



Energy and Environmental Concerns for Zambia

# REPORT ON THE ZAMBIA NATIONAL ENERGY POLICY CONFERENCE HELD AT MULUNGUSHI CONFERENCE CENTER FROM 28 TO 29 MARCH 2004

Friedrich Ebert Stiftung (FES) P.O. Box 30554 5583 Great East Road Lusaka Tel: +260 1 295615/6 Fax:+260 1 293557 e-mail: fes@zamnet.zm Energy and Environmental Concerns for Zambia (EECZ) P.O. Box 51288 Lusaka

Tel: +260 96 751871 Fax:+260 1 238545 e-mail: samusonda@yahoo.com

# REPORT ON THE NATIONAL ENERGY POLICY CONFERENCE HELD AT MULUNGUSHI INTERNATIONAL CONFERENCE CENTER LUSAKA FROM 28<sup>TH</sup> TO 29<sup>TH</sup> MARCH 2004

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# SUMMARY

The Zambia National Energy Policy Conference was held on 28<sup>th</sup> -29<sup>th</sup> March, 2004 at the Mulungushi International Conference Centre. The conference was organised by Energy and Environmental Concerns for Zambia (EECZ) in collaboration with Fredrich Ebert Stiftung (FES). The conference attracted many Members of Parliament, Chief Executives and Senior members of staff of Energy Utilities and the civil society. The main objective of the conference was to familiarise Members of Parliament and the civil society with the current energy Policy in order for them to make contributions towards the review of the National Energy Policy through debate.

# BACKGROUD

The Government through the Ministry of Energy and Water Development (MEWD) recognizes the need for the evolution of an Energy Policy that would guide development in the supply and demand of the various energy sources in the country. This has become especially important in view of the changed macro-economic environment in which liberalization and private enterprise have become the norm. The current National Energy Policy of 1994 does not address some of the important requirements to guide sustainable development in the energy sector. In order to come up with a good policy, a wide spectrum of stakeholders will have to be consulted. It is in this light that the National Energy Policy Conference was organised by the EECZ and FES.

#### **CONFERENCE OBJECTIVES**

The main objective of the conference was to familiarise Members of Parliament and the civil society with the current Energy Policy in order for them to make contributions towards the review of the National Energy Policy. Specific objectives were:

- provide information on the operations of the energy sector and help identify major key players in the sector
- identify issues to be included and requiring review in the main sections of the Policy Documents, such as Electricity; Biomass; Petroleum; Coal and Energy Management and; Rural Energy and Renewable Energy

#### METHOD

Presentations were made on different topics. There were discussions following presentations. The discussions allowed for participants to make recommendations at the end of presentations.

# **OFFICIAL OPENING**

• Welcoming Remarks

Mr. Geoffrey Musonda, the Secretary of Energy and Environmental Concerns for Zambia (EECZ), welcomed the participants and introduced the high table.

#### • Introduction of the Objectives

Mrs. Edith Chilembo, the Chairperson of Energy and Environmental Concerns for Zambia (EECZ), gave an outline of EECZ and the objectives of the Conference. In her speech she said that the decision by the government to commence the review of the energy policy was a relief. She also said that the development of modern household energy in Zambia had been biased towards urban areas to almost the exclusion of rural areas.

# • Opening Remarks

Mr. Michael Schultheiss, Resident Director – Friedrich Ebert Stiftung gave his opening remarks. In his speech Mr. Schultheiss said privatisation of the energy sector was not the solution because a private monopoly was as bad as a public one. He also said that the energy policy was crucial and sensible area of decision making as it was important for the economic development of the country.

# • Official Opening Speech

Mr. Alex Musanya, the Deputy Minister of Energy and Water Development, officially opened the conference on behalf of the Minister, Hon. George Mpombo. He said that government was enthusiastic and keen to see that the process of reviewing the energy policy was a success. He explained that it was government's desire to have a revised policy that would be responsive to the current social-economic aspirations of the country.

He said that progress had been made since the current energy policy was adopted in 1994 and noted that there had been institutional framework changes in the sector, which saw the creation of the Energy Regulation Board. He further noted that they had been legislative changes that led to the removal of ZESCO monopoly in the power sector bringing in private sector such as the Copperbelt Energy Company (CEC) and the Lunsemfwa Hydro Power Company. He also said changes had been made in the establishment of the Rural Electrification Fund and the Rural Electrification Authority.

# DELIBERATIONS

Ten presentations were made during the two days of the conference. After each presentation, there were discussions. Later, recommendations were made on various critical areas.

The deliberations were as follows:

Paper No. 1

1. The Role of Civil Society in Energy Resource Development in Zambia (Mrs Edith Chilembo-Chairperson, Energy and Environmental Concerns for Zambia-EECZ) The presentation looked at the role of NGOs as a vehicle for delivering modern energy technologies to the rural areas through advocacy, education and awareness. (for the full paper contact Friedrich Ebert Stiftung)

The following issues were raised in the discussions that ensued:

Hon. Bert Mushala (M.P. Mufumbwe):

- What is the role of ZESCO and Copperbelt Energy Company (CEC)?
- What is the role of Civil Society in energy resource development in Zambia?

• Why is Zambia not exporting power to more countries than it is currently doing?

• Will the conference discussions be of benefit to Zambia?

Response from the Conference Chairperson, Dr. Alvert Ng'andu (UNZA):

- \* The issues raised by the Honorouble M.P. concerning ZESCO and CEC will be covered more appropriately in the relevant presentations.
- \* As for the discussions being of benefit to Zambia, it was up to the participants to make it so.

Hon. Chance Kabaghe (M.P. Matero):

- The issue of rural electrification is very important and should be supported.
- Rural communities should be consulted in any energy projects that are meant to benefit them.
- However, the fact that lack of resources hindered work in rural areas should be acknowledged.

