CHAPTER FOUR: THE PRIVATISATION OF ELECTROGAZ AND ITS IMPACT ON THE RESIDENTS OF KIGALI

4.1. Introduction

Rwanda is a small, low income, densely populated and landlocked country, and its principal energy problems are related to these characteristics. Rwanda’s modern energy sector is small and covers a very small portion of the population, mostly in the urban areas. Rwanda has a fairly limited endowment of energy resources in the form of fuelwood, hydropower, methane gas (still virtually underdeveloped as it is used only by the national brewery, BRALIRWA and some pilot sites), and peat which is not at all exploited. Wood and charcoal remain the most significant - and often the only - fuels available to households and the productive sectors of the economy. The country has no known resources of oil or coal.

4.2. Overview of Privatisation in Rwanda

Privatisation has been an important element of reforms under HIPC\textsuperscript{17} initiative. In fact, the Rwandan private sector has always been considered small and weak (refer to Appendix 14)\textsuperscript{18}, yet privatization as well, is seen as having no substantial impact on the economy, particularly as regards to changing the structure of ownership and providing employment. The argument is that although the role of the state in running parastatals has been reduced, the public sector is still large and the thrust of economic change is expected from the central government (UNDP 2005).

Since 1995 Rwanda’s government embarked on a program of economic and social reforms, which focused on the exchange and trade regime, the reform of public administration, budget and financial management, private sector development, and the privatization of state enterprises (MINCOFIN, 2000). According to the Ministry of Finance and Economic Planning, the main focus of the reforms was the privatization of state-owned enterprises and the putting in place of a regulatory framework within with these privatized enterprises and other private companies could operate. An ambitious

\textsuperscript{17} Highly In-depthed Poor Countries

\textsuperscript{18} In current transfers totalling 192.6, the private contributed for 35.1 in 2004 whilst the public contributed for 278.9 in the same year (figures in million US dollar). The growth of the two sectors between 2003 was 11.8\% for private and 43\% for public.
privatization program of state-owned enterprises (SOEs) was established by Law no.2 dated 11/03/1996 on privatisation and public investment. It is the Presidential Decree no.08/14 dated 03/05/1996 that put in place the institutions to implement that programme. The Privatization Secretariat started its work in October 1997 (MINECOFIN 2000).

As MINECOFIN (2003) states, the privatization law gives government the power to liquidate, rent or transfer partly or totally any public institution or company, or whatever other state service if the management of the company is considered non-profitable, if the state wants to pull out of a commercial or industrial operation or if the (social) purpose establishing the company, has been reached. Rwanda had about 72 commercially oriented state enterprises in 1995. Most these enterprises were either operating well below capacity or were dormant and bankrupt. A crucial underlying assumption is that privatization is not an end in itself, but can be an instrument for making the government more efficient and the economy more productive when it is part of broader social reforms (MINECOFIN, 2000). The main SOEs were the telephone company (Rwandatel), the electric, gas and water utility (ELECTROGAZ), nine tea factories and estates and two banks owned in partnership with the private sector (UNDP 2005).

The government, after various studies and consultations with stakeholders and IFIs, adopted a strategy for the privatization of tea factories and estates. This provided for the participation of tea-growing cooperatives and small holders in the ownership of the factories. Legislation was passed to establish government/industry organizations to promote and regulate the tea and coffee industries, replacing the parastatals that controlled the sectors. Most enterprises were sold to domestic investors, although the larger ones that included a modern specialist hospital, a sugar factory and estate and a petrol distribution company were sold to foreign firms. To permit the privatization of Rwandatel and Electrogaz, the National Assembly adopted new legislation establishing the regulatory frameworks for the telecommunications and electric utility sectors, including the revocation of the monopoly of the state enterprises, paving the way for private sector participation. The law also created a multi-sector agency to regulate the activities of firms in the power and telecommunications sectors (MINECOFIN 2003, UNDP 2005).

The privatization program faced several obstacles in the post-conflict environment among others the lack of institutional capacity to manage the privatization process. While the
process is believed to have been generally transparent, there were also a number of transactions undertaken through mutual agreements, directly between the government, with the involvement of the Privatization Secretariat, and the private investor. These included some difficult transactions where the process of public offerings failed. However, even some of these transactions eventually unraveled. These problems lend support to the argument that privatization may have been premature in a volatile post-conflict environment. Arguably, the government could have waited until the economy had stabilized and fully recovered from the effects of the conflict before offering SOEs for sale (English et al. 2004, UNDP 2005, USAID 2004).

According to the UNDP (2005), the risks to the approach are significant as in most cases the assets of the firms to be privatized in a post-conflict situation are already in the process of decay, with technologies rapidly becoming obsolete and this was clearly the case for the important tea factories and communications sector in Rwanda. The UNDP (2005) stated that the Rwandan government would have to invest scarce reconstruction resources to halt this physical deterioration and to preserve economic values. However, the external financers of the government would be unlikely to approve such spending on parastatals as such actions might be seen to jeopardize the inflow of external assistance.

4.3. Privatisation of ELECTROGAZ

In Rwanda electricity production is almost exclusively hydraulic, even if fuel and solar energy are also sometimes used. Thus, ELECTROGAZ, a state-owned enterprise, has had a de facto monopoly on the production and distribution of water and electricity in Rwanda, since 1976, when it was established. In fact, not only does it cover the whole Kigali city supply of Rwanda, but also, when it was created, the Organic Law No. 18/76 gave it a 99-year full monopoly on production, transportation and distribution of electricity, water and gas wherever it would operate in Rwanda (MINECOFIN 2003). Though in practice ELECTROGAZ is still the only company that produces and distributes water and electricity, in 1998 the government launched a programme of sectoral reforms to end that monopoly, restructure the company, encourage private-sector participation, and develop rural infrastructure (Electrogaz, 2003).

Thus by the Organic Law No.18/99 of 30 August 1999, the monopoly was ended in theory. With that Organic Law, a two-tiered approach was provided for the restructuring
of the national water and power company, ELECTROGAZ. Firstly, through a management contract, and later by a concession or lease. The Cabinet meeting of May 24th, 2000 resolved that ELECTROGAZ should be restructured and privatised. That meeting provided that water and electricity should be managed separately from methane gas (Electrogaz 2003).

According to the Privatisation Secretariat (2002), on May 10, 2002 the request for proposals concerning the ELECTROGAZ management contract was sent to five short-listed groups. These groups were:
- Manitoba Hydro / Toche / Rand Water
- Eskom Enterprises / Umgeni Water Board
- TPF / SWDE / ALE / SPE
- Tata Power Company Ltd / TCE Consulting Engineers Ltd / Tata Iron and Steel Co. Ltd
- Lahmeyer International / Hamburger Wasserwerke GmbH / VEAG Powerconsult

Having received these documents, Manitoba and TPF withdrew from the competition while Tata failed to submit its bid before the deadline. Between June 24 and 28, 2002 the remaining bidders, namely Lahmeyer International and Eskom, sent their teams to Kigali to assess the situation. The bids submitted by these consortiums were opened on July 26, 2002 in a public session at the Privatisation Secretariat, and in the presence of representatives of both groups. The evaluation of the technical bids was carried out between September 8 and 12, 2002. The evaluation report for these technical bids was later sent to the World Bank requesting non-objection19 in order to proceed to the next phase of the process, which consisted in opening the financial bids presented by the two consortiums. This took place on October 28, 2002. The final evaluation of the technical and financial bids resulted in a better mark for the Lahmeyer consortium. Subsequently, on November 26, 2002 the Cabinet approved the evaluation report and the non-objection from the World Bank followed on December 13, 2002 (Privatisation Secretariat 2002).

After the selection of the winning bidder, a negotiation team was established, which comprised representatives of the various Rwandan institutions involved in the process. Lahmeyer International was invited for negotiations, which started on January 16, 2003.

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19 Mostly used in IMF and World Bank’s financed projects to mean approval or go-ahead.
As the Privatisation Secretariat (2002) explains, the various meetings between the two delegations focused essentially on the following issues:
- The amount of the contract and the remuneration formula to be used;
- Managerial competence and experience of the proposed experts;
- Revising of the performance indicators;
- Participation of Rwandan staff in the management of the company;
- Setting of tariffs.

Since then, the Lahmeyer International/Hamburger Wasserwerke HmbH/VEAG Powerconsult, a Germany Consortium, has been retained and a contract to that effect was signed on 28th August 2003. The Consortium has officially managed the company since 24th October 2003. No date has been set for granting a concession or lease. A regulatory body for public utility services, with responsibility for the monitoring of production, and price setting for exports and imports, was established in 2001 (Privatisation Secretariat, 2003).

The adoption of the privatization of ELECTROGAZ intended to relieve the financial and administrative burden of government; to improve efficiency and productivity; to reduce the size and presence of the public sector in the economy and to broaden the ownership base. From the government’s perspective, the successful investor should be required to re-organize the functions of ELECTROGAZ departments; account for assets and liabilities and increase the supply of water and electricity to various parts of the country (Electrogaz, 2003).

4.4. Historical Profile of the hydroelectricity sector in Rwanda and International Institutions involvement

Due to its small size and landscape, Rwanda has its major hydro resources situated along its boundaries. Thus by the 1970s-1980s the country relied greatly on bilateral and regional agreements for its electricity sector development. In fact Rwandan major sites exist along the DRC (former Zaire) and Tanzanian borders. Its electrical power grid is connected with those of DRC and Burundi through existing power plants (Rusizi I and Rusizi II) from which all three countries draw power.
Consequently, as the Department of Energy in the Ministry of Infrastructure affirms, Rwanda is a member of regional development organizations such as CEPGL with the resulting SINELAC20 created in 1983 by Rwanda, Burundi and Zaire and OBK for the Development of the Kagera River Basin (together with Burundi, Tanzania and Uganda). According to the Director of Energy, when SINELAC was created, its intention was to provide electricity generation for Rwanda, DRC and Burundi from power generating stations at the Rwanda-DRC border. On the other hand, Rwanda, together with Tanzania and Burundi, under the OBK power plan, were concerned with a power plant of between 60-100 MW to be situated two kilometers downstream of the confluence of the Kagera and Ruvuvu Rivers (Rusumo Falls) at the Rwanda-Tanzania border.

Thanks to Rwanda’s mountainous terrain and abundant rainfall (1,250-1,500 mm/year), there should be a significant potential for generation of electricity by small hydroelectric generating stations in the numerous, steep, fast-flowing rivers and streams. However, according to the Department of Energy, these sites appear costly to develop and maintain because of the small capacity and the topography, which prevents the construction of reservoirs to store water from the high flow seasons for use during the dry seasons.

In 1981, a UNDP/World Bank assessment mission had observed the major issues in the electric power sector in Rwanda to be institutional. The missions criticized the power sector thus: ‘The current dissemination of responsibilities for the electric power sector among various ministries appears to be counterproductive. There is no planning unit within ELECTROGAZ and the responsibility for initiating and supervising construction facilities is with the Ministry of Public Works’ (UNDP/World Bank, 1982:30). Thus, since early 1980s, the institutional arrangements within ELECTROGAZ were negatively considered by funding institutions which had for long demanded that changes be introduced.

In the 1980s, the main concern for the Rwandan power sector was to realize additional electrical energy supply by constructing the Rusizi II hydroelectric generating station at the DRC border, and to consider Rusumo Falls21 at the Tanzanian border as a new source.

20 Rwanda is a one-third shareowner in the ‘Société Nationale d’Electricité des Pays des Grands Lacs (SINELAC)’, created in 1983 by a treaty ratified by the Governments of Burundi, Rwanda, and Zaire to build and operate the Rusizi II power plant located at the border between Rwanda and DRC.

21 This option remained an alternative that was considered highly expensive and hence never realized.
In fact, as the Marketing Director of ELECTROGAZ argued, the main sources of energy has indeed been the hydroelectric generating stations constructed by La Société des Forces Hydro-électriques de l'Est du Congo, the Rusizi hydroelectric generating station built in 1958 with 12.6 MW capacity and expanded in 1972 to 28.2 MW; and Ntaruka in northern Rwanda, with two 3.75 MW units commissioned in 1958 and another 3.75 MW unit, added in 1962.

