ENERGY REGULATION BOARD

BOARD DECISION **BM 64 4.2.2007**

ENERGY REGULATION BOARD DECISION ON ZESCO LIMITED'S PROPOSAL TO VARY ELECTRICITY TARIFFS. (MULTI YEAR – 2007/8 - 2009/10)

DECEMBER 2007

MEMBERS:

Mr. Sikota Wina	Chairman
Mrs. Idah Nkhoma	Vice Chairperson
Mr. Elias Mpondela	Member
Mr. Nick Tembo	Member
Mrs. Pixie Yangailo	Member
Mr. Hobson Simasiku	Member
Mr. George Samiselo	Member

OPINION AND ORDER

---

1. HISTORY OF PROCEEDINGS

1.1 On 3rd September 2007, ZESCO Limited (hereinafter referred to as ZESCO) an undertaking Licensed by the Energy Regulation Board (hereinafter referred to as the ERB) to engage in the Generation, Transmission, Distribution and Supply of Electricity issued a Notice to its consumers of its proposal to vary electricity tariffs. Upon the issuance of the said Notice, the ERB duly issued a Notice in both the print and electronic media informing ZESCO's Consumers that they were at liberty to file submissions with the ERB on the proposed variation of electricity tariffs.

1.2 On 4th October 2007, ZESCO appeared before the ERB and made a formal presentation on its proposal to vary electricity tariffs. Pursuant to the Notice by the ERB inviting submissions from electricity Consumers, submissions were received from sixty (60) electricity consumers across the country. The ERB then held Public Hearings in Livingstone on 26th October 2007, Kitwe on 5th November 2007 and Lusaka on 21st November 2007 where the said consumers who had filed submissions and ZESCO were accorded an opportunity to be heard.

2. LEGAL BASIS OF REVIEW

2.1 Section 8 (2) of the Electricity Act Chapter 433 of the Laws of Zambia, provides that if an operator considers it expedient to vary or alter charges in respect of any supply of electricity, the operator shall give notice to the Consumers of the proposal to vary or alter those charges as the case may be. It is further provided in section 8 (3) that if consumers do not make any submission within thirty days of the Notice the variation or alteration as the case may be, the revised charges could come into effect. However, as per section 8(4), where a consumer makes a submission, the Board will have to review the proposal by the operator taking into account the submission by the consumer.

2.2 It is further provided in section 8(4A) that the ERB, on its own motion if it considers it appropriate, can review the notice issued by the operator of an undertaking. The law further provides in section (8) (5) that if a consumer makes a submission and the operator raises an objection to the said submission, the parties can appear before the Board with a legal practitioner and lead evidence in support of the submission or objection as the case may be.

2.3 Furthermore, it is provided in section 8(7) that after considering the submission by any consumer and objection thereto, the Board may confirm the proposed variation, or order that the proposed variation shall not be made or order the operator of the undertaking to make such other variation as the Board considers fit.

3. ZESCO'S PROPOSAL TO VARY ELECTRICITY TARIFFS

3.1 Proposed Tariff Increase

ZESCO's Notice proposed that electricity tariffs need to be varied upwards by an average of sixty (60%) percent. It stated that this would assist it generate K1.6 trillion in revenues in the first year of which about K695billion would be used for capital investment purposes. ZESCO stated that electricity was one of the major drivers of the Zambian economy and that it was therefore essential that the country had adequate electricity which was reliable, of good quality and is reasonably priced. ZESCO stated that the main reasons for seeking a variation of its electricity tariffs upwards were that;

i) Over the last five years the cumulative inflation had been over 90% whilst tariff increase has been 16%. ZESCO's projected inflation for 2007 at 10%.

ii) Commodities such as copper, steel, aluminum, iron and oil, which are major raw materials used in the manufacture of a vast array of machinery, equipment and spare parts which ZESCO uses in its electricity infrastructure such as transmission lines, turbines, generators, transformers, switchgears, transformer insulating oil, conductors, fuses, and meters had more than doubled in the last few years. It further claimed that between the period 2000 and 2007, the price of Copper had increased by 301%, Oil by 180% and Iron by 194%.

iii) Between 2000 and 2004, the Kwacha depreciated by 53.6%. In the first three quarters of 2007 the Kwacha depreciated from K3, 294 to K4, 099 representing a depreciation of 21% and resulting in an exchange loss of K113, 876 million.

iv) The Cost-of- Service study (CoS) conducted by IPA Energy Consulting concluded that the current tariffs were far below cost reflective levels required to maintain the power generation and supply infrastructure. The study revealed that in 2006, the average tariffs should have gone up by 150% in order to become cost reflective.

v) Various load forecast studies revealed that Zambia would start experiencing power deficits beginning in 2007 and in order to avoid the looming power shortage, huge funds had to be invested in new generating facilities. Furthermore, higher tariffs would attract private investments in the power sector.

vi) A comparison of electricity tariffs in the region carried out by SAD-ELEC (Pty) Limited revealed that ZESCO had the second lowest tariffs after Zimbabwe.

vii) The current tariff levels would not enable ZESCO to maintain the Zambian Power System to the desired levels and consequently reliability and quality of supply would deteriorate.

The proposed variation of the electricity tariff were as tabulated below:-

Table 1: Proposed Schedule of Tariffs

1.	**UNMETERED RESIDENTIAL TARIFFS**		**CURRENT TARIFFS**	**PROPOSED TARIFFS**
	L1- Consumption up to 2 Amps	Energy charge/ Month	K 4,911.00	K7,121.00
	L2- Consumption Between 2- 15 Amps	Energy charge/ Month	K17,770.00	K25,767.00
2.	**METERED RESIDENTIAL TARIFFS (Capacity 15 Kva)**			
	R1- Consumption up to 100 kWh	Energy charge/ Month	K70.00	K102.00
	R2- Consumption- 101 to 400kWh	Energy charge/ Month	K100.00	K145.00
	R3- Consumption above 401kWh	Energy charge/ Month	K163.00	236.00
		Fixed monthly Charge	K5,845.00	K8,475.00
	Pre-paid	Energy Charge	K111.00	K161.00
3.	**COMMERCIAL TARIFFS (Capacity 15Kva)**			
	C1-Consumption up to 700kWh	Energy Charge/kWh	K163.00	K245.00
		Fixed Monthly Charge	K29,227.00	K43,841.00
4.	**SOCIAL SERVICES TARIFFS** Schools, Hospitals, Orphanages, Churches,			

	Water pumping, street lighting			
		Energy Charge/ kWh	K135.00	K201.00
		Fixed Monthly Charge	K23,382.00	K34,839.00
5.	**MAXIMUM DEMAND TARIFFS**			
	MD1- Capacity between 16-300kVA	MD Charge/Kva/ Month	K6,943.00	K11,803.00
		Energy Charge/kWh	K100.00	K170.00
		Fixed Monthly Charge	K68,002.00	K115,603.00
	MD2- Capacity between 301-2000kva	MD Charge/kVh/Month	K12,990.00	K22,083.00
		Energy Charge/Kwh	K85.00	K145.00
		Fixed Monthly Charge	K136,003.00	K231,205.00
	MD3- Capacity between 2001-7500kva	MD Charge/Kva/Month	K19,587.00	K34,277.00
		Energy Charge/kWh	K63.00	K110.00
		Fixed Monthly Charge	K272,006.00	K476,011.00
	MD4-Capacity above 7500kVA	MD Charge/Kva/Month	K19,696.00	K34,468.00
		Energy Charge/kWh	K52.00	K91.00
		Fixed Monthly Charge	K544,012.00	K952,021.00

3.2 Proposed Improvements to be made with upward variation of electricity Tariff.

ZESCO submitted that with an upward adjustment of Tariffs it would be in a position to make improvements in metering, customer service, cash collections, staff productivity, and power quality. The company further stated that it would be able to reduce distribution losses and expand its customer base. ZESCO further submited that it would in addition do the following:

i) Reduce operating costs by 10%;
ii) Invest in capital projects to cope with load growth;
iii) Stop employing temporal staff but increase its labour force from 3814 to a desired level of 4200;
iv) Reduce its travel and accommodation costs by 20%;
v) Increase maintenance expenditure by 5%;
vi) Reduce non technical losses by 2.5 % per annum;
vii) Meter all unmetered customers with credit meters or pre-paid meters;
viii) Renegotiate some terms in the Bulk Supply agreement with Copperbelt Energy Corporation Plc (CEC);
ix) Reduce the first residential tariff block from three hundred (300) units to one hundred (100) units and to reduce the second block to three (300) units; and
x) Introduce a time-of-use (ToU) tariff for the maximum demand customers.