Response from Mrs. Chilembo:

\* I totally agree with Hon. Kabaghe's contributions.

Hon. R. M. Kapita (M.P. Mwinilunga):

• NGOs need to spend more time in rural areas than they do in urban areas. This is because rural areas are being left out in many initiatives being spearheaded by NGOs.

#### Response:

\* NGOs would like to work in rural areas when funds are available. To this effect, EECZ has planned a series of energy needs assessments for the whole country. However, certain NGOs are seriously involved in rural areas. Ms Lubinda Tafira may attest to that.

- \* ZAW is involved with rural communities by distributing improved cook-stoves.
- \* Financiers of projects are also choosy, they prefer areas where they can easily monitor progress.

Hon. Chitalu Sampa (M.P. Kalulushi ):

- There should be regulation on burning of forests as was the case in the colonial days.
- Cutting of trees should not be allowed along rivers and in wetlands.
- Trees cut during charcoal burning should be replaced.
- Environmental organizations should come up with ways of channeling water from areas of abundance to areas with water scarcity.
- Energy education and awareness should be encouraged.

#### Response:

\* These are some of the issues EECZ aims to tackle.

*Hon. Nedson Nzowa* (Dep. Minister, Ministry of Tourism, Environment and Natural Resources):

• How possible is it to distribute paraffin in containers with special tops, as a safety measure for children, considering that paraffin is not sold as a pre-packed commodity.

#### Response:

\* Mechanisms could be worked out to ensure that safety measures are put in place against accidents involving children arising from poor handling of paraffin.

Hon. Japhet Monde (M.P. Bwengwa):

• Are Youth included in the planning of energy projects?

#### Response:

\* EECZ's programmes are all-inclusive.

#### Hon.Peter Machungwa (M.P. Luapula):

• EECZ should be commended for coming up with programmes that are gender sensitive because indeed energy is a gender issue.

However, NGOs should focus more on rural women.

Hon. P. H. Kangwa (M.P. Solwezi East):

- EECZ should intensify its awareness campaigns against deforestation as forests are diminishing.
- NGOs should be active throughout the year and not only towards election time as has been observed in most cases.

Hon. Haakaloba (M.P. Magoye) :

- To what extent has the rural electrification programme failed or succeeded?
- How fair is it for electricity pylons to pass over areas, which are not electrified? Would this not foster vandalism?
- In Chikankata and Magoye, there is a problem of deforestation. Are there any reforestation plans?

Chairman's Response:

\* The issues of electrification will be covered in the relevant presentations.

*Mr. Teza Nchinga* (Vice-President, Federation of Free Trade Unions in Zambia-FFTUZ):

• Why is there a contradiction in the views regarding ZESCO's commercialization/privatization exhibited by Mrs. Chilembo of EECZ and Mr Schultheiss Friedrich Ebert Stiftung (FES) expressed in their presentations, considering that the two speakers come from the two institutions involved in the organisation of the conference.

Chairman's Response:

\* The fact that EECZ and FES are co-organizers of the conference does not mean they have to agree on all matters.

Paper No. 2

2. The 1994 National Energy Policy (Mr. Oscar Kalumiana. Assistant Director, Department of Energy)

The paper was an overview of the 1994 National Energy Policy (for the full paper contact Friedrich Ebert Stiftung).

#### Paper No. 3

3. Challenges in Implementing the 1994 National Energy Policy (Mr. Oscar Kalumiana. Assistant Director, Department of Energy)

The paper highlighted the major obstacles to the implementation of the 1994 National Energy Policy (for the full paper contact Friedrich Ebert Stiftung)

The two presentations brought out the following discussions:

Hon. Emmanuel Hachipuka (M.P. Mbabala):

- The National Energy Policy document should be distributed to the Members of Parliament since many are not familiar with its Contents.
- The stakeholders in the Energy Sector should be well defined

Response from Mr. Schultheiss:

\* The document will be made available before the conference ends.

Response from Mr. Kalumiana:

\* The issues of who is a stakeholder need to be revisited in the review of the policy.

Hon. Maxwell Mukwakwa (M.P.):

• The funding to the Ministry of Energy and Water Development should be increased in view of the importance of the energy sector to National development.

Hon. T.M. Bwalya (M.P. Kasama Central):

• Is the report on the Chama oil exploration available?

#### Response:

\* The report is not available at the Department of Energy since the Exploration Unit of the department has just been formed.

Hon. Ompie Nkumbula Liebenthal (M.P. Namwala):

- Why do people in urban areas, that have access to electricity, use charcoal?
- Why is charcoal and fire wood referred to separately?
- Are there any women involved in the charcoal business?

Response:

- \* People in urban areas use charcoal as a backup against power failures. Another reason given is that certain foods taste better when prepared on charcoal.
- \* Intervention measures for charcoal are considered separately from fire wood because fire wood targets deadwood while charcoal production targets live trees.
- \* There are many women involved in the charcoal industry through the hiring of men to do the actual production of charcoal.

# Hon.C. Kabaghe:

- The Nine billion Kwacha (K9,000,000,000.00) budgeted for rural electrification should be prioritized on productive areas.
- Many residents who were connected to electricity in Matero township cannot afford to pay the bills and have been disconnected.

#### Response:

- \* The nine billion Kwacha will be shared equally among the nine provinces of Zambia.
- \* Rural electrification does not just concentrate on productive areas but also has a social aspect.

# Hon. Machungwa:

• Why has there been a reduction in the percentage of the population with access to electricity?

# Response:

\* The collapse of certain industries and the population increase that is not matched by a similar increase in electrification rate are the main reasons for the decrease.