The Marketing Director confirmed that at the time of Congo’s Independence, the Rusizi hydroelectric generating station became the responsibility of that country's Société Nationale d'Electricité (SNEL); the Ntaruka plant reverted to Rwanda in 1977 and has since been operated by ELECTROGAZ. The Ntaruka generating station then remained the only main supply of electricity to Kigali through a 70 kV transmission line (later 110 kV), while the Rusizi I generating station provided energy for industry and mines in Southwestern Rwanda through a 30 kV transmission line (about 2 GWh or 3% in 1980). In late 1978, a 110 kV transmission line from Rusizi I to Kigali was completed, and was providing the main source of electrical energy for Rwanda (about 45 GWh or 65% in 1980). The Gisenyi hydroelectric generating station (two 0.56 MW units), which was built by the Belgians in 1956, failed by 1979 following the erosion of the turbine runner blades due to sand in the water, and to a general aging and lack of maintenance of the electrical equipments. Complete rehabilitation of the generating station was financed by the German government and by the end of 1980 the station was capable of producing only about 8.5 GWh annually. In addition, ELECTROGAZ operated two 0.7 MW diesel generating units at Gatsata, adjacent to Kigali, one 0.75 MW unit at Kibungo, and had an abandoned 0.5 MW unit at Kibuye.

However, according to the joint mission of the UNDP and the World Bank and as the Director of Energy in the Ministry of infrastructure admits, for several years prior to completion of the interconnection with DRC, ELECTROGAZ experienced severe difficulties with their diesel generating stations and as a result drew about 43 GWh annually out of Lake Bulera (reservoir for Ntaruka station) more than twice the average availability of about 20 GWh per annum. Consequently, the lake level was lowered about 1m. ELECTROGAZ hence stopped operating the Ntaruka generating station in order to save water, expecting that the lake would be refilled and normal operation of the station
resumed by 1983. At that stage then, the realization of Rusizi II and Rusumo power stations was very important in order for Rwanda to supplement the national grid.

The UNDP/World Bank assessment mission of 1981 described electricity tariffs as designed to cover the power system's operating but not capital costs. According to the World Bank’s experts, this had resulted in a tariff well below the cost of service. In fact, since a tariff increase in early 1982, the selling price of power at low voltage (i.e., for domestic and small commercial enterprises) was 13 RwF/kWh. High voltage consumers with less than 100 kW subscribed demand were paying 9 RwF/kWh and a monthly peak demand charge of 540 RwF/kW, while above 100 kW subscribed demand, the selling price was 5.5 RwF/kWh, with a monthly peak demand charge of 860 RwF/kW (UNDP/World Bank, 1984).

However, according to the UNDP/World Bank estimates, the cost to ELECTROGAZ was far higher than what consumers were charged.

‘Since 1974 ELECTROGAZ paid SNEL an average price of RwF 1.63/kWh for energy used in the interconnected system, plus a demand charge which brought the average cost to RwF 2.35/Kwh (US$ 0.034). The delivery cost of this energy to Kigali (at 10% per annum on the cost of the line) was about RwF 3.5/Kwh, and distribution to other areas, at medium and low voltage costed at least RwF 17/Kwh’ (UNDP/World Bank, 1982:35).

As the UNDP/World Bank (1991) noted, the consumption of electricity reached a level of only 105.2 Gigawatt per hour (GWh) in 1987, representing a per capita consumption of only 16 kWh, one of the lowest values in the world. In spite of an average annual rate of growth in the number of connections of 17% (1983-1989), in 1989 still only a small fraction of the total population of the country (1.4%) was using electricity.

All major urban centers were supplied by the national grid, but only a very small percentage of their respective populations were actually using electricity and Kigali's consumption represented 60% of the national total consumption, even if less than 12% of its population was connected to the power network. However, according to the UNDP/World Bank experts there was no close correlation between the growth of
electricity consumption and the growth of GDP on a year-to-year basis. The table below summarizes the consumption between 1980 and 1987\textsuperscript{22}.

Figure 4. Electricity consumption between 1980 and 1987

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</tr>
</thead>
<tbody>
<tr>
<td>Industrial</td>
<td>30.2</td>
<td>32.5</td>
<td>34.7</td>
<td>34.7</td>
<td>35.8</td>
<td>34.8</td>
<td>35.1</td>
<td>36.5</td>
<td>2.7</td>
<td>2.4</td>
</tr>
<tr>
<td>Commercial</td>
<td>7.2</td>
<td>8.5</td>
<td>13.4</td>
<td>11.3</td>
<td>14.3</td>
<td>14.6</td>
<td>14.3</td>
<td>14.3</td>
<td>10.8</td>
<td>0.7</td>
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<tr>
<td>Residential</td>
<td>12.5</td>
<td>14.5</td>
<td>15.5</td>
<td>14.3</td>
<td>17.5</td>
<td>17.7</td>
<td>20.0</td>
<td>23.7</td>
<td>9.6</td>
<td>15.8</td>
</tr>
<tr>
<td>Public Services</td>
<td>6.0</td>
<td>7.2</td>
<td>9.4</td>
<td>12.6</td>
<td>13.2</td>
<td>21.2</td>
<td>22.5</td>
<td>24.1</td>
<td>22.4</td>
<td>6.6</td>
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<tr>
<td>ELECTROGAZ</td>
<td>1.4</td>
<td>1.1</td>
<td>2.4</td>
<td>2.6</td>
<td>3.1</td>
<td>4.2</td>
<td>3.2</td>
<td>6.1</td>
<td>23.6</td>
<td>20.0</td>
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<tr>
<td>Total</td>
<td>57.3</td>
<td>63.8</td>
<td>73.4</td>
<td>75.3</td>
<td>83.9</td>
<td>92.5</td>
<td>95.1</td>
<td>105.2</td>
<td>9.0</td>
<td>6.7</td>
</tr>
</tbody>
</table>

Source: UNDP/World Bank, 1991

In the early 1990s, domestic grid-connected generating facilities included four hydroelectric plants with a total installed capacity of 26.5 MW (plus four diesel plants with total power of 3.6 MW on standby or out of service). As a partner in SINELAC, Rwanda was entitled to one-third of the 26.6 MW of this plant. It was also envisaged that the three countries (Rwanda, Burundi and DRC) would share the costs of the plant's additional 13.3 MW unit (Rusizi III), which should be installed by 1995\textsuperscript{23}. Thanks to the surplus installed capacity in Burundi and Zaire, Rwanda had the opportunity to purchase from SINELAC the energy not needed by the other two partners. This was considered by the UNDP/World Bank expert as interesting option for Rwanda given that they considered the economic cost of Rusizi II's power to be lower than that from the construction of new domestic plants.

Though contractual arrangements with DRC allowed Rwanda to import about double the energy taken in 1987, the country has preferred to maximize the use of its domestic power plants. In fact, even if Rwanda continued importing power from Zaire's Ruzizi I plant, this was in a steadily decreasing proportion to total energy supplied to the network (only 15% in 1987). As the 1991 joint report of UNDP/World Bank (1991:52) puts it: 'In spite of

\textsuperscript{22} No useful data on the evolution of consumption in the aftermath was available; hence we could not draw a meaningful table. The highlight is on the only type of consumers, household (Residential) not on the whole table.

\textsuperscript{23} The project was never realized, probably, because from 1990 to 1994 Rwanda was facing civil war and political upheavals, and from 1995 onward Rwanda and DRC were not in good cooperation, or because of lack of funds.
interconnection with Zaire which would allow imports of about 40 GWh annually, Rwanda has recently taken only about half that amount of energy, preferring instead to operate its power plants above their rated annual available production. This practice has steadily lowered lake levels over time.

These experts reiterated that Lake Bulera, which supplies the Ntaruka plant, fell by about 1m between 1962 and 1973 and by about 3m between 1973 and 1987, and the level of Lake Ruhondo, which supplies the Mukungwa plant fell by 0.4 meter between 1983 and 1988 (UNDP/World Bank, 1991).

Moreover, Rwanda and the UNDP/World Bank had always had misunderstandings on utility tariffs and on some operational and institutional issues in ELECTROGAZ. For example, in the early 1990s the UNDP/World Bank’s experts recommended that tariff structures be amended to better reflect the economic costs of supply for each category of service and eliminate consumer subsidies. They recommended also that equity considerations and the financial needs of a restructured, autonomous public utility also be reflected in the tariff structure. They, furthermore, said that: ‘Subsidized tariffs should not be used as part of a policy of promoting conversion of industrial boilers to electricity in cases where the conversions were not warranted on economic grounds’ (UNDP/World Bank 1991:60).

Besides that, in 1987 UNDP/World Bank’s experts estimated long run marginal costs at US$0.15/kWh for medium voltage consumption while the average tariff was US$0.13 and US$0.10 for capacities below and above 100 kW, respectively. Their estimates evaluated at US$0.18/kWh the cost for low voltage consumption while voltage rate was US$0.11. They even observed that above calculations were carried out prior to the then macro-economic adjustments, and would consequently, need to be updated with more rigorously established figures in the Power Master Plan that was to come later (UNDP/World Bank 1991).

In 1989, World Bank experts highlighted a tariff study completed by SAUR-Afrique and the French state-owned company, Electricité de France (EDF) in 1987, which showed that by 1988, even after operating cost-reduction measures, debt accumulated in the early 1980s would remain due, necessitating an average rate increase of 15%. According to these experts, ‘In January 1988 the government chose to ignore the results of the study and
lowered power rates by an average 14%, judging that this would make electricity more affordable’ (UNDP/World Bank, 1991:46).

These experts considered that lower rates, combined with a decrease in government subsidies and continued accumulation of government receivables in 1988, had instead decreased ELECTROGAZ’ ability to expand services to new customers and meet its debt obligations to the Government.

As given by the Department of Energy, by the late 1980s and early 1990s, increasing the population's access to electricity was among the most important objectives of the Rwandan Government. First priority was to be given to expanding connections in areas where service was already available. However, according to the joint report of the UNDP and the World Bank, a major obstacle to expanding services to new consumers even in areas already served by the urban grid was the high cost of an electricity connection. Due to the then regulations, consumers had to pay all the costs of the connection study, the equipment to be installed and the works to be executed, plus 10%, normally in installment after the connection was contracted. The average connection charge was estimated at about US$750 and this was very high given the GNP per capita of only about US$290 at that time. In 1991, the World Bank experts concluded in their report that

The high cost of connections is in part explained by the overly demanding technical specifications of the equipment used (tri-phase connections have been used in the past for all Low Voltage consumers), excessive use of underground cables in urban areas and low efficiency of the working teams (ELECTROGAZ’ own staff connect new customers rather than using private electrical contractors24) (UNDP/World Bank 1991:43).

And in their recommendations, World Bank experts recalled more appropriate standards to be introduced, efficiency and the connection charges that had to be spread over time using a credit mechanism combined with lifeline tariffs where these would be justified. ELECTROGAZ had extended the repayment period to clients of limited risk, but according to the UNDP/World Bank experts it was preferable to develop a policy for term payments and lifeline rates supported by donor funding for connections which would relieve ELECTROGAZ of some cash-flow risks and allow more new consumers to benefit. (UNDP/World Bank 1991)

24 It should be noted that no single private electrical contractor would be found in Rwanda. Hence using private electrical contractors refers to contracting with foreign firms
Previously in 1989, the UNDP/World Bank team had described the Government control of ELECTROGAZ as sometimes interventionist, and overriding the statutory authority of ELECTROGAZ’ Director to manage the enterprise's operations in accordance with standard utility practice; to prepare and execute an operating and investment budget based on the enterprise's needs and the National Energy Policy; and to recruit, reward or terminate the 40% of his personnel with civil servant status. The arrangements between the government (MINITRAPE-MINIFOPE) and ELECTROGAZ was said to have weakened the planning and programming process in which ELECTROGAZ as the national power entity and network operator normally would have a major role. As they emphasized

‘While ELECTROGAZ has a Board of Directors comprised of presidentially appointed high level civil servant from five ministries, it appears not to function in accordance with standard management principles: the Board examines, notes, and advises only, deferring all decision making to the appropriate ministry (…) Furthermore, this artificial division of responsibility has lessened coordination in network’ (UNDP/World Bank 1991:48).

