, especially the IMF. These conditions have required cuts in public spending which has directly “led to under-maintenance and underinvestment across infrastructure sub sectors [and] damaged existing systems”.⁸⁵ These policies are not immutable: they have been put under pressure by South American governments, and in 2004 Brazil gained a concession from the IMF that that public investment in profitable new assets should not be restricted: this allowed the Brazilian state electricity company, Eletrobras, to almost double its investment in electricity infrastructure.⁸⁶

There remains a need for further external funding from development banks, “who have a duty now to show the same level of commitment in the form of loans, capacity building etc., in bringing the electricity industries back under public control as they did in encouraging privatisation.”⁸⁷

4.5. Subsidy, cross-subsidy, and taxation

Electricity must be affordable, which requires maintaining subsidies and cross-subsidies for the poor. This is now acknowledged even by a World Bank research paper:

“... direct subsidies and cross-subsidies are not always as bad as they are made out to be. ... The evidence suggests that the poor can be deprived of infrastructure services in many ways. They often need to benefit from a connection subsidy as so often mentioned by casual analysts focusing on the access problem but they also often need to benefit from a subsidy for what amounts to be a minimum level of consumption. Unaffordable consumption, even with access is useless and vice versa”⁸⁸

South Africa again, is an example of government providing subsidies to enable poor households to receive 50 KWh per month free, with reduced tariffs after that point. By the end of 2006, 1 million households were benefiting from this, although many more should be covered.⁸⁹

Providing public finance means building a strong base of tax revenues to support the investment and subsidies. A recent UNDP report argues that developing countries, especially in sub-Saharan Africa, need to invest through the public sector in order to boost demand, improve productivity, and redistribute in favour of poorer households. To do this, governments need to borrow more of their own citizens' savings, and raise more taxes from those who can afford them:

“A widespread ‘small government’ ideology has masked the reality that many governments do not command the resources necessary to finance many essential public services. To put matters in perspective, for all developing countries, tax revenue as a ratio to GDP is only 18 per cent, compared to 38 per cent for industrial countries ... The case for boosting public revenue is particularly compelling in sub-Saharan Africa.”⁹⁰

4.6. Transparency and governance

Finally, the public sector needs reform. This can be based on the work done in India, especially by the Prayas group.⁹¹ Prayas set out the achievements of the public sector system in India, acknowledged the problems including lack of transparency, but rejected the solution of privatisation as the worst option for transparency. Instead, they argued:

“This leaves us no choice but to give centrality to the public-friendly transparency, accountability and participation (TAP) provisions in our efforts to reform and restructure the Indian power sector. This is necessary to permanently stem out the possibility of take-over of the sector by the unholy alliances. This, in turn, would require that all the governance functions and governance agencies are made amenable, on mandatory basis, to full transparency to the public, direct accountability to public, and meaningful participation of public.”

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