3.3 ZESCO'S Revenue Requirement

3.3.1 ZESCO submitted that for 2007/2008, it required revenue of K1.6 trillion of which K695 billion would be used for capital investment purpose. ZESCO claimed that its operating expenses for the same period would be in the range of K1.3 trillion. The said revenue would amount to a rate of return at 6% of capital employed.

3.3.2 ZESCO further submitted that there would be notable changes in its operating expenditure in the stated period due to:

i) The Purchase of electricity from Eskom which was expected to rise drastically as compared to the forecast, due to an anticipated shortfall on generation because of the continuation of rehabilitation works at its major generation stations;

ii) Increase in labour costs following the engagement of new staff and implementation of

the job evaluation exercise;

iii) Increase in maintenance costs to improve the reliability of supply to its customers;

iv) Increased training activity to enhance capacity in the company by sponsorship of staff at various learning institutions;

v) Increase in administration costs mainly in telecommunication, ZESCO United support, staff medical scheme and stationery usage;

vi) Travel and accommodation cost expected to rise due to increased subsistence allowances planned for staff working outside their stations;

vii) Rise in Generation costs for its diesel generators in the Northern Division because of high fuel prices;

viii) High Finance costs because financing costs of completed projects were now being charged to the Operating Statement and there had been a rise in the use of overdraft facilities.

3..3.2 ZESCO further stated that in order to cope with the load growth in the next few years, it had embarked on capital projects and expects to expend the amounts stated below during 2007/2008:

Itezhi Tezhi	US$15 million
Kariba North Bank Extension	US$48 million
Transmission Lines	US$13.8 million
Customer base expansion	US$ 46.9 million

3.3.3 In its summation, ZESCO submitted that the existing tariff regime does not support its financial health and long term viability. It further stated that the existing tariffs had contributed to the lack of private new investments in the electricity sub-sector. It further submitted that due to the low tariff it had been unable to invest and carry out maintenance as stipulated in industry standards resulting in compromised quality of service and reliability of supply. ZESCO stated that with an upward variation of electricity tariffs it would conduct itself more efficiently and effectively.

4. CONSUMER SUBMISSIONS

The ERB received sixty submissions from consumers of electricity from all over the country.

a) Mr. Daniel Chalata of Mazabuka in his submission stated that ZESCO's proposal was not justified because ZESCO needed to broaden its customer base. He further submitted that connection charges were out of reach of most people, and that the company should improve its management and performance in response to faults. He further stated that ZESCO seemed to have wrong priorities as it seemed to have more luxurious cars than utility vehicles. In his oral testimony, he testified that he was coming from Nakambala Compound in Mazabuka where almost three quarters of the houses had no electricity. He was of the view that connecting all unconnected people in Zambia would help ZESCO broaden its revenue base. He further testified that ZESCO did not have a toll-free line where one could report a fault. He wondered whether Government paid their bills on time. He concluded by saying that if ZESCO was to provide a better service, he would be the first to support any proposed tariff increase.

b) Ms Ruth Henderson of Livingstone in her written submission stated that ZESCO's Quality of service was appallingly bad and its load shedding was irregular. She further submitted that Government was trying to promote irrigation but the high tariff would make this less attractive. She asserted that an increase in domestic rates would lead to increased deforestation and that it was unreasonable to expect the rest of the consumers to subsidise the mines. Her contention was that a reasonable increase would be in the range of 10 to 20%. In her oral testimony she submitted that she had a small but intensive farming operation which depended heavily on irrigation due to the climatic conditions in the area. She claimed that any increase in tariffs would make it near impossible to continue operating. She further testified that ZESCO provided a poor quality of service and gave an example that on one particular day she had an outage from 01:00 am to 11:00 am. She further testified that her neighbours were selling charcoal for between K10, 000.00 and K12, 000.00 and she contends that this was contributing to deforestation. She alleged that the mines were paying the lowest rates and it was unreasonable to expect her and many others like her to subsidize the mines.

c) Mr Authur Sunninberg of Zambezi Nkuku, a company based in Livingstone, submitted that the tariff increase would adversely affect business and consequently goods and services would become expensive.

d) Himmer Nanhati Investments Limited of Choma submitted that it would be affected by the proposed increase as it relied heavily on irrigation and that the proposed increase would result in high pumping costs.

e) Mr. N. Nalisa of Kitwe in his submission stated that the proposed increases were too high for an ordinary worker. He, however, acknowledged the need for tariffs to be increased to raise revenue to invest in the sector. He went on to propose a phased tariff increase schedule of 15 % per annum over the next 3 years. He stated that the proposed increases pose risks of increased default.

f) Mr. Jim Miyanda of Ndola submitted that he appreciated the difficulties the company was undergoing in order to continue operating. However he stated that ZESCO should do the following; engage Anti-corruption and Police to investigate staff involvement in false billing; invite confidential submission from the public to disclose illegal connections at a reward; provide concessions to defaulters to start afresh; set deadlines for clearance of outstanding bills; agree on time and date for taking readings of meters; Prosecute illegal connections; and Reduce load shedding.

g) Mr. Peter Manda of Kitwe in his submission stated that ZESCO had misplaced priorities; had a bloated wage structure; should review its tariffs with mines and CEC which were sub-economic; ZESCO had poor strategic focus on non-core operations; and should set up a subsidiary to manufacture sub-assembly components to reduce on imports. He further submitted that ZESCO had enjoyed declining inflation and stable exchange rates against major currencies so there was no justifiable reason to seek an increase in Tariffs.

h) Mr. Moses Luapula of Ndola, submitted that ZESCO should improve the billing system before the increase and he was of the view that the proposed tariff level would deny most Zambians the electricity service.

i) Mr. Mwiya M. Sianga submitted that ZESCO was failing to maximise monthly collections and proposed that every customer should have a prepaid meter. He further stated that the current tariffs on average were enough to carry out developmental plans. He further submitted that ZESCO had not informed the ERB about the recently increased monthly unmetered charge of K70,000 from K17,770.

j) Kitwe Chamber of Commerce submitted that Industry could not cushion the proposed increases of 60% as this would push the cost of production even higher, which would be passed on to consumers and would result in higher inflation. They further argued that Companies would have to lay off staff due to high electricity bills. They further submitted that there was need for ZESCO to show commitment in increasing efficiency and managing its staff costs. The chamber contended that given the high trade receivables, an increase in tariffs would compound the revenue collection problems for ZESCO. The Chamber proposed that tariffs for the mines should not be under priced and that tariff increases should be phased.

k) Industrial Gases Limited of Kitwe also submitted that the proposed tariff increases were unjustifiable. It further submitted that the Copperbelt Energy Corporation (CEC) plc had finances to undertake energy sector projects and that CEC plc should be asked to embark on some of the energy sector projects as opposed to allowing ZESCO embark on most projects.