Consequently, the Department of Energy was required to make some major restructuring of the company. As it is clear in the 1991 joint report of UNDP/World Bank, the recommendations were that

‘(…) With regard to the former, ELECTROGAZ should be given the autonomy necessary to manage its day-to-day water, power, and gas operations, including a fully empowered director and board. As for the personnel statutes the ELECTROGAZ should be separated from the civil service, and the company's management given full control over human resources policy (recruitment, termination, training)' (UNDP/World Bank 1991:50).

The UNDP/World Bank experts also recommended that ELECTROGAZ’ organic structure be reexamined and revised in line with responsibilities which would result from greater managerial autonomy and from the expansion of the electricity sector, as set forth in the Power Master Plan. Furthermore, because of ELECTROGAZ monopoly status, the Bank advised for a regulatory framework to permit the government to monitor ELECTROGAZ’ technical and managerial performance, and to ensure cost-effective delivery of service in line with industry norms. The argument was that the transition to a commercial utility was going to require careful phasing and substantial external support, either through technical assistance or twinning with a foreign utility.
Based on the recommendations of a CCCE/IDA-financed study by SAUR/CEGOS/EDF, the UNDP/World Bank’s experts emphasized the urgent need for structural and managerial reform, including a proposal for privatizing part of ELECTROGAZ activities. The experts highlighted that: ‘this is a good basis for initiating the process of enterprise reform and recommendations to improve ELECTROGAZ’ operational and financial performance which need not await a complete legal reform to have a positive impact on ELECTROGAZ overall performance’ (UNDP/World Bank 1991:50).

These experts also said that ELECTROGAZ’ personnel unit should then be provided with the expertise and logistical means needed to prepare a human resources’ plan aimed at initially providing the restructured enterprise with adequate competent staff; and in a second phase, developing and expanding staff in line with the outcome of the Power Master Plan. The experts made it clear that the state had to divest from ELECTROGAZ.

According to the Director of Energy in the Ministry of Infrastructure, the reason why ELECTROGAZ infrastructure was collapsing is that: ‘In practical terms since early 1980s the sector received no funding and thus no infrastructure visible investments were made’. Actually, as the Director of Energy stresses, the country depended totally on aid and funds from funding institutions for major development projects and these institutions released nothing to be allocated to the sector. The result was a decline of overused hydropower stations in a situation where the demand was growing fast. In fact, for long the government had seen as ignoring the recommendations given by UNDP/World Bank experts while these recommendations are determinant in fund release.

According to the Director of Energy, from 1990 as Rwanda entered into a civil war, funding institutions (mainly the World Bank and the UNDP) were more than ever reluctant to fund the sector assuming funds would be misused to fund the war. After 1994, as Rwanda was coming from genocide and the four-year civil war, it received significant support for reconstruction. Nonetheless, Rwanda was again seen as spending much money on the war in the DRC and this made the World Bank appear reluctant to make any visible support to the energy sector, as it was suspected the funds would be diverted into funding the war.

With regard to all these issues, Rwanda had to convince the donor community about its firm commitment to abide with the recommended reform of ELECTROGAZ in order to
receive funds. In fact, even if it had been long reluctant to involve private business in the sector, Rwanda was unable to overcome all the problems it had without outside funding not only for the sector but also for all the sectors that needed relief. It should be noted that after the genocide around two-thirds of the annual budget were made from external sources (donations and loans). The Director of Energy recognizes that ‘nothing would be done if not to abide with recommendations’ and Rwanda thus opted for the careful phasing of the energy sector projects (management contracts first and full privatisation thereafter).

What is interesting to note is the divergence between the official Rwandan government’s discourse and the actual facts about the privatisation of ELECTROGAZ. According to the IMF:

‘The government has decided to accelerate the privatization process and has adopted an action plan and time schedule for the divestiture of the remaining 55 public enterprises during 1998-2001.... To this effect, the technical support unit of the National Privatization Commission is being strengthened (with technical assistance from the World Bank and the United Nations Development Program) to accelerate the evaluation and offer for sale of identified enterprises. The government will further extend the advertising of enterprises for sale and will intensify the media campaign to inform the public about the privatization process’ (IMF 1998:11).

At least, official sources of information accessible to the public (websites, reports, publications, media and public discourse) highlight that privatisation was a home-conceived policy decision. As the official documents show, the commitment of the government to privatisation came from its acknowledgement of the benefits from the private sector. As one can read from governmental websites: ‘Recognizing that the principal of economic growth in Africa and elsewhere has been the private sector, Rwanda felt it should not be left behind and has put in place an ambitious privatization program of its state-owned enterprises’ (Website of the Ministry of Finance and Economic Planning, accessed on Sept 05, 2005).

The public are made to believe that financial institutions and the international community came in purely to help the country realise its objectives, and that Rwanda Itself chose privatisation as the best option to realise better economic and social welfare. Collyer (2003) explains this by saying that a broader and more political definition of privatisation would have politically negative consequences, revealing the full range of likely effects and
exposing the yawning gap between the beneficiaries of the policy and those who would be harmed by its introduction.

No single mention is made as to how Rwanda might have been pushed or forced to privatise by its link with major international players. The International Financial Institutions are made to appear as if they came to Rwanda merely because Rwanda wouldn’t be able to achieve its vision without its sought for help for advice and funds. It is only by questioning officials that one discovers what really happens behind the scene. ‘We have to obey and follow what they say, otherwise they can cut even the small we are given’ is the kind of argument to be heard from government officials.

On this, one can question if ELECTROGAZ’ privatisation was adopted because the government perceived it as the best practice or because it had no choice but to follow the recommendations. Actually, one can read in the magazine of the Privatisation Secretariat (2003:1) special edition on ELECTROGAZ that ‘Given this situation, the privatisation of Electrogaz had become necessary. The Rwandan government had to choose among three options: sale, concession, or a management contract which might be followed by a concession arrangement once the situation of the company was stabilised. The government chose the third option’.

Since Rwanda opted for privatising of state-owned enterprises, the international funding institutions found arguments for their open involvement. For example, with the case of ELECTROGAZ, since the government put it on the list of companies to be privatised, a World Bank consultant was very active in the whole process providing ‘technical assistance’. The Privatisation Secretariat (2003:1) emphasised:

‘The government’s decision to restructure the energy and water sector in collaboration with the World Bank dates back to 1999. From the year 2000 up to May 2002, the Rwandan administration, with the support of the international consultant Booz-Allen & Hamilton and the World Bank held discussion on the privatisation process’.

But one can question whether the World Bank provided technical assistance or was the one to lead the process. The fact that almost all the meetings on the issue were held in the World Bank country offices under World Bank auspices and not in the Ministry or the Privatisation Secretariat adds weight to the view that the process was led by the World
Bank and not the country itself. For example on 23rd May, 6th and 14th June in 2001 meetings were held in the World Bank Conference Hall under Michel E. Layec leadership (Minutes of the meetings in archives of the Privatisation Secretariat).

All the elements of how the management contract was to operate were mostly discussed by all parties (World Bank and Rwandan Government) while some big aspects were studied not only by the World Bank Consultant but also at Washington DC. The evaluation of technical offers’ had to receive ‘non-objection’ of the World Bank while financial offers evaluation was done by the World Bank at Washington DC, which supports the idea that the World Bank was not an adviser but a leader. The role played by the World Bank Team Leader Michel E Layec in the process was very crucial in defining what was to be done and was more than merely technical advice.

At least, since the process got underway, the World Bank says that ‘the transformation of ELECTROGAZ into a well-run, commercially oriented utility, is a major challenge as the success of the management contract depends on the availability of funding for system rehabilitation and expansion, and that there have been delays in mobilizing the necessary resources’ (The World Bank 2004:4). The Bank’s engagement in the sector has been limited to support for the ELECTROGAZ management contract and startup support to the Rwandan Utility Regulatory Commission (RURA) through the Competitiveness and Enterprise Development Project (CEDP). In fact, ELECTROGAZ is said to have been historically a very weak entity both in terms of financial systems and documentation, as well as actual financial performance. ELECTROGAZ’ accounts are said to be poorly maintained (The World Bank 2004).

Deficiencies of ELECTROGAZ are attributed to both the lack of an integrated accounting system, and the shortage of qualified staff. The World Bank support to the new management team is believed to include the setup of a budgeting and costing system effective as from 2005. Even this may not be sufficient as long as ELECTROGAZ does not have integrated software covering all its activities. This means more funding is needed to set up that software. In fact the financial performance of ELECTROGAZ is said to have been unsatisfactory on account of low electricity tariffs unchanged since 1997 and which, according to the World Bank (2004), did not even cover the cost of purchases from

25 Mostly used in World Bank’s financed project to mean approval or go-ahead.
SINELAC; on structural inefficiencies (high level of unaccounted for water and electricity, and inadequate payment recovery ratio); and on poor assets’ management (stores).

Since 2004, shortly after the management contract entered into effect, the World Bank rhetoric was that: ‘Considerable efforts have to be devoted to addressing the ongoing power shortages on a crash basis that has hindered the longer term task of system planning and improving ELECTROGAZ’s commercial performance’ (The World Bank, 2004:10).

Thus, by December 2004 under the ‘Urgent electricity rehabilitation project’, the World Bank provided a credit of US$ 25 millions to Rwanda, a credit to be disbursed by July 2009. As the World Bank (2004) contends, performance targets for ELECTROGAZ have not been adopted yet, and their achievement will depend *inter alia* on the government of Rwanda’s ability to provide the necessary investment finance as well as financial restructuring of SINELAC and ELECTROGAZ.

The above findings are evidence of how countries such as Rwanda are forced by IFIs to undergo structural adjustments. As argued by Peet (2003) and Ruckert (2005), global major players are perceived as only ones that have got *‘the know how’* and each and every country has to follow their recommendations in order to receive funds from them. Global institutions exercise hegemonic power on borrowing countries, believe the same authors. There is a belief that privatization is part of an ideology in which people are coerced into accepting a particular set of policy strategies (Collyer 2003).

**4.5. The infrastructure and delivery profile prior to privatisation**

As argued unanimously by ELECTROGAZ and all government institutions concerned, ELECTROGAZ infrastructure dates back to the 1980’s and has received no visible renovations since then. For example as the Marketing Director of ELECTROGAZ admits: ‘78% of water installations, be it water pipes, reservoirs, generation stations, were made 20 years ago; the situation is the same for electricity’. The Director of Energy in MININFRAS confirmed too that no visible investments were made since the 1980’s. According to the management of ELECTROGAZ the existing infrastructure in Kigali was designed to cover a population of about 350,000 people while now the city counts for around 860,000 people, thus revealing its dire inadequacies.
It is obvious that the lack of investment in the sector resulted in overexploitation of existing infrastructure which started declining. Not only did the machines start weakening but lakes used in power generation started reducing their water levels considerably. The result was the supply decline over a period in which the demand was rising - especially after the genocide with quick housing and urbanisation. As power stations were producing less and less electricity, ELECTROGAZ had to make a ‘load-shedding program’\textsuperscript{26} of electricity supply and this impacted on water supply as well given that during the cutoffs water pumping had to stop. Thus, load-shedding was felt in both water and electricity.

In describing the consequences of lack of investment in the sector, the World Bank (2004) shows that in 1990, total electricity consumption was around 136 GWh, and this amount rose up to 220 GWh in 1995. With total losses in the electrical network declining from their 1987 level of 17\% to 14\% after 1990, the required generation was around 162 GWh in 1990 and around 256 GWh in 1995. Given this situation, in order to survive ELECTROGAZ not only imported electricity from SINELAC but, as the World Bank (2004) affirms, it did not meet its debt service obligations, and only paid small amounts to SINELAC. As said before, ELECTROGAZ was heavily subsidized, despite the country’s dependence on external funds. As prices were below the cost of production and distribution, the state periodically came to the rescue of the company in the form of debt forgiveness, the offset of accounts receivable against taxes and debts, and the financing of construction programs through grants.