# Hon. Haakaloba:

• How does solar, wind and biogas energy compare with hydroelectricity in terms of affordability, efficiency and acceptability.

# Response:

\* Apart from the high initial costs, they compare quite well.

Hon. Gunston Sichilima (Deputy Minister, Ministry of Local Government and Housing):

- Why do people in rural areas pay more for petroleum products than those in urban areas? Why is there no uniformity of prices as is the case with electricity tariffs?
- ZESCO is known to offer good conditions of service to its employees. Are the electricity consumers not shouldering these?
- Poles that can be used for electrical installations are readily available in Mbala, but ZESCO still contracts companies on the Copperbelt to supply poles.

Mr. Alex Mangamu (Director, Generation and Transmission-ZESCO):

- \* Commercial/Industrial customers pay higher tariffs than domestic customers.
- \* Electricity tariffs in Zambia are the lowest in the SADC region.
- \* The electricity tariffs do not reflect the true cost of producing the power. What is indicated is much lower. A good example is that it costs more to deliver power to faraway places than it does to supply places near the source of the power and yet the tariffs are uniform throughout the country even for those supplied from diesel sets.
- \* Electric poles used by ZESCO need to meet certain specifications to ensure longevity. There is only one company, based in Ndola that makes poles of such specification.

Response from *Mr Lukonde Mfula* (Inspector, Petroleum, Energy Regulation Board):

\* The petroleum industry is a deregulated industry. Therefore, transport costs have to be reflected in the price.

Hon. Kapita:

- What is the position of Trans-Sahara Trading (TST)?
- Why are mining companies importing coal from Wankie instead of Maamba?
- Why doesn't ZESCO phase out diesel generation of electricity?

Response from the Chairman:

- \* The first two questions will be tackled in later presentations.
- \* May someone from ZESCO respond to the third question?

Mr. Alexis Matale (Director, Distribution and Supply - ZESCO):

- \* There are ten diesel power generation plants countrywide on which ZESCO spends K 24 Billion yearly and yet collects only K 300 Million from the tariffs every year.
- \* By the end of this year Kasempa and Kaoma will be connected to the national grid.

#### Paper No. 4

4. The Role of the Energy Regulator in Zambia (Mr. Lukonde Mfula, Inspector, Energy Regulation Board-ERB)

The presentation highlighted the role and the successes of the ERB to-date. (for the full paper contact Friedrich Ebert Stiftung)

From the discussions that followed, a number of observations were made and issues were raised. The following are some of the questions and comments:

Hon. E. M. Mudenda (M.P. Dundumwezi) :

• Why do petroleum prices increase with distance from Indeni?

Response from Mr. L. Mfula:

- \* The petroleum industry is a deregulated industry. Therefore, transport costs have to be reflected in the price.
- Hon. M.Mukwakwa:
  - What criteria are used to appoint the ERB Board?

Response:

\* Appointment to the Board is on an individual basis as long as the appointee has certain skills required on the Board.

# Hon. Haakaloba:

• Why is there no stakeholder representation on the ERB Board?

Response:

\* The Act does not stipulate appointment based on stakeholder representation.

#### Hon. Kapita:

• Why does TOTAL operate both as a crude oil refiner and as an

undertaking? Doesn't this compromise on impartiality?

- What successes have been scored against illegal fuel vending?
- What is ERB's role on Zambezi Oil Transport (ZOT)?
- Why does Maamba Collieries fail to meet local demand?

Response from Mr. Mfula:

 $\ast$  TOTAL does not sit on the Indeni Board . Therefore it can not influence decisions of the Board.

- \* A Task Force has been created to fight illegal fuel vending and the scourge is reducing in certain areas.
- \* The Minister of Environment and Natural Resources gave the final authority for the ZOT project to go ahead.
- \* Maamba collieries has fallen into high levels of collapse and needs re-capitalisation. Currently Maamba cannot meet the local demand.

#### Mr. Teza Nchinga:

- Why doesn't ERB regulate the charcoal/woodfuel market?
- Why are there no special electricity tariffs for other sectors of the economy as there are for commercial maize farmers.

#### Response:

- \* The charcoal industry is not well organised. It is scattered all over the country and ERB has no capacity to regulate such an industry. The Forestry Department is in a better position to regulate the market.
- \* Special tariffs apply to commercial farmers with a minimum of 30 hectares of maize and subsistence farmers with a minimum of 5 hectares of maize. These special tariffs were put in place because of Government's special emphasis on agriculture.

# Hon. Hachipuka:

• Why does the fuel structure remain the same even for fuel that does not pass through Indeni, such as refined fuel from South Africa.

#### Response:

\* This is because Zambia Revenue Authority does not allow refined fuel bought outside the country to be offloaded anywhere else apart from Ndola.

#### Ms. L. Tafira:

• ERB should seriously consider regulating the charcoal sector as this may bring sanity to the industry.

Response:

\* When the charcoal industry becomes better organised or when ERB gains more capacity, the industry will be regulated.

#### Hon. Haakaloba:

• Who does ERB work with to enforce regulation?

#### Response:

\* The ERB task force is comprised of ERB, Zambia Revenue Authority and Anti Corruption Commission (ACC). The Zambia Police are also involved when raids on illegal fuel venders are carried out.

#### Hon. Sichilima:

• Is there any component of ERB that monitors the grade of fuel?

#### Response:

\* ERB monitors grades of fuel, for example there are two types of diesel; High sulphur gas oil used in underground operations and low sulphur gas oil used above ground.

#### Paper No. 5

4. Challenges of Rural Electrification in Zambia (Mr. Charles Mulenga, Senior Electricity Officer, Department of Energy)

This presentation looked at the objectives of Rural Electrification in Zambia and its obstacles. (for the full paper contact Friedrich Ebert Stiftung).