l) Towel Textiles Limited of Kitwe submitted that the proposed tariff increases were unjustifiable.

m) Match Corporation Limited of Luanshya submitted that it objected to the proposed tariff increase on grounds that electricity was its major input, currently making up about 50% of input costs. It further stated that electricity had been Zambia's major comparative advantage in manufacturing for exports and increasing tariffs would make the company uncompetitive and result in a closure of the company.

n) Sakiza Spinning Mills Limited of Kitwe submitted that most companies offset increases in costs by increasing efficiency in operations and this was not the case with ZESCO. It further submitted that there was no evidence that ZESCO was undertaking any cost saving measures. It proposed a tariff increase of 10% in year one and 5% in subsequent years.

o) Copperbelt Bakers Association of Kitwe submitted that Bakeries would not afford to operate with the proposed 70% tariff hike and this could result in over 1,000 workers ending up on the streets.

p) Metal Fabricators of Zambia submitted that while it essentially acknowledged the need to revise tariffs as ZESCO required maintaining & improving the system, it had some reservations on the proposed tariffs. It argued that the increase would impact negatively on business. It further submitted that ZESCO should introduce a levy for development of infrastructure and expansion which would then be phased out upon payback. It submitted that ZESCO should disclose its internal cost reduction plans as well as enhance its revenue collection efforts.

q) Perway Industries of Kitwe submitted that it objected to the proposed increase. It suggested that the new mines were being subsidised by ZESCO which now wanted to recover revenue losses from the industry and other customers.

r) Swarp Spinning Mills Limited submitted that it had no objection to the revision of tariff but proposed that the variation should be reasonable in the range of 15%. It submitted that the variation in to tariffs would require them to increase its selling prices too and this would render its business unviable. It submitted that mining agreements should be revised and ZESCO should recover its investment costs from new consumers it wishes to serve.

s) Zambia National Former Councilors Association of Kitwe submitted that it opposed the proposed tariff increase on the basis that most Zambians were already struggling to pay their electricity bills and ZESCO services were poor.

t) Child Care and Adoption Society of Ndola submitted that the proposed tariffs under the social service category would have a serious financial impact on its operations and requested for a reduced fixed monthly charge.

u) The United Church of Zambia of Ndola submitted that they were a non profit making organisation and were requesting for a monthly fixed charge at their Hillcrest congregation.

v) Jamas Milling of Kitwe submitted that a 75% increase in tariffs would entail its product prices increasing by K1,000 per bag and over K3,500 per bag over the next 3 years. This would pave way for foreign manufacturers to sell their products at lower prices than Zambian goods.

w) Scaw Limited of Kitwe submitted that it objected to the huge increase of 250% over the next 3 years as its operations would not be sustainable and would result in over 700 employees being declared redundant. It submitted that the proposed increase would affect other goods and services and government efforts to attain a single digit inflation rate. It submitted that ERB should ensure proper analysis so that capital expenditure should not be allowed in the operating costs; only costs for production, distribution and supply should be allowed in ZESCO'S operating costs. It argued that the rate of inflation did not directly increase cost of production in the same proportion; therefore ZESCO's reason relating to inflation was misleading.

It further submitted that there was no direct relationship between the price of commodities, raw materials and the cost of generation. It argued that appreciation of the Kwacha had made imports cheaper hence maintenance costs should have reduced. Scaw had issue with the contents and principles upon which the IPA study had been undertaken and it was not sure how fair that study was. It further submitted that the comparisons given of ZESCO and other countries utilities were misleading as the countries did not produce hydro power. It was of the view that ZESCO should negotiate tariffs with mines separately, and not increase tariffs generally for all consumers, as the demand for power had increased due to the mines.

x) Pigott Maskew Limited of Kitwe submitted that it was impossible to absorb an increase of 75% on power for many Copperbelt companies. It proposed that ZESCO should borrow for network and new generation expansion. It argued that ZESCO was inefficient. It submitted that the current power shortage was because of mining expansion, therefore, ZESCO should negotiate with these customers. It further submitted that ZESCO's customers were subsidising the mines and the Private sector should not be burdened by social cost of rural electrification through tariff hikes. It also argued that the Time of Use tariff was not suitable for running a proper shift as Maximum Demand was calculated over 24 hrs. It stated that it was wrong to compare ZESCO with Eskom as the economies and scale of operation were different and the proposed increase did not match inflation of 10%.

y) Lee Yeast Corporation of Lusaka submitted that the proposed increase was not justifiable as service was poor. It further submitted that the new tariffs would increase the cost of production. It argued that ZESCO's power was hydro generated so it is cheaper. It stated that ZESCO was inefficient in its collections and there was need to improve management of the company.

z) Mr. C.N Kasanda of Lusaka submitted that the application to revise tariffs may be justified but did not agree with the proposed levels of tariff increases. He proposed that the increases should be staggered over a number of years to lessen the impact on consumers.

aa) Mr. Andrew Kashita of Lusaka in his submission stated that the notice which was published in the media was misleading and erroneous in law as it implied that the new tariffs would be included in the October bills. He contended that ZESCO's poor performance was as a result of unpaid bills; over generous staff costs; inadequate expenditure on maintenance; poor planning; and inability to take action (e.g. to start the Kafue Lower and Ithezi – tezhi schemes). He stated that regional tariff comparisons are unacceptable as the technical and economic situations were different. He argued that expansion cost should be recovered from those that would use supplies from new schemes. He stated that the ZESCO-CEC agreement should have been terminated and mining tariffs revised.

bb) Mr. Timothy Mfula of Lusaka submitted that the proposed tariff increases were too high, the comparison of regional tariffs only looked at tariffs but not at incomes in these countries compared to Zambia where workers hardly got increases of more than 20%. He suggested that the Mines should subsidise domestic consumers. He was of the view that the increase should be in the range of 5% to 10%.

cc) Mr. Haggai Makawa submitted that ZESCO should find better ways of sourcing for funds without unnecessarily increasing the tariffs. He submitted that management lacked future planning, commitment and initiative. He suggested that ZESCO should promote other sources of energy for cooking and it should deliberately supply low voltage to households. He further submitted that ZESCO should embark on systematic switch off of some institutions like barracks, health institutions, colleges and in order to scale down on Government bills. He was of the view that ZESCO should be privatised.

dd) Mr. Henry Kayambalesa of Denver, in the United Sates of America submitted that ZESCO's customers were already overburdened at the current tariff levels. He suggested that ZESCO should find ways of reducing its costs, adopt leaner organisation structure and do away with sponsorship of the football team. He submitted that ZESCO should seek other ways of making electricity less costly to consumers. He was of the view that ZESCO should instead consider reducing tariffs by 10% points as this would assist in reducing destruction of woodlands.

ee) Mr Gabriel Banda of Lusaka submitted that he rejected the proposed tariff increase because ZESCO's residential consumers should not subsidise the mines. He argued that the SADELEC figures used for comparison were way out of context.

ff) Mr. M. Phiri of Lusaka submitted that the public should not pay for ZESCO's inefficiencies. He suggested that ZESCO should give details of debtors by customer category, age of debt, creditors (local & foreign), number of staff, salary structure with an indication lowest and highest paid, stock figures for the past three years and publish its balance sheet for the past 3 years.

gg) Mr. Killian Dennis Simasiku of Lusaka submitted that the Energy sector needs to find alternative financing for investment. If the tariffs were increased, industry's cost of production of goods would be very high.

hh) Mr D.P Combrick of Lusaka submitted that he objected to the proposed tariff increase because ZESCO was inefficient and wondered what customers would get for higher tariffs.

ii) Mr. David Matabishi of Lusaka submitted that the proposed increase was not justifiable from a business perspective because the utility had a wage bill of about 60% (instead of about 15-30%) of company revenue. He was of the view that there were too many staff in personnel and non technical departments and the management structure was top heavy.

jj) The Zambia Farmers Union (ZNFU) in its submission stated that it was concerned that its members were being obliged to fund sudden increase in demand arising from rapid mining activities. It submitted that the proposed tariff increases would increase cost of production, impose inflationary pressures and render farming uncompetitive. It stated that the IPA report was not transparent as ZNFU was not allowed to state its case to the consultant. It submitted that the mines were guaranteed power supply which must come at a higher price than the other users. It claimed that the mining tariffs pricing formula was not transparent. It was of the view that other sectors of the economy were not in a position to afford tariff increases of the scale to fund investment in generation. It submitted that agriculture should be considered as the primary target for concessionary rates and not subsidise other sectors.