When the management contract came into effect, the situation was critical. According to the Director of Administration and Finance in ELECTROGAZ, 33\% of electricity produced was being lost. For water, it was worse as half (50\%) of the water pumped was lost in pipe leakages or used without billing. Apart from these technical losses, the supplied water and electricity totalled around 60\% losses in terms of commercial losses (difference between the amount billed and the amount collected). Furthermore, ELECTROGAZ had to import electricity from the tri-national SINELAC and from the Congolese SNEL. On this import, ELECTROGAZ was paying RwF 48/Kw while it was selling it on RwF 42/Kw. According to the Marketing Director in ELECTROGAZ, ‘The malfunctioning of ELECTROGAZ overtime has left it with huge debts of over RwF 50 billions’.

\textsuperscript{26} A rationing way of providing lower quantity water and electricity mostly with intermittent connections alternatively to suburbs.
In recent post-genocide years, Rwanda (and Kigali in particular) experienced rapid urbanisation resulting in increased demands for water and electricity supplies and yet nothing was done to increase the capacity of electricity and water provision. That is the reason why it is admitted that the combination of strong demand growth with ‘unexpectedly low lake levels’\(^{27}\) in the hydropower sources - further exacerbated by high technical losses and unreliability of ELECTROGAZ dilapidated network - have led to extensive and lengthy power cuts that began in 2004.

The table below summarises the gap between the production (how much is produced and how much is distributed), the gap between the cost of producing and supplying services and the revenues from the sales of services of ELECTROGAZ from 2001 to 2003.

**Figure 5. Electrogaz losses for the period of 2001 - 2003**

<table>
<thead>
<tr>
<th>Summary Income Statements (US$ million)</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>MWh Supplied</td>
<td>199,759</td>
<td>235,045</td>
<td>242,112</td>
</tr>
<tr>
<td>MWh Sold</td>
<td>154,919</td>
<td>177,035</td>
<td>177,314</td>
</tr>
<tr>
<td>Average Rev./kWh sold (USc)</td>
<td>9.0</td>
<td>8.3</td>
<td>9.6</td>
</tr>
<tr>
<td>Electricity Revenues</td>
<td>15</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>Electricity Expenses</td>
<td>21</td>
<td>21</td>
<td>18</td>
</tr>
<tr>
<td>Operating Income Elec.</td>
<td>(6)</td>
<td>(4)</td>
<td>(3)</td>
</tr>
<tr>
<td>Water Revenues</td>
<td>5</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Water Expenses</td>
<td>9</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Operating Income Water</td>
<td>(4)</td>
<td>(4)</td>
<td>(2)</td>
</tr>
<tr>
<td>Other (Net)</td>
<td>(18)</td>
<td>(6)</td>
<td>(6)</td>
</tr>
<tr>
<td>Interest</td>
<td>(26)</td>
<td>(12)</td>
<td>(0)</td>
</tr>
<tr>
<td>Net Income</td>
<td>(54)</td>
<td>(27)</td>
<td>(11)</td>
</tr>
</tbody>
</table>

Source: *Rwanda Urgent Electricity Rehabilitation Project, the World Bank, 2004, p. 69*

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\(^{27}\) It is continuously said that the low lake levels are unexpected, but throughout 1980s-1990s it has been identified that national hydropower stations were overexploited and there needed to be many more other investments, which required funding from outside. But as the country had continued decreasing the advised electricity import from SINELAC and had held low rates on water and electricity, funding institutions have given no funds to the sector.
4.6. Service facilities before and after the management contract

According to those Kigali residents that took part in interviews, nobody opposed the idea of privatising ELECTROGAZ. Even if people had been informed about the process only after its implementation, they believed in the government claims of its benefits. In fact, ELECTROGAZ had long been accused of declining customer care services and mistreatment of consumers, and this had been always linked to its being a public monopolistic institution.

Interviews show that in the years prior to privatisation ELECTROGAZ was characterised by lack of efficiency in terms to connection and support services. At least everybody recalls bad services when it comes on connection applications. One respondent from Gisozi exclaimed thus: ‘Esh, don’t remind me about applying for connection! It was the worse you can imagine’ (Gisozi 3).

Another interviewee from Mont Kigali (Butamwa 3) argued that: ‘even if I did not apply before it was privatised I know that you would spend months and months going up-and-down asking them for connection; at the end your file would be kept underneath working tables and you could not even ask them about how far it was going’ (Butamwa 3).

One would apply for water or electricity connection, and this would take an undefined time. Not only were files kept in a way that made follow-up somehow impossible for consumers, but also consumers were treated by staff in a manner that indicated inefficient management. It would take months or years to get connected, and sometimes consumers were brought to bribe technicians in order to get served. As this respondent says:

‘We were used to being told ‘Get out of my office’, ‘Never come back to see me this way’, ‘Come back another time, I’m not receiving you now’, ‘I’m tired of you in my office’ (Nyamirambo 3).

Another respondent (Nyarugenge 2) confirmed that prior to privatisation customers were neglected and mistreated by staff members. And a Kicukiro resident confirmed that ‘(…) they could move you up and down until the time you get tired and give up’ (Kicukiro 4). Furthermore, a respondent (Kacyiru 2) emphasizes that:

‘Sometimes, you would feel bad to approach ELECTROGAZ for service inquiries as it would take your time for nothing and if you know nobody you would end up humiliated by the way they treat you.’
Staff had come to see the situation as very useful for them. One respondent remembers that:

“It was abominable. Whenever you needed a service you had first to look for how to get in touch with someone, maybe a technician or just someone working for ELECTROGAZ. (...) He would then tell you how much he needed to make your case through. Without someone you could not get something from ELECTROGAZ (Nyamirambo 1).

In cases where the person was not the one in charge of providing the particular service, additional money had to be given to allow the bribe network to operate. No fixed amount was to be given as deals were made face to face or in network channels behind the scenes within personal arrangements. ‘It took me around two weeks as the man I talked to had to negotiate with his colleague; then he told me how much the guy asked. So I had to double the money’, says a respondent’ (Nyamirambo 2). All these underground contacts had prevented people from getting the services they had applied for by by-passing the normal channels.

As said by residents and confirmed by ELECTROGAZ management, there was no one to care for the infrastructure or the equipment. Water would leak from pipes for days and days with no intervention to stop it; electrical cables would be short-circuited, electricity posts would fall and nobody would address that problem. ‘There is a time that we spend more than a week without electricity because a cable was cut by a tractor which was tracing the road’ said one respondent (Kacyiru 2).

It is thus apparent why citizens were not opposed the idea of privatizing the company as they believed that failures were linked with its being a public monopoly. They thought that with a private operator the company would take care of customers and assets, and deliver better services. As this person says: ‘We knew that it was due to lack of control that ELECTROGAZ was malfunctioning and everybody believed that when a private manager will come in he will take seriously the control over his staff’ (Gikondo 1).

According to the Marketing Director of ELECTROGAZ, the company used to have only three antennas (substations) for the whole city of Kigali. All these antennas were not well equipped to deliver all services. The insufficient number and lack of empowerment of antennas had made ELECTROGAZ services centralised at the headquarters and this had
resulted in over-crowding of non-treated files. People had to travel far to request services as customer care services were based primarily at the head quarters. Daily long queues were among other results of the centralisation of services.

To some extent, changes are evident. Shortly before Lahmeyer International took over, the company undertook some restructuring to prepare it for privatisation. For example, the number of ELECTROGAZ antennas in Kigali rose to five. But, it was really after Lahmeyer International came in that changes were felt by consumers. Customer services were reinforced to the extent that the distance to get to service centres has been considerably reduced. ‘Now we have up to 9 antennas in Kigali city and we want at least every sector in Kigali to have its own antenna. Our antennas are now able to serve customers in whichever services they request from us’, the Marketing Director affirmed. Now, all files are treated at antenna level and this makes the treatment of individual cases quick and easy.

Customer centre
Since ELECTROGAZ was privatised, the management created a customer centre that operates from 8 a.m. to 8 p.m. seven days a week. The customer centre allows people to purchase power units loadable in electricity prepaid meters (commonly known as Cashpower) and to make almost all other operations. A technical team is available during customer centre service hours for eventual intervention. The city centre antenna operates on the same schedule as the created customer centre. To believe the Marketing Director, ‘The current data processing allows consumers to access their accounts from any antenna which means people can at least pay for water and electricity from any ELECTROGAZ antenna in Kigali’. According to the Marketing Director, ELECTROGAZ customer services extend their operating hours to late evening to provide services to those who leave their offices.

Although the general trend is positive, there is still a mixed view on the way services are provided to consumers.

Positive
Almost every respondent acknowledges that the application process is speedy. An application may receive a reaction in less than two weeks and each and every application
file is dealt with rapidly. New applicants and every consumer of ELECTROGAZ services can even talk easily to the Director General about whatever issue linked to services they may have. A respondent claimed: ‘There are no delays. After two weeks I went back and found they had responded positively to my application’. Another one states that: ‘Now they talk to you as a human being (…)’ (Kicukiro 2). All these words testify to a situation in which customer services have improved. Thus, to some extent, for Kigali residents the administration of ELECTROGAZ is somehow more efficient than the previous one.

**Negatives**

However, there are others who express bitterness. One respondent claimed that:

(…) The chief of the antenna asked me to bring a notoriety certificate from the district while this was not part of the requirements (…) The technician overestimated the necessary needed equipments to install in my house; so I had to negotiate with her (…) They simply told me that they knew some staff are complicated and don’t listen to what the management says. (…) I heard him ordering a technician: quickly go to install the house of Captain, I cannot make him wait (Kicukiro 2).

With regards to the application the big question is that most of the time the reply comes not to say when connections are to be done but according to this person, ‘to give excuse and ask applicants to keep on hold as they are put on the waiting list’ (Nyarugenge 3).

What happens is that, officially, ELECTROGAZ is believed to be running a stock shortage either on water equipments or electricity equipments. Since the new management came in, quickly, applicants for electricity connections are told that there are no meters (pre-paid meters known as Cash-power) in stock, hence, electricity connections are, officially delayed until meters will be available. The Marketing Director says: ‘We ordered more than 5000 cash-powers months ago. We are still waiting for them. We hope they will be arriving soon’.

According to a respondent in Gikondo, applicants for water connections are told by ELECTROGAZ that there are no ¾ pipes in stock (Gikondo 2). As these ¾ pipes are the ones used to connect houses to the main water pipes, applications are acknowledged but officially, no connection is done. Be it for water or electricity, applications are quickly acknowledged but this is to allow connection fees payment only as generally no connection is made in the aftermath. In fact, before one can claim services, payment must
be done and it is clear that a lot of people have already paid but are still waiting for connections. A newly connected person in Kicukiro claimed that: ‘Well, they do make the application quickly so that you can pay but after you have paid you don’t know how long it will take for you to get connected’ (Kicukiro 3).

The problem of connections and equipment shortages become quite absorbing when a close look at what is being done is taken. The fact is that there are people who are now getting connected and this doesn’t mean that they applied earlier than others. Officially, there is no equipment in the ELECTROGAZ stock, but then why is it that some people get connected while ELECTROGAZ is the sole supplier of equipments used for connection? The simple answer may be bribery involving ELECTROGAZ staff as revealed by interviews.

As discovered throughout interviews, there is a very high level of bribery in the current ELECTROGAZ service provision to consumers. Even the Director General of ELECTROGAZ recalled it, in his interview with Ubumwe newspaper: ‘People are trying to make fraudulent tricks, even with our own staff (…)’ (Ubumwe N.139, July 8-14, 2005:27).

Following interviews with consumers, one may assume that if some people are getting connected it’s not because technicians have a hidden stock that they use to make connections. Rather than that the available equipment in the stock may be insufficient considering the demand and the uncontrolled staff speculate on it to make their own money. According an ELECTROGAZ worker, the management knows about the existence of bribes and frauds in services yet appears unable enough to control field workers who are believed to be the initiators of the bribe system. One of ELECTROGAZ staff affirms: ‘Myself I know technicians and even other workers like Chiefs of antennas get bribes from applicants. But what can we do? No one can afford fighting these practices. These people are impossible’ (Electrogaz 4).