From the discussions, the following comments and questions were raised:

Hon. Charles Banda (M.P. Kapoche) :

• Rural electrification will be very beneficial to rural people. What are the major obstacles to its success?

Response from Mr. Mulenga:

\* Lack of funds coupled with the high cost of rural electrification (It costs 50 - 60 million Kwacha to extend the grid by a kilometer) has been the major obstacle to progress.

#### Hon. O. N. Liebenthal:

• What are 'smart subsidies' as referred to in the presentation?

- How soon is the Rural Electrification Authority (REA) going to be formed?
- What is the rural electrification policy on rural communities that tend to be 'mobile'?
- What are the conditions for the support being received from the co-operating partners?
- What is being done to ensure that the 30% women representation on REA as mentioned in the Act will be maintained?

#### Response:

- \* Smart subsidies are the kind where Government pays to the service providers the shortfall to what they are supposed to collect if they were charging economical tariffs.
- \* It is difficult to be exact in terms of how soon REA will be in place.
- \* It is hoped that provision of electricity to rural communities will be an incentive for people to stay in one place and develop their communities.
- \* The main condition to donor funding in this case is accountability and efficiency.
- \* If a 30% women representation is mentioned in the Act, then it will be followed. However, appointment to REA will be on merit.

# Hon. G. Sichilima:

- The failure to electrify rural areas is not a ZESCO problem but is a result of non-availability of money.
- Will the creation of REA not make the electrification of rural areas more expensive to the local people ?

# Response:

- \* Total agreement over Hon. Sichilima's views on the real problem in rural electrification.
- \* REA is expected to take on the social responsibility of electrification that cannot be taken by electricity utilities that operate commercially.

# Hon. P. Machungwa:

- The Rural Electrification Authority (REA) is an ideal vehicle to administer rural electrification funds and attract donor funding because it is expected to be free from political interference.
- How will REA generate money?

# Response:

\* Since rural electrification will be an integrated developmental plan,

its linkages with other productive sectors of the economy, such as agriculture and tourism are expected to make it sustainable.

#### Hon. Kangwa:

• Why does it take too long to receive a response to a rural electrification application?

#### Response:

\* Before restructuring of the Department of Energy, there was a shortage of manpower. However, the staffing levels of the department have improved and responses to rural electrification applications are being made on time.

#### Hon. Hakaloba:

- Emphasis on electrification should not only be in productive areas, but also as a social exercise.
- ZESCO should not complain about the cost of electrification when it can afford to make political donations.

#### Response from Mr. Mulenga:

\* Rural electrification is a socio-economical programme, therefore institutions such as clinics and schools will be electrified regardless of whether they are situated in productive areas or not.

#### Response from Mr. Mangamu:

\* ZESCO has been improving on its efficiency in the last two years and as a result does not make political donations. However, donations of a social nature such as to football are made when possible.

# Hon. Kapita:

• Zambia should learn from the success of rural electrification in South Africa.

#### Response from Mr. Matale:

\* South Africa isn't a good example for comparison with Zambia because of the differences between the two countries' economies.

#### Hon. David Matongo (M.P. Pemba) :

• Provision of electricity should not be looked at in isolation, but

should be linked to building of schools, clinics, roads and other infrastructure.

• Before electricity is taken to rural areas, people need to be educated on how to use it.

#### Hon. Mubanga:

• Will the disbursement of the electricity levy depend on the areas from which it has been collected.

#### Response:

\* Disbursement of funds is irrespective of the areas it is collected from.

#### Hon. Mukwakwa:

- To what extent has Government consulted and engaged the utilities in developing the rural electrification strategy.
- What will be the role of other utilities in the implementation of the rural electrification strategy.

#### Response:

- \* The rural electrification strategy was formulated after wide consultations with all energy stakeholders including the utilities.
- \* All utilities, including ZESCO will have equal opportunities to vie for rural electrification projects.

# Hon. E. Hachipuka:

• How cost effective is ZESCO?

#### Response from Mr. Mangamu:

- \* ZESCO ,s cost of production is very effective.
- \* Tariff is sub-economic but is cushioned by effective cost of production.
- \* ZESCO supplies first class power to the mines
- \* Only 3% losses are incurred during transmission. This is within the Internationally acceptable losses.
- \* The customer to employee ratio has increased from 23:1 in 1992 to the present 83:1. The Internationally acceptable ratio is from 70:1.
- \* ZESCO is operating profitably.
- \* There is rehabilitation of the old generation equipment.
- \* The customer base has increased from about 180,000 in 1991 to about 300,000 at present.

Paper No. 6

6. The Role of Renewable Energy in Sustainable Development (Mr. Geoffrey Musonda, Secretary, EECZ)

The presentation outlined the various renewable energy options available in the country, the rationale for its use and the obstacles to its use. (for the full paper contact Friedrich Ebert Stiftung)

The following contributions followed the discussion:

Hon. Nzowa:

- What is the current position on attempts to make operational the Kapishya Geothermal Scheme.
- Zambia should emulate Kenya in the development of geothermal technology.

Response from Mr. Musonda:

- \* There are more issues involved with the Kapishya geothermal scheme than mere transmission. Unfortunately, this conference may not provide all the answers.
- \* Indeed, the Kenya geothermal experience is one from which we can learn something.

Hon. Mukwakwa:

• Workshops, seminars and conferences reveal that there is abundant knowledge that is not being utilized. Are there no mechanisms in Government to implement the findings from research?

#### Response:

\* Unfortunately, in Zambia, the linkages between research institutions and implementing organizations are not strong. This has to be rectified.

Hon. P. G. Phiri (M.P. Chipata) :

• Has EECZ got an office in Chipata?