It was further submitted that ZNFU is currently in negotiations with ZESCO over tariff structures and any tariff reviews for agriculture should be within the context of these negotiations. It noted that the consultants reports also highlighted concerns in ZESCO 's operations like surplus staff, high levels of illegal tapping, poor payments, inadequate collection efforts and incorrect billings. It concluded by stating that raising tariffs would not solve ZESCO's problem and any tariff reviews to non-mining consumers should only be conducted after satisfactory conclusion of negotiations with the mines.

kk) The Jesuit Centre of Theological Reflection submitted that although cost of electricity was currently reasonably affordable (as % of total cost of basic needs), the proposed tariffs (average of 67 % for fixed tariffs) would hinder accessibility for customers especially rural customers (basic needs basket included). It stated that the proposed tariffs did not link tariff adjustment to a guaranteed level of service as well as pace of rural electrification. It further stated that the proposed tariffs did not link adjustments with any guaranteed right-sizing of the staff of ZESCO and minimising expenditure on staff emoluments. It submitted that ZESCO should publish a break down of its past expenditure as part of tariff application as the Zambian public needed assurance that increased tariff would go to expand infrastructure and increase rural electrification as opposed to expanding salaries of top management.

ll) The Zambia Association of Manufactures submitted that the shortfall in power supply was as a result of increased mining activities and wondered why manufacturers should be made to pay for additional capacity. They stated that Industrial users in other countries were paying a fraction of what residential customers are paying which was not the case in Zambia. In other countries, unlike in Zambia, the cost of additional capacity is borne by that specific consumer requiring the capacity. They were however pleased that off-peak rates were being considered and hoped this could be extended to 07:00hours.

mm) The Zambia Association of Chambers of Commerce and Industry (ZACCI) submitted that it acknowledged the need for immediate increase in revenue in order for ZESCO to undertake maintenance works. However, the dramatic increases as those proposed would have a significant potential for shock effects on the economy and industry could not cushion the proposed 60% increase. The proposed increases would push up the cost of doing business in Zambia and render the single digit inflation rate unattainable. It stated that there was need for transparency from ZESCO to give details of its cost drivers to ensure that there were no flaws in tariff planning process and that assumptions made were sound. ZACCI accepted that the cost of power from new plants (6 to 8 cents/kwh) would be significantly higher. However, this cost should only be passed on to the consumers after the costs were incurred. It was of the view that ZESCO adopt a business model where new power generating costs are averaged with existing costs or new developers could sell directly to large end users in which case there would be no impact on existing customers. It noted that the IPA report stated that ZESCO receivables were as high as 80%, the tariff increase would compound the revenue collection problems. It concluded that the unprecedented tariff increase would have to be passed on to consumers by producers thereby going against the spirit of reducing poverty in the country to attain the millennium development goals (MDG).

nn) Zambia Business Forum submitted that initial increases were likely to increase the overall cost of production for the private sector, thereby discouraging greenfield investment and expansion in these sectors and other industries that rely on power. The forum further stated that the overall competitiveness of the Zambian goods/services would be affected both in domestic and export markets and this could affect Zambia's preferred position for FDI Sectors such as the mines. It was noted that agriculture in the past had concessions on tariffs implying that cost of electricity was already too high.

ZBF was of the view that ZESCO could improve revenue collection and become competitive. It further submitted that the regulation of ZESCO should address issues such as loss of revenue due to unmetered customers, illegal connections, poor revenue collection, low client base, poor business management and corporate issues. It suggested that there was urgent need to review the long term Power purchase agreements with CEC. It concluded by stating that Government should speed up commercialisation of ZESCO and the Company should mitigate impact of increases in tariff by assisting consumers implement energy efficiency measurers.

5. ZESCO'S GENERAL RESPONSE TO CONSUMER SUBMISSIONS

a) ZESCO objected the Submissions made by its consumers. In its response ZESCO submitted that in 1995 there were key reforms in the energy sector which led to the liberalization of the Energy sector putting an end on the monopoly of ZESCO to generate, transmit and supply electricity. The sector has some players such as Copperbelt Energy Corporation (CEC) and Lunsemfwa Hydro. It stated that it has an installed generating capacity of 1640 MW; 350,000 customers; 3,900 employees; annual energy sales of 8,000GW per annum and a customer/employee ratio of 89.

b) ZESCO stated that it sells fifty percent of its power to the Mines through CEC and only 27% of the Zambian population is connected. It stated that there was an urgent need for it to invest in new generation and transmission to carter for the growing demand. It stated that the major demand driver was the booming economy led by the increased mining activity, agriculture, tourism, manufacturing and housing. It further submitted that various reports showed that capacity would be surpassed by demand around 2007-2008 hence the urgent need to have new plants come online. It stated that in the meantime it had embarked on a power rehabilitation project that would increase capacity to 1,850 MW.

c) It further submitted that it had a number of on going interconnection projects to enable it import power from the region; a 330KV line with Zimbabwe; a 220KV line with Congo; a 66KV and 220 KV with Namibia; a 220KV with Malawi; a 220KV with Botswana ; and a line between Livingstone and Hwange at 330KV. It further stated that it would spend US$300 million on rehabilitating and up rating its generation facilities with financing from the World Bank, European Investment Bank, Development Bank of Southern Africa, SIDA, AFD France, the Zambian Government and its own resources. It estimates that it would need about US$320 million to construct a power station at either Itezhi-tezhi or Kariba North Bank and some funding for this had been secured through the China Exim Bank. Kafue Gorge would come on stream by 2014 at a cost of about US$1 Billion. It stated that it acknowledged that reliability and security of supply were essential and would therefore endeavour to reduce losses, improve maintenance operating regimes, and improve business process by making more investments.

d) ZESCO further submitted that the issues at hand were much broader than people thought. It stated that a new power plant would sit at between 5 and 8 cents and yet the existing tariffs were at 3.5 cents making its whole operation unsustainable. It stated that it was finding it difficult to market its proposals for new plants because the revenue streams were very low.

e) ZESCO further stated in its response that to mitigate the effect of increased tariffs it was proposing to introduce a time of use tariff of 25% discount on energy and 50% on capacity, in order to shift the loads to off peak times. It further stated that according to its research an average household consumed between 250 and 300 units whose cost at the proposed tariff would be about K94,000 whereas using charcoal, paraffin and candles would cost the same family K180,000=00 per month.

f) ZESCO admitted that the tariffs with the Mines were much lower but these were negotiated in 1997, it claimed that any subsidy the mines were getting were being met by ZESCO because at the current tariff levels it was also subsidizing the other Customer groups as well.

g) On the issue raised by Mr. Chalata of Mazabuka on broadening of the revenue base by connecting more people especially those who had benefited from the home empowerment scheme, ZESCO responded that it had plans to double the customer base within four (4) years as per its

Corporate Business plan however, such expansion needed resources which currently could not be raised from the low tariffs.