This situation makes one ask whether this bribery is not something initiated by the company. Equipment for connections are officially taken from the ELECTROGAZ stock to the place where installation is to be made and no single case shows that people get equipment from any place other than the ELECTROGAZ stock. Another fact is that all
connections are authorised by the management and it may not be understandable how the same management authorises connections while knowing that no equipment is available. Even some well-informed people have affirmed that when one has money everything becomes easy. ‘You just have to ensure the technician of his part (how much you give them) and you get connected’ said one respondent (Gisozi 2).

It is clear that there is a divide between ‘in the offices’ discourse and ‘on the ground’ practices, as officially no equipment is available while on the ground solvent people get serviced. There is a divide between what is officially said and what is really done. Management affirms serious measures against corruption while the bribery is glaringly obvious in the current service delivery by technicians. There is no way that the management can stay unaware of the on-ground bribing if it really claims to be fighting corruption. The following statement gives a clear picture of what is happening behind doors.

(…) I went to see the Director General; he kindly told me that no equipment was in the stock and asked me to be patient. He could not sign for me. When I saw he was not going to help me I went to talk to the twicey\textsuperscript{28} who knows me well since years ago. (…). He signed for me and the antenna connected me with no other complications (Kacyiru 1).

With the current situation where people cannot even get equipment officially, cases are reported of meters stolen and pipes removed. Cases are also reported of stolen equipment used by ELECTROGAZ staffs to make new connections. ‘(…) The cash-power was given to someone else’ says a respondent (Gisozi 3).

Actually, in order to get a meter connected it must be registered by the company. Of course, some cases of illegal acquisition of equipment are slowly discovered but even so when one has made deals with high ranking staff the result is the legalising of what was actually given illegally.

4.7. Privatisation of ELECTROGAZ and Water delivery

As is clear from interviews with a variety of participants, since early 2004, ELECTROGAZ had a shortage of water and electricity. By early 2004 the shortage was so high that some suburbs would spend weeks without water. This was exacerbated towards

\textsuperscript{28} Term used to mean the deputy or the second person in command.
the dry season (June-August) and, obviously, never went down. From 2004 more and more suburbs spent a long time without water running in pipes. As interviewed residents made clear, Kigali had never experienced such a situation before. Prior to the management contract of ELECTROGAZ, Kigali residents enjoyed a reasonable water supply. Sometimes, of course, there could be disconnections in suburbs, but that would normally be for only a short time during the day or for a few days when it was due to technical problems. When it comes to asking what people think of the delivery of water after the management entered into effect almost all interviewees express the same negative observation. ‘(…) I don’t know what I can say because since they came our hope was to get more water but what happened is really the opposite, and it’s terrible’ says an interviewee (Butamwa 2).

Actually, shortly after the company was put under the management contract, water shortage spread throughout Kigali city. Not only did suburbs run short of water, but lacking water has now been a common issue for all Kigali residents even though the situation differs from suburb to suburb. According to a RURA official, the situation worsens during the dry season. As he says: ‘ahh, wait a bit you will see it’s going to be worse. (…). Now that the dry season is on we are likely to have more and more shortage of water. Even those swamps you talk of people may be fighting to get water from them’.

**Kanombe**

To illustrate the situation, evidence shows that from late May to mid-July 2005, in the district of Kanombe in the area of Kabeza there was no water running in pipes. As this respondent says: ‘You can look at my tap it’s been dry since almost May. We have to fetch water from the other side of the road because these pipes of ours are always dry. It is because of placement as pumps seem tired and cannot make it to pump water up to our homes’ (Kanombe 1).

Simply, in Kanombe, the situation is no different. Some areas are still regarded as rural and depend on some public stands found at considerable distances (mostly 1km or more). For some remote areas of the district, residents still rely on ponds or water running in the swamps. Areas that were, for ages, part of the city, experience cases where water is lacking. Kabeza and Samuduha are among those areas that not only lack public stands but, also for them, water is still a dream. Residents rely almost entirely on private water sellers that make arrangements with ELECTROGAZ to get supplied with water or sell water
taken mostly from far distance where water runs from natural sources. This respondent who is also a private seller says

> When I need water I talk to ELECTROGAZ and they supply me with their car tank, everybody around buys it from this plastic tank because they don’t have their own connections. Myself I don’t have a connection. There are times that it becomes complicated to get water from ELECTROGAZ and I make my arrangements with some other people and get water to sell (Kanombe 1).

Nothing has changed since privatisation in these areas. In fact, it may be even worse than before.

**Kacyiru**

Throughout this period other areas such as Kibagabaga and Kimironko were receiving water for almost one day or two days per two weeks. To believe in this respondent ‘it’s been almost two weeks that we did not get water and this is the situation, we are now used to it’ (Kanombe 1). And this other one testifies that ‘when it comes you have to make sure that you fill your tanks or whichever container as it may take time to come back’ (Kacyiru 3).

As respondents in Kacyiru affirmed, almost all other areas of the district get disconnected longer periods than they previously experienced. Only some areas of the district such as a part of the sector of Kacyiru in which the President’s offices are situated, a part of Kimihurura (known as ministerial quarter) and Nyarutarama (which is not only new but also inhabited by wealthy and expatriate people) are believed to get reasonably short disconnections.

Even if these areas are said to be somewhat better than others, respondents recognize there is a big difference between current the situation and the situation before (at least three years ago). Indeed, according to a respondent from Nyarutarama, it may not take more than two days without water shortage and sometimes water tanks get dry when they are reconnection delays. And this person writes this in The New Times: ‘(…) It is now two weeks without water in this suburb (…)’ (I. Uwimana in The New Times website, March 2-3:9).
The district of Kacyiru accommodates three ELECTROGAZ centres: Kacyiru antenna, Remera antenna and Customer Centre (KBC offices). All these three centres are open to consumers and people are happy about their relationship with ELECTROGAZ staff. But the big question comes when one talks about how areas share the scarce water. It is on this point that everybody agrees that the privatisation of ELECTROGAZ has been a big failure, as the company is unable to provide water to residents. People do accept official claims about lowering levels of rivers that are used in supplying water to Kigali city. But they feel water hardship more than they understand official claims and this is made more severe by the inequitable distribution of water. ‘There is no water because rivers are drying and we cannot blame them because of this. But we are starving. So what can a private manager do about it? There was no need to privatise it’, believes one of respondents (Kacyiru 4).

Some residents have seen newspapers as the best way of expressing their concerns and it has been noticed that a lot of petitions from Remera and Kimironko are sent to ELECTROGAZ through newspapers. As this person wrote in The New Times: ‘We have been patient for long, nights have turned into days, days into weeks and weeks into months, but Electrogaz seems to be taking our silence for granted (…’) (The New Times website, accessed on October 26, 2005). Another respondent wrote:

(…) People in these areas have so far spent a whole month without having power and without water. Should we wait for the services only during Christmas? (…) Some people say that it is the load-shedding program of Electrogaz, but if that is the case why don’t they make it uniform and be alternatingly fair in their programs? (…) (The New Times website, accessed on July 24, 2005)

**Gisozi**

In the district of Gisozi, households are used to being underserviced. The majority of houses are not connected to ELECTROGAZ water pipes. For a very long time residents have been used to long distance walks to get to the few public stands that were installed long ago. As only a few houses benefit from home connections, complaints are not about whether households receive water but on interruptions of water at the stands. The situation has severely worsened as most the time even the few public stands do not have running water. For Gisozi district residents, nothing positive was seen since ELECTROGAZ was put under the management contract. The image that people have is a company with a declining supply capacity, as even the little that they used to get seems to becoming less.
‘What can I say? I have nothing to say everything is wrong’ a respondent claimed (Gisozi 2)

During the interview period it was noticed that some people in Gatsata and Gisozi areas who cannot afford making long distances or to buy water from particular individuals have to fetch water from the Nyabugogo swamp. It should be noted that this swamp receives refuse and sewage from auto garages and factories that are situated at Kabuye, Karuruma and Gatsata. One of the respondents reacted in this way: ‘Where else can I get it if not here? I don’t have enough to pay someone to go and fetch it far from here and I don’t get it around if not from this swamp. (…) I don’t have a connection. I used to get water from my neighbour and pay him but now water is not there. What do you want me to do?’ (Gisozi 1).

**Butamwa**

The district of Butamwa is mostly non-urbanised or under urbanised. Newly incorporated in Kigali city, most its sectors are still purely rural and know nothing about piped water. This respondent has this to say: ‘Even modern areas are crying. What can we say then in this remote area? I think it will take years for us to get services’ (Butamwa 1).

Areas serviced by ELECTROGAZ were connected to the grid long ago and no extensions of services are visible. People there believe that non-extension result from the scarcity of water, as this is the argument put forward by both the government and ELECTROGAZ management. ‘We are told that there no water in rivers and are not going to ask them to give us what they don’t have. We have simply to rely on ourselves. The company is very weak; it cannot afford’, a respondent argued (Butamwa 2).

People rely on piped water running in the valley or simply on swamp water. In this district of massifs and mountains like Kigali mount (Mont Kigali), most people have to walk down and climb back up mountains to fetch water from public stands or running water in the valley and this is time and energy consuming to residents of these areas. ‘It can take around two hours to go and come back as we have to queue and sometimes to struggle to get water from where there is a pipe’ said one respondent (Butamwa 3).
In this district, the impact of the management contract on the residents seems fictional, as most people see no difference to the previous situation. Moreover, some have come to believe there was no need to privatise as the privately operated ELECTROGAZ fails to do better than the state-operated one while others think it may have been a mistake to privatise the company. One interviewee complained that: ‘I cannot see any link between the contract management and service delivery. Anyway water provision has become worse. That’s it, but as we are told this may be due to our rivers not to the bad management. For me I cannot see how well the private operator is as nothing has improved’ (Butamwa 1).

**Kicukiro**

In Kicukiro, some areas now get water on a continuous basis while others still suffer from the same water shortages as before. The people who receive water continuously are ranged along the main pipeline going to the Kanombe International Airport, Kanombe military camp, and supplying also the residence area of late president Habyarimana. As this pipeline rarely runs short of water all the people that are connected to it enjoy water with no serious interruptions. This respondent told me: ‘I have no problem with water, because it never goes off. (…) I know water is a big problem as I see my neighbours. But for me I’m lucky; we are connected to a pipeline that goes to serve important people so we enjoy benefits’ (Kicukiro 1).

Most of those connected to the pipeline going to Kanombe airport do not even have water tanks to save water for the time it stops running in the pipes, as this may happen just for a few hours a day. The same situation applies not only for Kicukiro but also for other districts and areas through which such pipelines pass. Sometimes the nearest houses may be connected to different main pipelines which makes people express bitterness about water delivery from ELECTROGAZ. In the remaining areas of Kicukiro irregularity of water is now a day-to-day situation. People however see no link between the management contract and the shortages of supply.

**Gikondo**

The district of Gikondo has in no way different situation. For some areas, such as Kanserege and Mburabuturo (with informal housing), most houses are not connected to
the grid\textsuperscript{29}. People fetch water either from public stands or from their neighbours who may have been connected. Most of the time, water is available during the day and may be shut off for short periods. However, given the many people who come to fetch water from the few public stands, long queues are prevalent. As one respondent clarified ‘In order to get water you have to wake up very early in the morning to avoid long queues as people are so many. The water you fetch in the morning or late evening has to be used for the rest of the day’ (Gikondo 2).

No improvements have been felt in terms of the availability of water, but people do not complain much as at least they still can manage to get water from existing stands and they compare their situation with what they see in other districts.