Response:

\* EECZ has no office in Chipata but has plans to reach out to all parts of the country.

Mr. Ndopu Imbuwa (Director, Dept. of Science and Technology):

- There is need for a legal framework to remove the barriers to implementation of renewable energy technologies.
- There is an absence of linkages between Government institutions that have a common interest.

Response:

\* The observations by Mr. Imbuwa are very true.

Hon. Mkondo Lungu (M.P. Lundazi) :

- Are there any steps to make provision of solar energy to rural areas cheaper?
- Is there any monitoring involved on agents of solar equipment in terms of their profit margins?

Response from Ms. Clotildah Mwanza (Senior Energy Officer, DOE):

- \* There is a lot of research currently going on in the Eastern Province. Currently pilot projects are on-going in Nyimba, Chipata and Lundazi.
- \* Provision of solar energy is being done through Energy Service Companies (ESCOs) and there is a fixed charge of K35,000 per month.

Hon. M. Wanyambe (M.P. Mulobezi) :

• What happened to the Mulobezi Biomass project?

Response from Mr. Musonda:

\* There isn't much information available to us on the same project.

# Hon. Machungwa:

• Solar energy for rural areas is a good alternative because of the scattered nature of rural communities. What is Government doing to encourage research and investment in solar energy?

Response from Mr. Matale:

\* UNIDO has been doing projects in renewable energy in parts of Northern provinces involving solar, biomass (Kaputa) and minihydro (Shiwang'andu). However, we do not have the full report on the status of these projects.

Hon. Haakaloba:

• Wind energy equipment (windlasses) were quite helpful especially for cattle owners in Southern Province. What is being done to revisit the issue?

Response from Mr. Musonda:

\* The main problem with these windlasses was ownership and as a result they fell into a state of disrepair. If there are individuals who want this technology and have the resources, it can be provided.

#### Mr. Matale:

• Due to the high initial costs involved in implementing renewable energy technologies, smart subsidies should be considered in this area as well.

# Response:

\* I totally agree.

# Mr. M. Schultheiss:

• Before renewable energy is introduced on a wider scale, there is need to educate people on energy conservation. There is a lot of wastage in the way energy is used in Zambia. A lot of savings can be made, as is the case in Europe.

# Response:

\* It is true that energy conservation is not commonly practiced in Zambia. It is for this reason that one of the objectives of EECZ is Energy Conservation awareness. So far, workshops on energy conservation have been held at schools.

#### Hon. Lungu:

• How true is the belief that lighting systems do not consume much power?

# Response:

\* This depends on many factors such as the type of the bulb, such as its wattage and the period when it is left on.

# Hon. Kapita:

• If blending of petrol with ethanol is such an energy saving idea, why is it not being promoted in Zambia?

Response from Mr. Mfula:

\* Tax regime on ethanol is high. Unless a deliberate policy is put in place to reduce it, the idea will not be feasible.

Mr. Titus Mwandamena (Copperbelt Energy Company) :

- What is the generating capacity of geothermal sites in Zambia?
- How can excess solar electricity be sold to the grid?

#### Response:

- \* The exact generation capacity from geothermal sites is not known, the study done in the mid 80s only indicate surface temperatures of the hotsprings.
- \* It is possible to sell solar energy to the grid as it is being done in Germany. Technology is available to do so.

# Paper No. 7

7 The Role of Privatization in the Zambian Economy with Special Regard to the Energy Sector (Mr. Austin Muneku, Zambia National Congress of Trade Unions)

The paper gave the general view of the Trade Union movement on privatization. The view is that if privatization is externally driven and unplanned, it can bring misery to the people. However, the energy sector is strategic and therefore should not be privatized. (for the full paper contact Friedrich Ebert Stiftung)

Paper No. 8

8. Commercialization of ZESCO – is it a Panacea? (Ms. Violet Tembo, Ministry of Commerce, Trade and Industry)

This presentation looks at the various options that were available in order to make ZESCO more efficient and why commercialization was considered the best option. (for the full paper contact Friedrich Ebert Stiftung)

# Paper No. 9

9. Commercialization of ZESCO, how does it Affect other Players in the Economy? (Mr.Webster Kalaluka, Economic Association of Zambia-EAZ)

In general, this presentation highlighted the positive impacts that the commercialization of ZESCO will have on other players in the economy. (for the full paper contact Friedrich Ebert Stiftung)

The following were the questions and comments that came from the three presentations:

# Hon. Liebenthal :

- Is it possible to sensitize people to desist from using charcoal if electricity is available?
- Who is the appointing authority at ZESCO?
- Mechanisms should be put in place to ensure that money collected by ZESCO for rural electrification goes to the intended purpose.

# Hon. Kangwa:

- What is the ZCTU doing to help Government make correct decisions?
- Do Unions have any programmes to help victims of liquidations and retrenchments?

# Response from Mr. Muneku:

- \* The Union has on many occasions made its position known on various issues including privatization. Unfortunately, the Unions' advice to Government on privatization has been ignored.
- \* It is Government's responsibility to take care of victims of retrenchments and liquidations. However, where Unions can help, they do help. But they can only do so much.

# Hon. Haakaloba:

- Government is the only institution with the social obligation to electrify rural areas.
- In view of ZESCO commercialization and creation of REA, there is need to have a specific stand on who will stand for the poor in terms of electrification.

Response from Mr. Matale:

- \* Subsidies should be there for the rural poor to benefit from electrification.
- \* REA is there to help the poor.

#### Mr. Schultheiss:

- Is ZESCO operating profitably?
- Is it possible to have a truly independent Board that is appointed by Government?

Response from *Mr*. *Zulu* (Director of Finance-ZESCO) :

\* ZESCO is operating profitably. It made a profit of K61 billion last year and declared a dividend of K20 billion to Government.