h) ZESCO responded to Mrs. Henson submission on the poor quality of service by stating that it was doing the best it could given the resources available at the current tariff levels. The poor/irregular supply, especially in rainy season was a reflection of the problems of the transmission and distribution power system which was built more than twenty years ago. Due to below cost tariffs these systems had not been refurbished or replaced as required by prudent system management. Therefore ZESCO needed a huge injection of resources to improve the reliability and quality of supply hence the tariff application.

i) On the submission by Himmer Nanhati Investments Limited that the proposed increase would adversely affect Agriculture, ZESCO responded that it was sensitive to the needs of its customers, that is why it was proposing to introduce a Time of Use Tariff which would help cushion the impact of the tariff increase.

j) ZESCO Responded to the submission by Sakiza Spinning Limited on the need for it to be more efficient by stating that in its cost structure the major costs include labour due to its geographical spread, maintenance and rising cost of electricity imports. The High Maintenance costs were due to the rising prices of metals like Copper and Iron ore as well as rising oil prices which were major inputs in the manufacture of switch gear, transformers, conductor and fuel for the running of the ZESCO fleet for operations and oil for cooling transformers.

k) On the submission by Metal Fabricators of Zambia that ZESCO should reduce its costs, ZESCO responded that it had embarked on internal cost reduction measures such as curtailing overtime of staff, freezing of recruitment, outsourcing certain services like security and awarding salary increases below inflation.

l) On the submission by Swarp spinning mills Limited that the mining tariffs were low and ZESCO should therefore increase these, ZESCO responded that in as much as the mining tariffs were low, all tariffs in Zambia were not cost reflective. It further stated that it had begun re-negotiating the CEC tariffs which were implemented at privatization of ZCCM.

m) ZESCO responded to Match Corporations' concerns by stating that Companies should specialize in the production of goods for which they have a comparative advantage in terms of national endowments. In setting up their plant industries must have considered the implications of their location on their costs in their strategic planning and sensitivity analysis.

n) ZESCO responded to Pigott Maskew Limited's submission that hydro electricity was cheaper by stating that its hydro power plants which were built in the 1950's – 60's were no longer sufficient to provide the current power requirements. Studies carried out in the recent past showed that the current cost of new hydro generation was between USc5-8/kWh. To build these the normal cost was about US$1000/kw. This meant that for a 600MW plant one needed $600 million. It stated that to borrow this amount required stringent due diligence from financiers and one variable they looked for was the project's ability to repay the loans. Therefore at current tariffs, such projects would never be approved by financiers.

o) On the submission as to why ZESCO could not raise finances from other sources such as the capital markets, it responded that the cost of borrowing over the years had been prohibitive and it was not able to demonstrate to potential lenders that it was in a position to repay any loans due to its poor cash flow. Once the company is viable it would attempt to obtain money from the capital markets.

p) On the question of the increased demand being made by the increased mining activity and this did not warrant other consumers to contribute to the construction of new generation, ZESCO's response was that the demand was being made by increased economic activity in all areas although mining accounted for the larger portion. However it was only prudent that every customer category contributes to the construction of new generation stations as the tariff would be designed in such a way that customers would pay in accordance to the strain put on the system. Furthermore it stated that it would not be wise to ask investors to finance the building of new plants because there were other investment destinations so the onus was on the Zambians to build new capacity.

q) On the alleged poor quality of service, ZESCO's response was that it was seeking a tariff increase in order to address issues of poor quality of service, such as poor voltage and lack of system expansion. The company had over the months made significant investments in transport, a new billing system, a new call centre but still required more funds to invest in new infrastructure for the future.

r) On the cost of charcoal being cheaper than electricity, ZESCO's response was that in totality charcoal was more expensive than electricity as it posed great harm to the environment. On the poor maintenance of infrastructure ZESCO stated that it required sufficient funds in the region of US$200 million although it had embarked on major rehabilitation works. On the call center being free, ZESCO responded that initially this had been the case but customers begun abusing the service. On the relationship with Government and that Government was not paying its bills, ZESCO responded that Government was the share holder and Government had many institutions which had a challenge in meeting their bills.

s) On measures being put in place to reduce costs, ZESCO responded that over the years it had been improving on its productivity by cutting its customer staff ratio. It had decommissioned some diesel generators and the up rating of some generators had resulted in savings of about us$300 Million.

6. ENERGY REGULATION BOARD'S EVALUATION OF THE PROPOSED VARIATION

6.1 We carried out various analyses of the reports and data submitted by ZESCO. Key among these reports were its financial statements for the period 2006/2007 and the updated Pricing and Accounting models. A detailed review of the costs claimed for the base year was carried out including a trend analysis of historical cost and revenue figures from 2001/2 to 2006/7 in order to examine the reasonableness of figures claimed in the test year. The analysis identified a number of costs that were selected for further review based on the unusual trends they presented.

6.2 On the models, a comparison of corresponding entries between the Accounting and Pricing Models was carried out in order to verify their consistency. All the variances were subsequently clarified and corrections effected accordingly. Several adjustments were then effected on the pricing model based on a review of financial and various other assumptions presented by ZESCO.

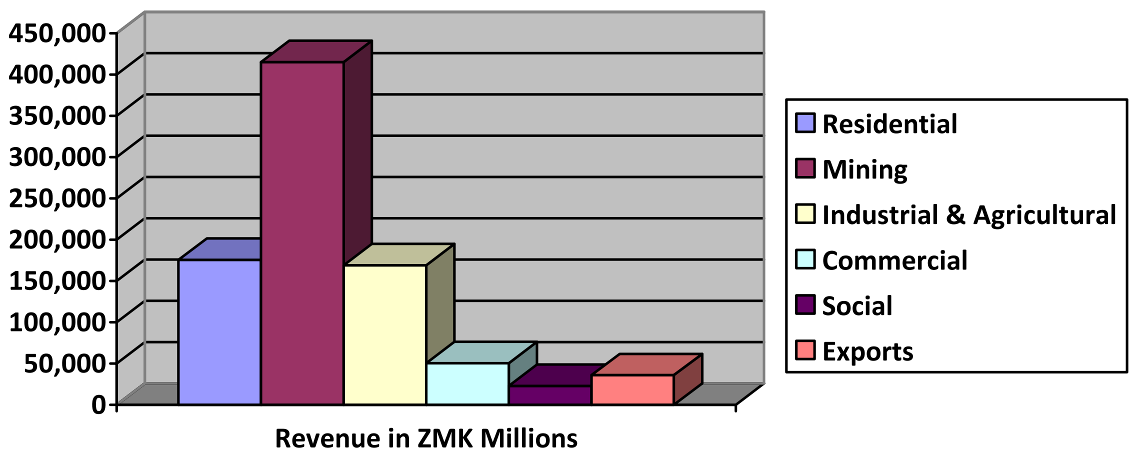
7. REVENUE AND COST ANALYSIS

7.1 We undertook an analysis of the revenue profile by customer category to determine the customer class contribution to total turnover for the year 2006/2007. This analysis revealed that the mining customers still account for the highest revenue contribution to ZESCO turnover. The second largest customer group are Residential customers then followed by Industrial and Agricultural.