In areas where houses meet Kigali city requirements, most the time, no water runs in home pipes and there ELECTROGAZ installed no public stands. Thus, people have to buy water from water sellers who get supplied by ELECTROGAZ car-tanks or use their own ways to get supplied in bulk water.

\begin{quote}
We are starving; we don’t have water as it’s no longer running in our pipes and we don’t even have a place where to get it. We have only to buy it from that private seller who charges us RwF 50 per jerrycan\textsuperscript{30}. At least he never runs short, he is a wise guy. (…) I don’t see anything that improved, contrarily everything has worsened. At least before (…), a respondent emphasized’ (Gikondo 3).
\end{quote}

Thus, in the district of Gikondo residents of poor housing areas seem accepting the situation as they assume it is impossible for them to get connected at home given the cost of connection and the urban regulation on housing that prevents them from asking water connections. Contrarily in those areas where housing standards meet the urban regulations residents are sceptical when talking of ELECTROGAZ, as the water they used to get at home is no longer coming and they pay much to get it from private sellers.

**Nyarugenge and Nyamirambo**

The districts of Nyarugenge and Nyamirambo are different as most the residents here do have water on a continuous basis. Even in low standard areas (Biryogo, Cyahafi, Gitega,

\begin{footnotesize}
\begin{itemize}
\item[29] In 2002 it is noted that out of 131,106 households in Kigali, 43% (52,682) had access to piped water either found indoors or within the plot. 40% (48,444) were getting water from public stand pipes. The remaining (17%) were fetching water either from ponds, wells, or lakes around their dwelling areas.
\item[30] 20litre-plastic bottle.
\end{itemize}
\end{footnotesize}
Muhima, Nyakabanda…) where there is informal and poor housing, at least most house compounds have water taps. One respondent declared that: ‘Those problems, I don’t have them (…) All I know is the country doesn’t have enough water to supply to consumers but I really don’t have any problem’ (Nyarugenge 1).

Sometimes cut-offs happen but people do not complain about water shutoffs, as it doesn’t reach the extent of undermining residents’ welfare. Few areas get disconnected and when it does so it is restored without people suffering greatly. When asked why it is that these areas are better off, the answer was that these are areas that formed the capital decades ago. Most households share main pipes with common interest facilities that are found in Nyarugenge. It’s in this water grid that we find major hospitals, the military camp, the city commercial centre, the central administration and residences of most of top officials. To back this, a respondent confesses: ‘(…) If you look well, we are a part of old areas that have had a strong and stable supply for ages. Actually these areas that formed the capital city from the 1960’s have no problems’ (Nyarugenge 2).

4.8. Privatisation of ELECTROGAZ and Electricity delivery

Since early 2004, shortly after Lahmeyer International took over the management of ELECTROGAZ, Kigali experienced power shortages and this has gradually worsened in 2005. Electricity shortages seem to be the biggest problem residents of Kigali have ever had. In all areas of Kigali a power crisis is experienced. Nevertheless, given the discourse on how hydropower generation declined abruptly, people make no link between the change in ELECTROGAZ and the crisis they endure, but neither do they make a link between these changes and the delivery of services. This person says: ‘We cannot blame them for what they did not cause. Power generation stations are old and our rainfall has not been good. Anyway we have been informed. So what can they do about it? (Butamwa 1).

The situation is so severe that when talking of ELECTROGAZ services everybody turns to talk of power shortages. Findings show that all residents of Kigali city recognize there is a power crisis. At least all the areas expect long electricity cutoffs on a daily basis to the extent that most people who can afford it have turned to the use of small diesel generators to supplement the power from ELECTROGAZ. As one respondent declared: ‘everybody has installed a generator because our electronic machine would serve for nothing. There
are times we can get cut off for more than three hours. You understand that without a generator most things in the fridge can be damaged’ (Nyarugenge 2).

The government has recognized the depth of the crisis and has removed some taxes from imported generators to allow for reduced costs. Since early 2004 ELECTROGAZ issues a weekly program of electricity load-shedding through media (newspapers, radio channels, TV). The Marketing Director claimed: ‘we issue a weekly program and everybody is advised on it. (…) Of course there are areas of common interest such as hospitals, military sites that have to be given special treatment. But the ideal is to make all areas share the small power we have’.

For some people, the management contract improved nothing at all in terms of electricity supply, and for others, even the small amount people used to get has worsened. The severity of the crisis implies that there are long cutoffs, unbalanced power connections between areas and useless connections for some neighbourhoods.

**Kanombe, Kabeza**

To illustrate the problem, one disappointed resident of Kabeza wrote the following in The New Times newspaper (The New Times’ website, accessed on October 26, 2005)

‘We are really disappointed at the way Electrogaz is treating us. What shows that this is an intention of victimization on the part of Electrogaz is that sometimes we spend whole days and nights in darkness and at around 3 o’clock in the morning, the lights come on. By the time you wake up in the morning hoping to iron some clothes for work, boom! The power is switched off. (…) Last but not least, thugs are now using the black-outs as opportunities to break into houses or mug people returning from work and take their phones and other valuables. (…)’.

**Nyamirambo**

During the fieldwork (mid-June to mid-July) Kimisagara in Nyamirambo would spend a whole week getting electricity either between 17h00 and 19h00 (only two hour connection) or from 23h00 to 6h00 (late night connection) every day. According to respondents’ views either they get electricity for a very short time only or electricity is available when people are sleeping and in fact they cannot make use of it as by the early morning they are disconnected. One respondent complained: ‘(…) like this week we get electricity only around 11pm and early morning when we wake up it is not there. Two
weeks ago we were getting it only during the evening from 5pm but right before TV news the power was being cut’ (Nyamirambo 3).

**Kacyiru**

During the interviews some areas of Kanombe only received electricity when people were already sleeping (after mid-night to very early in the morning). Other areas such as Kibagabaga in Kacyiru or a big part of Gisozi would receive electricity only in the early morning hours (5h00-8h00). As a respondent makes it clear: ‘Most the time we have electricity in the morning until the time we leave for work but for the rest of the day it is shut down’ (Kacyiru 2).

During interviews, it has been noticed that only the district of Nyarugenge and some areas of Nyamirambo seem better off compared with other districts. This does not mean they never get disconnected but even if the loadshedding program touches the whole city these areas seem to get less disconnections than others. Actually, even if respondents feel the weight of the crisis they consider that cutoffs have become usual and nothing can be done as they link them with insufficient power generation capacity. One respondent in Gitega argues thus: ‘We don’t have big problems with electricity. We get cut offs because the country is lacking the power but we are ok. We know there is a problem and we know we get the best as we can watch out during the nights and see how dark other areas look’ (Nyarugenge 3).

For those regions that were newly incorporated in the city (such as some areas of Butamwa, Gisozi and Kanombe) even if the loadshedding program shows they get electricity on the same basis like others, residents are far from relying on the ELECTROGAZ program as they assume it has a very low capacity of supply and think of using electricity just when they are connected.

When discussing electricity delivery the problem of cutoffs goes along with the imbalances in load shedding. There are areas that are really suffering while some others seem better off. Even if people sometimes accept the loadshedding idea nobody knows the reasons why there are imbalances between areas. This person laments in a local newspaper

(…) what have we done to Electrogaz to deserve the punishment of persistent darkness when other areas like Kanombe and Kacyiru are enjoying uninterrupted power as if there is no power crisis in the
country? Why these three areas, have we defaulted on payment of our electricity bills? Even then, wouldn’t it be better if you just disconnected the defaulters and gave the good guys some light to see around their houses at night? (The New Times’ website, accessed on October 26, 2005)

This resident of Remera asserts

(…) there are other areas where electricity is no longer a problem. But in others, especially Remera Kisementi, Migina and so on have not seen a day pass without a prolonged period of power cut (…) Klotz should realise that his company is acting as an accomplice in crime as long as darkness is encouraging robberies which could otherwise have been prevented if there was light (…) (The New Times, April 20-21, 2005:9).

And this resident of one area in Kanombe says

(…) Nonetheless, what is bizarre is that your company has now and again advertised the power-shedding schedules in the local media, which you apparently abide by only for a short respite or do not even bother to pursue in any case. (…) We are concerned that you have chosen to disproportionately and deliberately distribute power in the city (…) even when this happens to the chosen few, it so happens without a moment’s notice. It hence seems that your advertisements are only but a formality or so to say, a publicity stunt (The New Times, July 7-8, 2005)

In fact, in sharing the small quantity of electricity between areas, the program follows a logic that seems to be unknown by consumers as they find themselves disconnected or connected during a specific time while some other areas remain connected at that particular time. According to ELECTROGAZ, the program is based on the particular and varying consumption needs of areas in Kigali. The Marketing Director notes that:

(…) in places where we have industries we know that they are in need of electricity during the day while for the evening all residential areas need to be connected. Normally during the day we have no big problem as people do not need electricity much but the night all residents need it and we have to rotate the distribution accordingly.

An assessment of the loadshedding program shows that people get disconnected during evenings and nights mostly. ELECTROGAZ assumes it is due to this demand of electricity (peak demand) that a load shedding program is made to allow a balanced distribution between areas. But the published load shedding program is far from being followed. When residents expect to get electricity in the evening, they may find themselves in the darkness and get it simply after mid-night or just during the day, or do not get it at all. Furthermore, the program does not give a detailed list of areas and this make it null and void.
The week of July 6-12, 2005 illustrates the situation well. As the loadshedding program made public in the media shows, no single area in Kigali would get disconnected between 7h00 and 13h00 (see Appendix). Nevertheless, the situation on the ground was that areas such Kibagabaga, Kimironko and Remera (in Kacyiru) did not get electricity in the morning at that particular time. The same complaints were given throughout the city, at least, by interviewees highlighting that there is no link between what is expected and what happens, as the published program is not followed. This interviewee affirms: ‘We no longer rely on power; we keep our stuffs not plugged in. You never know when electricity will be restored as when it comes back it sometimes destroys all plugged machines’ (Nyarugenge 2).

People believe that ELECTROGAZ supplies electricity to areas the way it wants. It follows no plan or, maybe, an unknown plan. The shifts from connection to cutoffs occur irregularly to such an extent that not are residents unable to plan how to use electricity sometimes it results in damaging house wares such as fridges and other electrical machines. A respondent says: ‘We forgot about using fridge and other electric machines. My fridge got damaged because of high voltage when we were reconnected … Since then I don’t even try to plug in anything fearing that the same can happen again’ (Nyamirambo 2).

There are areas that are seen as of least interest, meaning that no eminent personality stays there and no common facilities or production units are there. Such areas get less electricity to the extent that sometimes they can spend days with no electricity at all. Even when they are connected, this cannot be for the whole day or even a half-day.

Nobody is known here. If there were someone strong we would be getting better service like others. We cannot get same services like where ministers stay, you understand yourself. Go and check in Kiyovu or Nyarutarama, lights are on. But here! That’s how it works (Butamwa 3).

We don’t get electricity during the nights (…) When we come back thinking that we can make use of electricity, it is shut down (Kicukiro 3).

Even if the argument falls under a simple generalised pessimism, what is meant is that wealthy areas get better services and the poorer an area looks, the less services it gets. However, even in wealthy areas that are believed to be better off, people talk of how hard it is to depend on ELECTROGAZ. On-field observations show that these areas are not in
fact fully connected as claimed by some people from neighbouring areas. However, most of the residents can afford to make use of diesel generators to keep power on when ELECTROGAZ shuts down its electricity. As a result, even when ELECTROGAZ’s power is cut off, wealthy areas do not seem to be in the darkness and it is from this situation that people staying in surrounding areas may assume that they don’t get disconnected.

Throughout Kigali city, it is commonly said that ELECTROGAZ does not have sufficient supply for the demand. It is admitted that there is a huge negative change, a visible decline regarding the capacity of supplying electricity in the city since 2004. Even if people make no visible link between the private operator and the decline of the supply, most interviewees agree that the private operator simply worsened the situation. Others describe the situation by using the official view of unexpectedly low lake levels and degraded power stations.

4.9. Privatisation of ELECTROGAZ and change in pricing

The issue of prices is crucial to Kigali residents the majority of whom are low income earners. In fact, considering the people that participated in this research sample, only 1 household out of 24 earns more than RwF 300.000\(^{31}\) per month, 3 households earn between RwF 200.000 and RwF 300.000/month, and 6 households get between RwF 100.000 and RwF 200.000/month. 10 households get between RwF 50.000 and RwF 100.000/month while the remaining (4 households) earn less than RwF 50.000.