#### Mr. Nchinga:

• The Labor movement has always stood against the privatization of the energy sector.

#### Hon. Nzowa:

• How will commercialization work economically if there will be no differential billing?

Response from Mr. Kalaluka:

\* The ZESCO tariffs will have to go up in the short term after commercialization. However, in the long run, they will reduce and stabilize, enabling ZESCO to operate economically.

#### Hon. Hachipuka:

- How can one be convinced that commercialization is the solution?
- Shouldn't ZESCO be left as it is, if it is operating profitably?

Response from Ms. Tembo:

\* It is true that ZESCO has demonstrated that it can operate efficiently the way it is. However commercialization will give Management more independence while Government remains the shareholder.

# *Mr. Dominic J. Mbewe* (Center for Energy Environment and Engineering Zambia limited) :

- Strategic industries should be left in Government's hands.
- Even with commercialization, there will still be political interference.
- Tariffs will not reduce with commercialization.

Chairman's Intervention:

\* There should not be any misunderstanding as regards privatization of ZESCO. No one is saying ZESCO is going to be privatized. ZESCO is being commercialized and with this it means Government will remain the shareholder. As a result this strategic industry will remain in Zambian hands.

Hon. Patricia Nawa (M.P. Mandevu) :

• Is ZESCO paying the Councils for its installations?

Response from Mr. Mangamu:

\* ZESCO pays rates to the Local Authorities for it's installations, even though there have been complaints from certain authorities such as in Kalulushi that ZESCO owes them lots of money. This will be investigated.

# Hon. Hachipuka:

• From the way certain policies are imposed on the Zambians by external sources we are left to wonder; Does Zambia have people who can effectively represent it in negotiations?

# Hon. Mukwakwa:

- How can we have faith in people who, not so long ago, were agreeing that concessioning of ZESCO was the best option, but have now u-turned saying commercialization is the best option?
- The problem we have in Zambia is that we do not think through what we want to do as a country. We seem to be copying what has been done elsewhere without thinking of the implications locally.
- As a country, we need a strong industrial base, but alas due to privatization, we have a weakened industrial base.

Response from Ms. Tembo:

\* The decision to go the commercialization road was not externally imposed. It was wholly a Government decision.

Response from Mr. Kalaluka:

\* As Economic Association of Zambia, we believe that any decision to privatize any more institutions in Zambia should involve a thorough and consultative process.

# Response from Mr. Muneku:

\* As a Union, we have been against privatization of any institution in Zambia and we will forever remain so because of the misery it has caused to many Zambians.

# Hon. Nzowa:

- The concerns that there will be political interference in a commercialized ZESCO are wrong. There will be no political interference!
- Privatization is not as bad as people make it to look. It is just that in Zambia, it was done in a haphazard manner.
- The notion that Government can not be in business is wrong. In many countries Government is running businesses successfully. Therefore, ZESCO should never be privatized.

# Hon. Bwalya:

• Have we sold the idea of mini-hydro potential to the outside world?

# Response from Mr. Matale:

\* There is an office known as Office for Promoting Private Power Investment (OPPPI) whose task is to woo private investors in the Power sector.

# Hon. Machungwa:

• Government has always known the importance of certain strategic industries. It is no accident that institutions like ZESCO, ZAMTEL and ZANACO have not yet been privatized.

# Paper No. 10

10. Policy Guidelines on the Importation of Crude Oil and Distribution of Petroleum Products (Mr. Wankunda Siwakwi, Energy Economist-DOE) The presentation outlined the various guidelines that govern the supply, procurement, distribution, transportation and supply of oil in its various forms. (for the full paper contact Friedrich Ebert Stiftung).

The following were the discussions ensuing from the presentations:

Mr. D. J. Mbewe:

• The oil storage tanks around the country need to be rehabilitated in order to have strategic oil reserves.

Response from Mr. Siwakwi:

\* This issue is receiving attention at a high level of Government.

# Hon. Machungwa:

- Government and TOTAL own INDENI, what kind of contractual arrangements exist between INDENI and Government?
- What is the position of TAZAMA? Are they being paid adequately and timely?

Response:

- \* Indeni has been contracted by Government to be the sole importer of crude oil.
- \* TAZAMA is operating efficiently and is being paid adequately and timely. It has even managed to declare a dividend to Government after a long time.

Hon. Mukwakwa:

- Has the component of middlemen reduced the cost of petroleum in Zambia?
- The cost of Jet A1 is the highest in the sub-region. Most planes refuel in South Africa, robbing the nation of revenue.

Response:

- \* The more middle- men in the supply chain, the more costly the commodity at the end of the supply chain.
- \* Jet A1 is supplied by BP and Mobil. The two suppliers have a monopoly. Government is looking into the matter.

Addition from Mr. Mfula:

\* In other countries in the region with National Airlines, Government is subsidizing Jet A1. Hence the relatively lower prices.

# Hon. Matongo:

• Why does the Tender Board Technical Committee of Crude oil include Anti Corruption Commission (ACC), Office of the President- Special Division (O.P.-S.D.)? Who is watching the watchers?

# Response:

- \* The current composition of the committee is meant to ensure transparency and lack of corruption.
- \* Strategic control of petroleum starts from crude importation to Indeni. Beyond the refinery, free market forces take control.

# Hon. Sichilima:

- Why doesn't the Tender Board Technical Committee of Crude oil include Environmental Council of Zambia (ECZ)?
- Why don't Zambia buy crude from Angola?

# Response:

- \* The issue of ECZ sitting on the Tender Committee will be looked into.
- \* Crude cannot be imported from Angola because there is no well established route and also because bitumen and tar cannot be got as a by-product.