Table 2: Distribution of revenue by customer category

Customer Category	Revenue in ZMK Millions	As % Turnover
Residential	175,593	20%
Mining	415,244	48%
Industrial & Agricultural	169,095	19%
Commercial	50,189	6%
Social	22,894	3%
Exports	35,709	4%
Total	868,724	100%

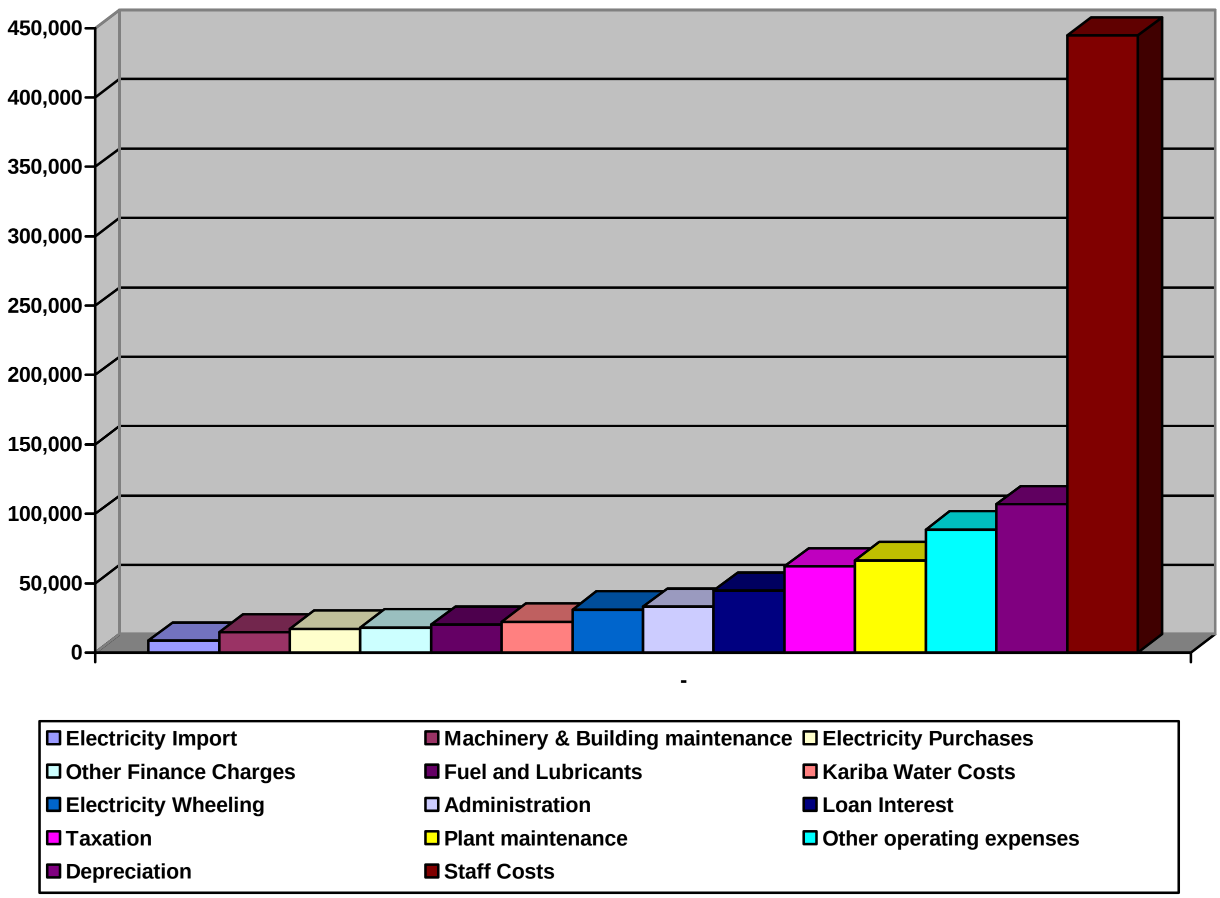
Figure 1: Distribution of revenue by customer category in 2006/7



Source: Zesco

7.2 We undertook an analysis of ZESCO's detailed cost profile and it revealed that staff costs would still be the largest cost component followed by depreciation, primary plant maintenance, electricity purchase costs and finance charges. We also found that ZESCO had continued to borrow short term financing resulting in expensive finance charges.

Figure 2: Cost Distribution 2006/7 in ZMK' millions



8. Cost Trend Analysis

8.1 We undertook an analysis of ZESCOs' seven major costs, covering a six year period from 2001/2 to 2006/7 to establish the composition and trends. The analysis revealed that:

i. Administration costs showed a significant increase in 2006/7 growing by 41% over the previous year's figures.

ii. Electricity import costs had generally shown a downward trend over the years reducing by 46 % in 2005/6 and by 63% in year 2006/7.

iii. Auxiliary plant maintenance costs had been declining since 2004/5 while primary plant maintenance costs, although they declined in 2005/6 had increased by 29% in 2006/7.

iv. Finance charges had been consistently increasing in the past three years growing by 3%, 8% and 13% in 2004/5, 2005/6 and 2006/7 respectively.

v. Bad debt provision continued to record increases over the years, in 2006/7 it grew by 73%.

9. ERB Adjustments

9.1 Loan Interest

We find that ZESCO has earmarked a total capital budget of US$669 million to be spent over the next four years. New loans will contribute K1 trillion in loan interest over the next four year tariff priod. The major driver of loan interest would be that ZESCO would obtain loans to fund new capital projects. ZESCO assumed that 90% of new capital projects would be funded through loans while only 10% would come from internal resources. This would increase the gearing ratio of the company as debt would increase at un-proportionate rates to equity. It is our considered opinion that debt should not exceed 70:30 debt equity ratio. Hence we have adjusted the loan funding proportions from 90% to 70% because the new tariffs to be awarded to ZESCO would enable the utility to also contribute in funding new capital projects and thus loans help to reduce loan interest to be payable.

We reviewed all interest rates on existing domestic loans as ZESCO had put a uniform figure of 23% on all local loans. We find that Current domestic loan interests are below 23% and we therefore decided to use the actual interest rates appearing in the ZESCO provided loan schedule.

9.2 Staff Costs

We found that during the financial year ended 31st March 2007, labour costs were the biggest component of operating costs which contributed 49%. The proportion of labour costs to the total budget is way beyond acceptable international levels which is about 30%. We therefore find that there is an urgent need for ZESCO to begin reducing its labour cost and in this regard have decided to adjust this labour cost contribution to operating costs to 40% for 2008, 35% for 2009 and 30% for 2010 after excluding extraordinary cots like electricity imports, loan interest rates and taxation.

9.3 Imports

We find that by the year 2008, electricity demand is expected to outstrip supply in the country as generation capacity will not be able to meet demand. The annual projected increases of demand over the next four years by 12%, 33%, 27% and 11% will require ZESCO to import power in order to serve all customers. ZESCO has claimed that it will not import anything in 2007 but will need to import the following volumes in subsequent years; 294MW in 2008, 627MW in 2009 and 823MW in 2010. However it is a notorious fact that the Southern African region is expected to face a power shortage from 2008 due to increased economic activities in the region coupled with inadequate investment in generation infrastructure. Most countries experiencing power deficits have got long term contracts with power surplus countries but ZESCO has not demonstrated how it will be able to import electricity since the stated volume will not be available and ZESCO does not have the requisite transmission capacity. We have therefore adjusted the cost of these imports from those stated by ZESCO to a more realistic level taking into account the fact that most of the imports will be made during peak times.