The major problem is the ability of consumers to pay their electricity bills. During the interviews, it was revealed that since ELECTROGAZ came under the management contract, the worries of consumers were about hike prices. After just one year of operation, this happened. Thus, in January 2005, electricity tariffs jumped from RwF 42 to almost the double, RwF 81.26 per Kwh (VAT excluded). According to residents in Kigali, these rates are very high and people cannot afford them. One respondent from Gisozi explains: ‘Yourself you can see how many people can afford these rates, understand that is too much for consumers (…) Consider that we don’t spend our money on electricity only. A family is a family. I don’t even understand why we get charged taxes for vital services’ (Gisozi 3).

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\(^{31}\) A the time of interviews R1=RwF80
**How electricity is used**

When people were asked what they use electricity for, it was found that all respondents use electricity mainly for house lighting during the night. All households also use electricity for home entertainment such as connection of music, radio and TV sets. It was found that at least 20 out of 24 households have small portable radio devices that use batteries as they expect electricity cutoffs on a long regular basis. Half of the number (12/24) have coal iron to supplement their electric iron. No household relies on keeping food frozen, as long disconnections do not allow freezers and fridges to operate properly. Other electricity uses seem nonexistent or forgotten given the high amounts people have to pay. As this respondent alleges, ‘Who remembers about fridge? Don’t consider that! We have them but they are empty; stuffs were getting rotten. (...) Nobody can afford water-heater. We use electricity for lighting, it is very expensive’ (Nyarugenge 2).

The fact is that during the short periods that people do get electricity it is used mainly for lighting, connecting the radio or TV sets and ironing. No single household appears to afford using electricity for cooking, warming water, or any other uses of electricity. People say that if they were to use electricity for cooking and other high electricity consuming activities they would be spending far more than their incomes. One respondent lamented; ‘All these amounts, we pay them while we get electricity for very short times and consider that we use it just to get light in our houses. I don’t understand really. It doesn’t correspond; we pay much higher than what we consume’ (Butamwa 3).

**Electricity price hikes**

During the interviews, residents showed that previous electricity prices were somewhat affordable even if they could not afford using electricity for cooking and other high consumption activities. Almost everybody showed disappointment about the electricity price hike. The big contrast is the fact that the more one is required to pay (rising rates) the less electricity is available for consumption (decreasing service delivery). Some people, like this respondent, exclaim that: ‘I would appreciate paying whatever big amounts they ask me to pay but if this were coinciding with the increase in power supply. Electricity is a necessity; that’s why I can pay whatever but why are we asked to pay more and more while we get less and less?’ (Kacyiru 3).
The problem of electricity rates is controversial even in RURA (Rwanda Utility Regulatory Agency). Nothing seems to be possible to lower prices, given that the ELECTROGAZ management team is the one entitled to conduct studies on real costs of its services and proposes tariffs based on those costs. One RURA officials stated that:

‘They bring us the proposal; whenever their estimates of costs seem accurate and the margin between costs and proposed prices acceptable RURA has just to endorse the proposal. There is nothing else we can do. People have to bear the cost of running the company. (…) Myself I know it is very high but we have to close our eyes. But our donors cannot give money just to subsidize’.

Thus, RURA assumes that since 1997 tariffs have been dropping in SUS terms as RwF has weakened gradually. Given that ELECTROGAZ purchases electricity, imports diesel for generators. there had to be adjustments for the cost recovery. RURA admits, as the ELECTROGAZ management team says, that the real costs were far beyond the price of electricity. According to RURA, the government is unable to subsidize without external funds and funding institutions do not like subsidisation, consequently consumers have to bear the costs and the sustainability of the operations. RURA recognizes that the price is high given the average income of an ordinary Rwandan. But it sees no alternative as the company has to rely on its own resources. Whether people can afford to pay or not, this is not the big concern as the focus is to ensure that the company can run by itself.

It is very high I know it. Sometimes I feel we are killing people. But, what else can we do? ELECTROGAZ needs money to make it operate and principle and reliable resources it has got are consumers. The price is then set according to the costs not on the consumers’ affordability’ Better we have expensive services than having nothing at all, a RURA official considers.

With regard to this, in February 2005 ELECTROGAZ submitted to RURA a document on the proposed new water and electricity tariffs. In this document the electricity tariff of RwF 81.26/kwh (in use since January 2005) was maintained until a new tariff structure with a Block Tariff (Small and Medium Power Users) for less than 36MWh consumption per month and a Time of Use Tariff (Large Power Users) for the average consumption of 36MWh or more per month would be implemented. According to RURA in February 2005, ELECTROGAZ proposed new electricity rates for Small and Medium Power users.
Consequently the government has been brought\textsuperscript{32} to raise electricity rates to RwF 112/kwh\textsuperscript{33} effective from 1\textsuperscript{st} December 2005.

**Alternatives to hydropower – Methane gas, peat**

According to the Department of Energy, the rise of rates is inevitable given all the issues surrounding electricity generation. The Director of Energy affirms that: ‘(…) the money spent on machines has to be paid back. The daily consumption of generators is another issue’ The government is undertaking studies to strengthen the sector with a range of alternatives to hydropower generation and, according to the Department of Energy, the electricity crisis may be overcome by 2007. According to the Director of Energy, a study has been undertaken on methane gas exploitation. As he says:

‘Actually the methane gas reserve is far beyond the demand. Lake Kivu has more than 55 billion m\textsuperscript{3}. We consider that if exploited methane gas would be sufficient not only for national consumption but also it may be available for export into needy regional countries. Besides methane gas, Rwanda can exploit solar and Aeolian energy, peat which is around 155 million tons and geothermal energy as well’.

Thus, within two years of the management contract rates have been changed twice and have almost tripled from RwF 42 to RwF 112/Kwh. The rise of rates coincides with the generalisation of the prepaid metering system that was introduced shortly before the privatisation. Even though prepaid meters were banned in Britain (Ruiters in Mail&Guardian 18-24/06/2004) and are facing contestations in South Africa (McDonald and Pape 2002), residents of Kigali believe the prepaid metering helps them to use what they can afford buying. It was noticed that those who received bills after they had consumed, found it very difficult to limit consumption and, sometimes, ran the risk of being unable to pay the bill, resulting in disconnection from water and electricity uses and having to pay huge penalties. The fact is, in order to make people pay for unpaid bills, ELECTROGAZ cuts both water and electricity, no matter what the bill is for. The prepaid system make things much easier, as people get what they paid for, avoiding failure in payment and penalties.

\textsuperscript{32} Actually, studies on prices are carried by ELECTROGAZ and a tariff proposal is submitted to RURA for approval. When the tariff proposal is accepted it is passed to the Government and a Cabinet confirms and enforces it.

\textsuperscript{33} Please note that consumers have to pay even a VAT tax of 18\%.
The Director of Administration and Finance in ELECTROGAZ affirms: ‘We had trouble recovering money billed as many customers were not paying, even if forced. The cash-power meters are perfect because we no longer have clashes with customers. Sometimes we were accused of mistakes in billing but with cash-power there are no more mistakes. You check the units you get before you load them and there is no more trouble’.

**Water tariffs**

On the other hand, since 1997, water tariffs have not changed, and according to one ELECTROGAZ staff member, to date water rates are structured as follow:

<table>
<thead>
<tr>
<th>Volume</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-25 m³</td>
<td>RwF 200/ m³</td>
</tr>
<tr>
<td>26-60 m³</td>
<td>RwF 300/ m³</td>
</tr>
<tr>
<td>61-100 m³</td>
<td>RwF 350/ m³</td>
</tr>
<tr>
<td>&gt;100 m³</td>
<td>RwF 375/ m³</td>
</tr>
</tbody>
</table>

These rates are still in use until the time new water tariffs will be adopted. People do not complain about water prices, yet given that rates are still the same and people seem to have become used to them and assume they are affordable. ‘(...) We are used. We can complain about not having water but the prices are still the same nothing changed. We pay what we have been paying before. For me I pay less than RwF10.000 per month’ a respondent acknowledges (Nyamirambo 1).

Interviews highlighted that the money spent on water differs according to diverse factors. It may be due to the fact that the house has got water connection which implies that they pay official rates according to what they consume. It may also be due to the fact that the house is not connected but occupants get water from public stands where they pay RwF 10/20 litre-jerrycan or from a private seller who charges them between RwF 20 and RwF 50/20 litre-jerrycan.

Now that water has become a big issue, people cannot even know well how much they have to spend or have spent on water. For this respondent: ‘it depends on whether we got water at home on not as when we run short of water the cost will depend on from where we get it and how much we pay the one who goes to fetch it’ (Kacyiru 3). And this one stresses: ‘It depends; actually for me I paid someone just to fetch water. I pay him RwF 5000 per month. Every day he gets at least RwF 200 that he pays for water’ (Kicukiro 3).
The threat is that, according to RURA, there is a new water tariff structure in the February 2005 document, a tariff structure that will change the whole considerations of water rates. ‘You are talking of electricity; wait a bit, what are we going to say about water? Customers are likely to pay around three times what they are paying now’ a RURA official proclaimed.

About possible changes in water tariffs, the Director General of ELECTROGAZ revealed to Ubumwe newspaper (No 136, 14-20 April 2005), that the ELECTROGAZ management is having talks with RURA for setting up a new tariff. As is clear from the regulatory agency the new tariffs structure is proposed as follows:

<table>
<thead>
<tr>
<th>Volume Range</th>
<th>Cost per m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5 m³</td>
<td>RwF 250/ m³</td>
</tr>
<tr>
<td>5-20 m³</td>
<td>RwF 415/ m³</td>
</tr>
<tr>
<td>20-50 m³</td>
<td>RwF 500/ m³</td>
</tr>
<tr>
<td>50-500 m³</td>
<td>RwF 600/ m³</td>
</tr>
<tr>
<td>&gt;500 m³</td>
<td>RwF 700/ m³</td>
</tr>
</tbody>
</table>

According to the respondent from RURA, with this proposed tariffs structure most low consumption residents are likely to fall in the category of 5-20 m³, which will be paying around RwF490/m³ (18% VAT included) while they used to pay RwF200/ m³. This means that when the proposed water tariffs are endorsed by the Government (which is imminent) residents will be required to pay more than double what they are paying now.

As is clear from the discussions with the RURA official, for public stand taps ELECTROGAZ proposed to maintain the current rates implemented since 1997:
- a flat rate of RwF200 per m³, for the private operators of public stand posts
- a fixed on-selling rate of RwF10 per 20litre-jerrycan (or RwF 500/ m³)

What is astonishing in this purchase of water from the public stands is that besides the distance people have to travel to get to public stands, they also pay more than double what those getting water at home are paying. While low consumers currently pay RwF 200/m³ when connected at home, those taking water from public stands pay RwF 500/m³. Furthermore, as in most areas public stands were not installed, ELECTROGAZ supplies water with car tanks to private operators, who sell it for RwF50 or more per 20litre-jerrycan making it RwF 1250 or more per m³. Here, the big question is, who should pay
less or more between those connected at home and those getting water from public stands? In fact, if people do not have home connections it is due either to the inability to pay home connection fees or to the refusal of the connection, given the place where the house is situated or the standard of housing.

According to the management of ELECTROGAZ, even if it is the one to propose prices it has nothing to do with the affordability of consumers because the government (RURA) is the one to decide how much people have to pay. ELECTROGAZ management sees no responsibility in setting prices. This top official in ELECTROGAZ reacts in this way: ‘Do you know who sets the prices? (…) If the government says that people have to pay this; what do you want me to do! I believe the government does it knowing that people can afford it. My responsibility is about insuring that they do pay what they are supposed to pay’.