# Hon. Machungwa:

• How did the Kuwait government to government crude oil deal progress.

# Response:

\* The Kuwait issue is still being discussed.

After the plenary sessions, there were four discussion groups from which the following recommendations were made.

# **RECOMMENDATIONS**

#### **1.** Implementation of the Rural Electrification Policy

#### i. Legislation and Enactment of the Law

The Rural Electrification Bill which was passed by Parliament in December 2003 is fully supported. The implementation of Rural Electrification projects should move from ZESCO to REA. Government should ensure that the electricity levy is remitted directly to REA and used for the intended purpose. Applications for rural electrification funds should not be personal but be considered on well-defined guidelines to ensure transparency.

#### ii. Staffing

Recruitment of staff should not be done on the basis of secondment. Recruitment of critical staff for REA through a transparent manner should be done with immediate effect, i.e., through advertisement.

#### *iii.* Provision of Budget

REF funds should be transferred to the REA with immediate effect to enhance the operations of the authority.

#### *iv.* Master Plan

Government should seek funds to prepare a comprehensive rural electrification Master Plan. There must be a contingent plan to manage on going projects. The master plan should consider social aspects apart from profitability of electrification projects.

# v. Financing of the Master Plan

Government should provide funds for the master plan as soon as possible.

#### vi. Smart Subsidies

Where rural electrification projects are unprofitable, the REA should provide smart subsidies in order to accelerate the rate of electrification of rural areas.

#### vii. Operation of the projects

The Energy Policy should clearly indicate who will operate the electricity networks. The alternatives to consider include;

- REA itself operating the networks
- The utility itself in case of grid extension

- REA engaging small companies to run
- The operation might be community based

#### viii. General Recommendations

- Avoid ambiguity, e.g., stakeholders
- Define who is an indigenous Zambian
- The policy should indicate how the prices will come down after commercialisation of ZESCO
- Power Investment Act is required to encourage private investors
- Zambian entrepreneurs should be considered as potential investors and should also benefit from all the incentives to be offered.

# 2. Restructuring of the Electricity Sector

- i. Restructuring of the electricity sector should not be tied to privatization or commercialization of ZESCO
- ii. Restructuring has to have a legal framework and therefore the first step is to look at the existing legal framework
- iii. Need for the enactment of the Power Investment Act.
- iv. Item 2.3.1(iii) in the Energy Policy concerning privatization of the distribution functions of ZESCO should be removed.
- v. Government pronouncements should emphasize more on improving performance of ZESCO than on unbundling the utility
- vi. The Policy should reflect the responsibility of the Hydroelectricity generating companies over the conservation and management of water resources.

# 3. Policy Guidelines in the Petroleum Sector

- i. Oil strategic reserves should be considered as a matter of urgency.
- ii. There must be incentives for suppliers of petroleum to rural areas such as :
  - Tax holidays
  - Removal/reduction of ground rates
- iii. Supply of environmentally friendly petroleum products, such as unleaded petrol, should be promoted in the National Energy Policy.
- iv. Refiner of crude oil to be free to source own raw materials
- v. Petroleum exploration to be encouraged
- vi. Taxation policy on petroleum products should be reviewed
- vii. More Zambians should be encouraged to venture into petroleum business

# 4. Renewable Energy Policy

- i. There should be a clear policy on independent power producers
- ii. Provision of electricity should be targeted towards productive areas in order to generate employment.
- iii. Research institutions should be strictly involved in research while implementation should be done by the private sector.
- iv. Information dissemination should be promoted through advertising.
- v. Government should provide incentives to the private sector to enhance their participation in New and Renewable Sources of Energy.
- vi. Government should promote ethanol-petrol blending and biodiesel by reducing tax on ethanol and offering incentives to the private sector.
- vii. Other renewable sources of energy like biogas, wind and biomass should be promoted in order to provide modern energy services to rural areas.
- viii. Industries should be encouraged to start using renewable Energy Sources in their production and service facilities.

After the presentation of the recommendations, Hon. Mkondo Lungu, M.P. Lundazi Central and the Vice-Chairperson of Committees officially closed the conference.

#### CONCLUSION

The main objective of the workshop was well realised and attendance was well above the number of invited participants because some people just came with out being invited. Participants turned up in large numbers during the two days of the conference including Sunday, which shows that they were very much interested in the topic. The topic of energy was debated with a lot of passion through out the period of the conference. However, the general complaint from the participants was that time was not enough and the women also felt that men dominated the discussions.

Our evaluation process has shown that the workshop was very successful.

Appendix I- Workshop Programme

# PROGRAMME FOR THE ZAMBIA NATIONAL ENERGY POLICY CONFERENCE, 28-29 MARCH 2004, MULUNGISHI INTERNATIONAL CONFERENCE CENTER, LUSAKA, ZAMBIA