9.4 The ERB further undertook a comprehensive review of the Master Pricing Model and effected some adjustments in line with sound regulatory practice. These adjustments are as follows;

a. Financial Assumptions

i. Escalation factor (inflation) has been adjusted to 7% after reviewing empirical evidence of the impact of inflation on ZESCO's cost structure.

ii. The Exchange rate has been adjusted from K4400 to K4000 from 2007 onwards based on projections from the Bank of Zambia and computations of the average exchange rate from January 2005 to August, 2007.

iii. Percentage of Capital expenditure funded by loans reduced from 90% to 70%.

b. Tariff Assumptions

i. The tariff for the mines has been adjusted in order to bring it to cost reflective tariff levels.

ii. ZESCO Staff tariff adjusted to regular residential tariff level.

iii. The R1 band of Residential customer category tariffs will only be varied by an increase of 10%, in order to take care of the vulnerable in our society.

c. Demand Assumptions

i. Distribution losses have been revised from 22.9% (2008) to 14% (2010) as agreed in the key performance indicators.

d. Customer Groups Assumptions

i. The 'No tariff - unmetered' have been transferred to metered.

ii. All MD3 unmetered existing Large Power have been changed to metered from 2008 onwards.

e. Revenues worksheet in the pricing model:

i. The formula on ZESCO customer numbers has been altered to pick actual customer numbers instead of unit charges as agreed with ZESCO.

f. Cost Assumptions

i. The Kariba fixed water costs have been set to zero as agreed with ZESCO.

ii. Loan interest figures in the pricing model have been reconciled with corresponding accounting model figures.

iii. New loans domestic: Interest rate to be maintained at 20% from year 2008 onwards on the basis of current macro economic trends.

iv. New loans foreign: interest rate has been maintained at 9.5% from year 2008 onwards on the basis of current LIBOR based interest rates.

v. Some Administration costs such as those related to ZESCO United FC (K2.2 billion), penalty on late payment (K5.1 billion), entertainment (K601 million) and donations (K180 million) have been disallowed.

This resulted into the revenue requirement for ZESCO is K1.2 trillion in 2007/8, K1.7 trillion in 2008/9, and K2.2 trillion in 2009/10.

10. TARIFF STRUCTURES AND LEVELS

ZESCO claimed that it could not implement the Volume Differentiated Tariff (VDT) recommended by IPA Energy Consulting (the Consultant who conducted the Cost of Service Study) due to technology constraints and therefore proposed to maintain the current three tier block tariff structure with some modification. We find this to be a reasonable request but made the following changes to the tariff structure:

i. L1 & L2 consumption categories have been abolished to pave way for one residential category.

ii. The unmetered category has been abolished because we believe going forward ZESCO should meter all its customers at connection.

iii. Customers in the MD4 category who consume more than 25MVA will have to negotiate a tariff with ZESCO which will be subject to approval by the ERB.

iv. The introduction of Time of Use (ToU) tariffs for MD customers between 22:00hrs to 06:00hrs for which they would be allowed discounts of 50% on MD charge and 25% on energy costs.

v. R1 will now be for consumption of up to 100Kwh

vi. R2 is for consumption from 101 kwh to 400kwh

vii. R3 is for consumption greater than 400kwh

viii. ZESCO staff tariff has been transferred to residential tariff

ix. MD1 is for capacity from 16 to 300Kva

x. MD2 is for capacity from 301 to 2000 Kva

xi. MD3 is for capacity from 2001 to 7,500kVA

xii. MD4 is capped at 25MVA

11. MULTI-YEAR TARIFF

We hereby find that the just and reasonable tariff variation for the multiyear be as follows:

Table 3: ERB computed tariff variation path

Customer Category	**2008**	**2009**	**2010**
Residential	26.8%	16.6%	11.9%
Commercial	1.3%	0.3%	0.3%
Services	6.8%	1.9%	1.9%
Small Power (MD1 &MD 2)	16.2%	5.5%	4.5%
Large Power (MD3 & MD4)	27.5%	16.6%	2.2%

12. ZESCO'S FINANCIAL POSITION AFTER TARIFF VARIATION

We further find that the above stated variation of the tariff will result in an improvement of ZESCO'S financial position and it is hoped that for the multiyear tariff period ZESCO will record profits.

13. FINDINGS AND OBSERVATIONS

Upon examination of the submissions made by ZESCO's customers, the response to the said submissions by ZESCO and the evaluation of the submissions by the ERB, we hereby further find as follows:

i. That ZESCO'S quality of service has generally deteriorated. It is therefore expected that the capital expenditure approved for ZESCO's improvement of it's transmission and distribution systems will be utilized for the intended purpose. We will monitor ZESCO's capital expenditure program to ensure an improvement of the quality of service.

ii. That the demand for electricity around the country is driven by all customer categories. However, it is our considered view that the future development of Greenfield projects should not be the preserve of ZESCO alone but the whole electricity supply industry and other interested stakeholders.

iii. That ZESCO needs to increase its budget for maintenance costs. This is expected to translate into increased efficiencies which we shall closely monitor.

iv. That ZESCO's staff numbers and staff costs are too high, and therefore we have incorporated a Key Performance Indicator (KPI) which we shall stringently monitor to reduce this cost component and enhance the company's productivity.

v. That Load shedding may be necessary at this point in time. However, ZESCO should implement a transparent load shedding policy which should be made available to the general public.

vi. That ZESCO needs improved tariffs to enhance its financial viability and enhance security of supply of electricity in the nation.

vii. That ZESCO needs to put in place measures to access cheaper capital from the stock market so as to reduce pressure on tariffs.

viii. That the current ZESCO staff tariff is a distortion and is prone to abuse as evidenced by the unusually high per capita consumption of electricity by ZESCO staff consumption which currently stands at 2.4% of total metered residential consumption.

ix. That the time-of-use tariffs for industrial customers and the 10% increae for R1 category of the Residential tariffs will help address the concerns of industrial consumers (including farmers) and vulnerable residential consumers, respectively.

14. BOARD'S FINDINGS FROM FOLLOW UP MEETING WITH ZESCO MANAGEMENT

14.1 Staff costs

Issue: The Board was concerned that Staff costs constituted about 49 % of ZESCO's total costs. The Board wanted to know what measures ZESCO was taking to address these costs.

Response: ZESCO explained that they have since agreed with the Local Authorities Superannuation Fund (LASF) to reduce ZESCO's mandatory 23% contribution per employee's emoluments to 13% as a way of dealing with the huge staff costs. ZESCO explained that this measure has been implemented since 1st December 2007.

The ERB has capped ZESCO's staff costs to 30% by the year 2010 in order to encourage the Utility to be cost conscious.

14.2 Negotiations with CEC plc

Issue: About 50 % of the power generated by ZESCO is sold to CEC, at tariffs which are below cost. ZESCO has stated that they are re-negotiating the tariffs with CEC. The Board wanted to know the status of these negotiations.

Response: ZESCO informed the Board that negotiations with CEC were proceeding well and were envisaged to be concluded soon.

The ERB urged ZESCO to hasten the negotiations as CEC revenue is of considerable importance to ZESCO.

14.3 Kariba North Bank Extension

Issue: ZESCO has announced that it is due to invest US$375 million to put up additional capacity of 360MW at Kariba North Bank. However, this power will only be available for 10% of the time and consequently the produced power will be very expensive. Is this a prudent investment? Is the investment for Zambia or for sale to the Region? If its for sale to the Region, why should Zambians pay for it?

Response: ZESCO explained that the project was a strategic one with future potential benefits for the country. It was clarified that the station would serve as a peaking plant as well as base load plant when KNBC is not available or out for maintenance. On the US$375 million budgeted for this project ZESCO explained that the correct figure was US$243 million plus US$57 million interest during construction making it US$300 million.

The ERB therefore included this project in the revenue requirement with a revised capital project figure of US$243 million.

14.4 Imports

Issue: The Board was concerned with ZESCO's projected phenomenal increase in imports of power from nil imports in 2007 to K860bn in 2008, K2 trillion in 2009 (an increase of 128%) and a further increase in 2010 of 40% to K2.8 trillion. The Board wanted to know the basis of this colossal increase in the import bill when the whole SADC region is short of power?

Response: ZESCO explained that they agreed with ERB's view that the budgeted power import figures were not sustainable. It stated that the Zambian system had capacity to import 300MW but had revised the model to make a provision for importation of 120MW of daily deficit.

The ERB has however, maintained the earlier adjustment to allow 30% of what was the projected shortfall based on the peak shortfall.