**Connection fees**

Pricing also includes connection fees and monthly fees. On this point it has been said by some respondents that connection fees are high. In fact, connection fees include billing of all the equipment used to connect a household to the main grid (main water pipe or main electricity post) and transport of ELECTROGAZ technicians who come to install the equipment and charges for the labor cost. As a newly connected consumer comments:

> For electricity, it depends on the nearness or how far the electricity pole is from the house. Water also depends on how far the main pipe is from the house. So mainly all calculations are dependent on how near or far the main supply is. Ours for water, 60 meters from main pipe, was RwF 289,000, while electricity was relatively cheaper because the pole of supply was near my enclosure, it cost about RwF 159,000 (Kacyiru 1).

This other newly connected respondent had this to say: ‘Months ago I was billed RwF 230000 for my electricity connection. (…) I paid the amount of course, but … I was given a 4x10 cable. So the bill fell to RwF127000. But ELECTROGAZ never pays back cash (…)’ (Kicukiro 3).

Even if charges are due according to the costs of individual connections, the problem is that, as ELECTROGAZ is the sole supplier of the equipment, prices are set by it and are, obviously, high and unchallengeable while the same items can be found cheaper elsewhere. As this person believes: ‘ELECTROGAZ does it the way it wants. (…) We are
forced to buy expensive equipment that can be found from local shop. Their focus is about how to get the maximum profit they can get from us’ (Kicukiro 2).

Another big issue is about how many people can afford home connection fees if this is given. As this person thinks: ‘It’s not for everybody to afford paying for this equipment considering how much one is due to pay and the average income of Kigali residents which is moderate’ (Butamwa 1).

As ordinarily low class residents tend to be underserviced, it is obvious that low class residents may get charged more money than what they should pay if they were in areas where sufficient infrastructure was laid before settlement following the urban plan. Moreover, on the other side people seem to have appreciated the pre-paid metering on electricity and are welcoming the same system for water. Nevertheless, there are contestations on why people must buy meters around RwF 50,000 paid in the connection billing and keep on paying a monthly fee of RwF 500 for the same meters. This respondent says this: ‘(…) Why then do I pay the rent for the cash-power I bought? Cables and cash-power are mine because I paid them. But ELECTROGAZ I don’t really understand what ELECTROGAZ wants’ (Gikondo 3).

Even if this practice is not linked with the change in ELECTROGAZ, to some extent it is unfair, given that from the main pipes or from the main electricity posts to the installed meters equipments remain the property of ELECTROGAZ. Then it may not be understandable why people do have to buy the equipment that they will never own. It would be more understandable if people had to rent the equipment and the fact is that they do pay a monthly fee.

4.10. Issues behind price rises

As has been said above, since 2004 shortly after the management contract came into effect, consumers started getting less and less electricity and water. The fall of supply capacity was said to have a link with the decline in hydropower generation. The power and water shortages spread and reached a level where it was perceived as a real crisis. However, according to the Marketing Director of ELECTROGAZ, even when ELECTROGAZ was privatised the demand was far beyond the capacity. As he explains, ‘By 2004 for a daily demand of 900MWh ELECTROGAZ was able to supply only
Our power stations were producing beyond their capacity and this resulted in the decline of them.’

For the Marketing Director, the decline had started long ago, but it’s only with the rapid growth of population in need of electricity and of water late 1990s and early 2000 that it became clear and heightened with the management contract.

As the Department of Energy shows, different options existed long ago, to increase the capacity of energy production in Rwanda: renovation of existing hydroelectric stations, electricity import thanks to regional cooperation, methane gas exploitation, solar and Aeolian energy; the main options being a combination of methane gas\textsuperscript{34} exploitation and renovation of hydroelectric stations. But all these options were seen as heavy operations that would take a long time to deliver and according to the management of ELECTROGAZ a quick solution was needed at least for a short and temporal time. ‘We needed something that could save us, not a project that was going to take time’ said the Director of Administration and Finance.

**Diesel Generators**

Due to the need for a quick solution, the management of ELECTROGAZ (Lahmeyer International) identified switching to diesel generators as being the quickest option for a short term solution to supplement hydropower units and alleviate the crisis. Six Diesel Generating Units totalling 12.5 MW were purchased from the European market with funds from the Dutch Embassy in Rwanda. These generators were bought from Messrs Global Power System (GPS) a Belgian-German company in May 2004, and were tested in the Netherlands before they were transported into Rwanda to be connected to the existing electricity grid. ‘These generators were ready on the market and they needed nothing else in terms of installation’ states the Director of Administration and Finance.

**Huge costs**

As highlighted by the Director General of ELECTROGAZ during the inaugural ceremony on June 21\textsuperscript{st}, 2005, these units cost huge amounts, about 4.313.727 Euros that Rwanda got thanks to the cooperation with the Dutch Embassy. As the Director General said at the

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\textsuperscript{34} Actually the Ministry of infrastructure says that Rwanda needs only 52MW and the Kivu Lake has a capacity of 700MW. Already discussions had resulted in methane gas expert’ companies assuring being able to extract up to 200MW from the lake. The project is still pending as the investment was directed into Diesel Generating Units as a quick solution.
inaugural ceremony, those generators are so powerful that they can turn 24 hours a day for a full year. But it is clear that the cost is very huge and the company seemingly cannot afford it. As the Director General of ELECTROGAZ said: ‘(…) But one question comes up. Do we have money to make the machine turn continuously for the whole year?’

According to ELECTROGAZ, the hourly diesel consumption of these machines is 800 litres, which is 19,200 litres of diesel per day; and following petrol prices the daily consumption of the Diesel Generating Units is between RwF 8 and 10 million per day\textsuperscript{35}. By 2005, the ELECTROGAZ management found an additional option and hired generators from Agreco, a US thermal energy provider company, but the venture has increased the cost of production considerably, rising from around 10 million RwF (around RwF 300 million per month) to RwF 560 million (one million dollar US) per month. Following the cost recovery practice (purchase of the machines to generate electricity and the cost of operating them) a new tariff had forcibly to come up. Actually, the process of privatisation of ELECTROGAZ coincided with the removal of subsidies to the company and this, itself, might affect the prices.

It should be noted that the abovementioned Diesel Generating Units were inaugurated in June 2005, but as it is clear even before these machines started operating the electricity tariff doubled from RwF42 (+ 10% tax) to RwF 81.26 (+18% VAT) from January 2005 and a new tariff of RwF 112/Kwh was effective from 1\textsuperscript{st} December 2005. Thus findings show that from October 2003 to December 2005 (two years) electricity rates have almost tripled.

4.11. ELECTROGAZ’ performance as seen from the government’s view

From October 2003 to July 2005 under the management contract, there exist different ways of assessing ELECTROGAZ’ performance. Besides considering views from residents (ordinary consumers of water and electricity), a view from the government seems quite meaningful. Discussions with the Department of Energy revealed another side to the assessment. In fact, even without taking into consideration how areas are serviced (fairly or unfairly), according to indicators of performance on which the government and

\textsuperscript{35} The updates from media interviews with the ELECTROGAZ management reveal that the company is spending up to 560 million Rwandan francs (one million dollar US) per month simply on the Diesel used to run the generators.
Lahmeyer International have agreed the Department of Energy believes the company is not performing.

When the company was handed over for the management contract, it was believed to have 32% losses. The operator, Lahmeyer International, had to lower it to 25%, within one year of operation. But, the Director of Energy believes that baseline level was not even real as it has been evaluated long ago and that, prior to privatisation, ELECTROGAZ had undergone some changes that might have lowered it to even less than 25%. As the Director of Energy says, no assessment was done just at the right moment the company was to be given out.

As no clear indicators were there at the moment of takeover, there was no proof by which to recognize the situation and it had been agreed that an assessment study had to be done by the new management of ELECTROGAZ itself, to clearly show the company’s situation. ‘We agreed that within the first three months of operation they should give us the results of the assessment study done by themselves’, affirms the Director of Energy.

Surprisingly, until now the management has done no single assessment study or if it has done it, results were not presented to the Department. Thus, there is no way that the Department can assess whether the operator is performing well or not, given that no compromise was made on performance indicators. With resentment an official says: ‘I’m afraid, the company is not performing. (…) I don’t even know if we will sustain the whole five years of the contract’.

But, in his interview with Ubumwe, a local newspaper, on the inauguration day of the Diesel Generating Units, the Director General of ELECTROGAZ accepted no responsibility in whatever may be wrong in the company; the interview was titled ‘C’est le devoir du Gouvernement d’intervenir dans la politique sectorielle des investissements’36. The Director General emphasized that: ‘We are simply a distribution company. Failures should not be put on ELECTROGAZ. If there are failures on the generation side, what can we do? The government should assume its entire responsibilities’ (Ubumwe N. 139, July 14, 2005).

36 The title reads in English as ‘It is the duty of the Government to intervene in the sectoral policy’
According to the Director General, the government is failing in many ways regarding infrastructure investment and this impacts negatively on the distribution of water and electricity of which ELECTROGAZ is in charge. The management of ELECTROGAZ wants to do things in the right way but sometimes the government is seen as an obstacle. To quote the Director General

(…) But we are always waiting and I really don’t understand (…). We are still a state-company, public, it is then the duty of the Government to intervene in sectoral policy and in investments (…) I repeat it again without reinforcing the capacity of production, we cried left and right the problem will not be solved (…). But again people have to accept that we can guarantee a continued supply. Mostly blame is directed to the distribution company that ELECTROGAZ is, and people forget that we are not in charge of production. The problem must be questioned at the source level not only at the end. Now the Government has to support us in order to produce more (…). The Government must fully take its responsibilities (Ubumwe No. 139, July 14, 2005).

It is clear that misunderstandings exist between the government and the managing company. From the government’s view, the issue is about how the company manages what is produced. According to the Department of Energy many things were supposed to be done long ago in the aftermath of the management contract. Even so, they have not yet been done and the government view is that the private operator is far from meeting the targets. However, the managing company has too many excuses on its behalf. In fact the big failures that are mostly seen are about supply capacity which does not meet the current demand. As excuses the managing company claims that ELECTROGAZ supplies what it does not produce. This is why failures are rejected and put on the Government which is supposed to produce water and electricity.

4.12. Summary

The above given findings show a situation where people initially welcomed the process of privatisation of a utility company. The reason is that ELECTROGAZ had for long before been accused of bad services and many believed it was due to being a state-managed company. There had been lack of investments in infrastructure as the country depended on outside sources which did not give much attention to infrastructure.

When the company’s management was given out to a private operator people expected great shifts to a situation where they wouldn’t complain for anything. In terms of staff-
consumer relations there have been improvements as people feel mistreatment has decreased. Nevertheless, people still identify bad behaviours of the staff and to some extent those uneven behaviours are increasing among the staff of ELECTROGAZ. Bribery is still reported when it comes to application procedure and the management seems to be doing little or nothing against it.

Moreover, just after the management contract came into effect, ELECTROGAZ started showing an unusually bad situation. Electricity and water became scarcer than ever before. Official load shedding programs became usual but these programs were and are still regarded as if they are not followed by those who make them public. This decrease in capacity of supply still is controversial as the Government and the managing company seem to put responsibility on each other. But the fact is that the company has become weaker than ever before in supplying water and electricity to Kigali residents.

To alleviate the crisis the ELECTROGAZ management opted to using Diesel Generating Units as a short term solution. It imported six generators from the European market supplied by Messers Global Power, a Belgian-German company. Furthermore, a few months after the purchased generators were installed, ELECTROGAZ management hired other generators from Agreco that have been added to the grid. However, the cost of purchasing these generators was very high (around 4,313,727 Euros) and the operating cost of purchased and rented generators altogether is very high as well given that diesel consumption by its own is around one million US dollar (RwF 560 million) per month.

Consequently, as the Government was advised by donors to stop subsidizing the company, the cost of operating these engines was to be recouped through consumer charges. Hence electricity prices rose from RwF 42/Kwh to RwF 81.26/Kwh just in one year of a private involvement in ELECTROGAZ. Nevertheless, even this price wouldn’t be maintained as late in 2005, electricity rate have to shift again up to RwF 112/Kwh (VAT excluded). For water, rates still remain the same, but a proposal for a new tariff structure, raising prices more than double came up in February 2005.