14.5 Trade Receivables

Issue: The Board was concerned that Trade Receivables as a % of turnover was 48% in the 2006/2007 financial year. This is equivalent to almost 180 debtor days. The Board wanted to know what steps ZESCO was taking to improve revenue collection and reduce debtor days.

Response: ZESCO clarified that the bulk of debtors was constituted by the retail customers owing K179 billion, water utilities owed K33 billion, Government owed K232 billion of which K209 billion was ear-marked for a debt swap, parastatals owed K6.8 bilion, Councils owed K 2 bilion and REA owed K40 billion. ZESCO stated that it is buying pre-paid meters for residential customers to improve collections as well engaging various stakeholders to improve debt collection.

The ERB has maintained its initial position that ZESCO reaches the KPI of 60 debtor days by the year 2010 so as to improve ZESCO's liquidity.

15. ORDER:

UPON HEARING ZESCO on its proposal to vary electricity tariffs and **UPON HEARING** Consumers of electricity on the proposed variation, We **HEREBY ORDER AS FOLLOWS:**

1. **THAT Tariffs for the multi-year period 2008-2010 be varied as tabulated in the table below:**

Table 4: ERB approved multi year tariff variation

Customer Category	**2008**	**2009**	**2010**
Residential	26.8%	16.6%	11.9%
Commercial	1.3%	0.3%	0.3%
Services	6.8%	1.9%	1.9%
Small Power (MD1 &MD 2)	16.2%	5.5%	4.5%
Large Power (MD3 & MD4)	27.5%	16.6%	2.2%

2. That the adjusted tariffs for 2008 as tabulated in the table below be effective on 1st January 2008:

Table 5: ERB approved tariff schedule for 2007/8

PROPOSED & ADJUSTED TARIFF SCHEDULE : 2007				
CATEGORY	**Old Tariffs**		**ZESCO proposed Tariffs (ZMK)**	**ERB adjusted tariff (ZMK)**
1.UNMETERED RESIDENTIAL				
L1- Consumption upto 2Amps	(K/Month)	4,911	7,121	Abolished
L2- Consumption between 2 - 15 Amps	Energy Charge/Month	17,770	25,767	Abolished
2.METERED RESIDENTIAL (capacity 15 kVA)				
R1 -Consumption upto 100kWh	Energy charge/kWh)	70	102	77
R2- Consumption between 101 & 400 kWh	Energy charge/kWh)	100	145	127
R3 - Consumption above 400 kWh	Energy charge/kWh)	163	236	207
Pre-paid Tariff	Enegry charge/kwh	111	161	141
Fixed monthly charge covers all residential customers	Fixed Monthly Charge	5,845	8,475	7,411
3.Commercial tariffs (capacity 15kVA)				
C	Energy charge/kWh)	163	245	165
	Fixed Monthly Charge	29,227	43,841	29,607
4.SOCIAL SERVICES				
Schools, Hospital ,Orphanages, churches, water pumping & street lighting	Energy charge K/kWh	135	201	144
	Fixed Monthly Charge	23,382	34,839	24,972

Table 5 continued

5.MAXIMUM DEMAND TARIFFS				
MD1- Capacity between 16 - 300 kVA	MD charge/kVA/Month	6,943	11,803	8,068
	Energy charge /kWh	100	170	116
	Fixed Monthly Charge	68,002	115,603	79,018
MD2- Capacity 301 to 2000 Kva	MD charge/kVA/Month	12,990	22,083	15,094
	Energy charge /kWh	85	145	99
	Fixed Monthly Charge	136,003	231,205	158,035
MD3- Capacity 2001 to 7500kVA	MD charge/kVA/Month	19,587	34,277	24,973
	Energy charge /kWh	63	110	80
	Fixed Monthly Charge	272,006	476,011	346,808
MD4-Capacity above 7500kVA	MD charge/kVA/Month	19,696	34,468	25,112
	Energy charge /kWh	52	91	66
	Fixed Monthly Charge	544,012	952,021	693,615
MD Time of Use tariffs	MD charge/kVA/Month		50% discount on Capacity charge	50% discount on Capacity charge
	Energy charge /kWh		25% discount on energy charge	25% discount on energy charge
	Fixed Monthly Charge		Applicable fixed charge	Applicable fixed charge

Note: The above tariffs are exclusive of Government excise duty and VAT

Table 6: Approved Multi-year tariff adjustment rates

	Customer Category	2008	2009	2010	Cumulative increase
Residential	ERB approved	26.8%	16.6%	11.9%	65%
	ZESCO applied	45%	37%	29%	156%
Commercial	ERB approved	1.3%	0.3%	0.3%	2%
	ZESCO applied	50%	10%	10%	82%
Services	ERB approved	6.8%	1.9%	1.9%	11%
	ZESCO applied	49%	22%	21%	120%
Small power	ERB approved	16.2%	5.5%	4.5%	28%
	ZESCO applied	80%	29%	16%	159%
Large power	ERB approved	27.5%	16.6%	2.2%	52%
	ZESCO applied	75%	55%	29%	250%

3. **That ZESCO directs adequate resources from the enhanced revenue to the maintenance of plant and equipment and the strengthening of its transmission and distribution networks, in line with the revenue allocated to these activities in the tariff, so as to improve quality of supply.**

4. **That ZESCO monitors and complies with all performance benchmarks that form part of the incentive based tariff framework such as metering of customers, reducing system losses, reducing staff costs as proportion of the operating budget, increasing staff productivity, reducing debtor days to 60 days from current levels of about 180 days, reducing number of unplanned outages per customer and reducing waiting time for applicants for new service connection.**

5. **That ZESCO furnishes the ERB within 60 days, with a plan of how it expects to reduce the connection waiting time for customers who pay service connection fees.**

6. **That ZESCO furnishes ERB within 60 days, with a plan of how it intends to reduce the financial burden on people wishing to connect, thereby increasing access to electricity.**

7. **That ZESCO adheres to all Key performance benchmarks agreed with the ERB to improve efficiency of operations.**

8. **That ZESCO furnishes the ERB within 60 days, with a comprehensive plan of how they intend to contain staff costs from current levels of about 49% of operating budget to about 30% of operating budget to efficient levels by 2010.**

9. **That ZESCO implements necessary measures to enhance the utility's productivity from the current 61 customers per employee to 100 by 2010.**

10. **That ZESCO furnishes the ERB within 60 days, with a comprehensive 3 year Demand Side Management plan to help mitigate the supply deficit in the nation given the financial and time constraints in**

building new generation capacity and obtaining adequate imports from the region to meet the anticipated power deficits.

11. That ZESCO furnishes ERB within 90 days, with its plan to re-engineer ZESCO's capital structure and improve shareholders' equity by 2010.

That ZESCO provides the public timely notice wherever possible, on its load shedding plans.

12. That ZESCO abolishes the current staff tariff for its employees and applies approved residential tariffs for its members of staff as with other customers effective 1st January 2008.

It is FURTHER ORDERED and pointed out that this being a Multi-year Tariff award, the indicative tariffs for the years 2009 and 2010 will only come into effect upon ZESCO's successful attainment of the performance indicators agreed between ZESCO and the ERB, which include, but are not limited to, the following:

a) Metering of customers;
b) Cash Management;
c) Staff Productivity;
d) Quality of service; and
e) System losses.

ZESCO's accessing of the indicative tariffs for 2009 and 2010 is therefore CONDITIONAL upon ZESCO achieving or exceeding the agreed performance indicators.

Dated this 18th day of DECEMBER 2007.

Mr. Sikota Wina
Chairman

Mrs. Idah Nkhoma
Vice Chairperson

Mr. Elias Mpondela
Board Member

Mr. George Samiselo
Board Member

Mrs. Pixie Yangailo
Board Member

Mr. Hobson Simasiku
Board Member

N Tembo

Mr. Nicholas Tembo
Board Member