# Day 1 :28<sup>th</sup> March 2004

| Period        | Activity   |
|---------------|--|
| 08 00 - 08 30 | Arrival and Registration of Participants   |
| 08 30 - 08 45 | Self Introduction of Participants  |
| 08 45 - 10 15 | Official Opening<br><i>Chairperson-Energy and Environmental Concerns for Zambia</i><br><i>(Mrs. Edith Chilembo)</i><br><i>Resident Director-Friedrich Ebert Stiftung</i><br><i>(Mr. Michael Schultheiss)</i><br><b>Minister of Energy and Water Development</b><br><i>(Hon. George Mpombo)</i> |
| 10 15 - 10 30 | Tea Break  |
| 10 30 - 11 00 | The 1994 National Energy Policy<br>(Mr. Oscar Kalumiana-Department of Energy)  |
| 11 00 - 11 30 | Challenges in the implementation of the National Energy<br>Policy<br>( <i>Mr. Oscar Kalumiana-Department of Energy</i> )   |
| 11 30 - 12 00 | The Role of the Energy Regulator in Zambia<br>(Mr.Lukonde Mfula-Energy Regulation Board)   |
| 12 00 - 13 00 | Open discussion  |
| 13 00 - 14 00 | Lunch Break  |
| 14 00 - 14 30 | The Role of Civil Society in Energy Resource Development in Zambia (Mrs. Edith Chilembo-EECZ)  |
| 14 30 - 15 00 | (Mrs. Earth Chilembo-EECZ)<br>Challenges of Rural Electrification in Zambia<br>(Mr. Charles Mulenga-Department of Energy)  |
| 15 00 - 16 45 | Open discussion  |
| 16 45 - 17 00 | Closing remarks for the day  |
| 19 00 - 20 00 | Cocktail Party   |

# Day 2: 29<sup>th</sup> March 2004

| Period        | Activity  |
|---------------|---|
| 08 00 - 0830  | Arrival of Participants and Registration  |
| 08 30- 08 40  | Presentation of Previous day's Discussions  |
| 08 40 - 09 10 | The Role of Renewable Energy in Sustainable Development (Mr. Geoffrey Musonda-EECZ)   |
| 09 10 - 09 40 | Open discussion   |
| 09 40 - 10 00 | Tea Break   |
| 10 00 - 10 30 | The Role of Privatisation in the Zambian Economy with special regard to the Energy Sector (Austin Muneku-Zambia Congress of Trade Unions)   |
| 10 30 - 11 00 | Commercialisation of ZESCO is it a Panacea?   |
| 11 00 - 11 30 | ( <i>Ms. Violet Tembo-Ministry of Commerce Trade and Industry</i> )<br>Commercialisation of ZESCO how does it affect other players<br>in the Economy?   |
|               | (Mr. Webster Kalaluka-Economics Association of Zambia)  |
| 11 30 - 1300  | Open Discussion   |
| 13 00 - 14 00 | Lunch Break   |
| 14 00 - 14 30 | Policy guide lines on the importation of crude oil and distribution of petroleum products ( <i>Mr. Wankunda Siwakwi- Department of Energy</i> )   |
| 14 30 - 1500  | Open Discussion   |
| 15 00 – 16 00 | <ul> <li>Group Work</li> <li>Group 1: Recommendations on Rural Electrification Policy</li> <li>Group 2: Recommendations on the Restructuring of the Electricity Sector</li> <li>Group 3: Recommendation on Policy guidelines in the Petroleum Sector</li> <li>Group 4: Recommendations on the Renewable Energy Policy</li> <li>Group 5: Recommendations on the implementations of the Rural Electrification Policy</li> </ul> |
| 16 00 – 17 00 | Presentation of Recommendations from the Plenary Discussions  |
| 17 00 - 17 10 | Official Closing of the Workshop  |

# Appendix II LIST OF PARTICIPANTS TO THE ZAMBIA NATIONAL ENERGY POLICY CONFERENCE HELD AT MULUNGUSHI CONFERENCE CENTER FROM 28<sup>TH</sup> TO 29<sup>TH</sup> MARCH 2004

| No, | Name                         | Gender | Address/Organisation                               |
|-----|------------------------------|--------|--|
| 1.  | Hon. R. M. Kapita            | М      | National Assembly of Zambia, P O Box 31299, Lusaka |
| 2.  | Hon. O. Nkhumbula Leibenthal | F      | "  |
| 3.  | Hon. S. K Chitanga           | М      | "  |
| 4.  | Hon. David Matongo           | М      | "  |
| 5.  | Hon. Japhet Mode             | М      | "  |
| 6.  | Hon. E. M. Mudenda           | М      | "  |
| 7.  | Hon. T.M Bwalya              | М      | "  |
| 8.  | Hon. M. Wanyambe             | М      | "  |
| 9.  | Hon. Nedson Nzowa            | М      | "  |
| 10. | Hon. Bert Mushala            | М      | "  |
| 11. | Hon. Joseph Kasongo          | М      | "  |
| 12. | Hon. Patricia Nawa           | F      | "  |
| 13. | Hon. Maxwell Mukwakwa        | М      | "  |
| 14. | Hon. Charles Banda           | М      | "  |
| 15. | Hon. Andrew Hakaloba         | М      | "  |
| 16. | Hon. Dr. Peter Machungwa     | М      | "  |
| 17. | Hon. Y. H Banda              | М      | "  |
| 18. | Hon. P.H Kangwa              | М      | "  |
| 19. | Hon Dalton Sokontwe          | М      | "  |
| 20. | Hon M. Muwowo                | М      | "  |
| 21. | Hon. E.K Chungu              | М      | "  |
| 22. | Hon. Emmanuel Hachipuka      | М      | "  |
| 23. | Hon. P.G Phiri               | М      | "  |
| 24. | Hon.Alex Musanya             | М      | "  |

| 25. | Hon. C.K. Kabaghe        | М | "  |
|-----|--------------------------|---|--|
| 26. | Hon. Gunston Sichilima   | М | "  |
| 27. | Hon. J Chilufya          | М | "  |
| 28. | Hon. Sakwiba Sikota      | М | "  |
| 29. | Hon Kennedy Sakeni       | М | "  |
| 30. | Hon. Mkondo Lungu        | М | "  |
| 31. | Hon. Chitalu Sampa       | М | "  |
| 32. | Hon. C. Pwele            | М | "  |
| 33. | Hon. Enoch Kavindele     | М | "  |
| 34. | Mrs. Edith Chilembo      | F | EECZ Lusaka (Resource Person/Seminar Staff)      |
| 35. | Mr. Geoffrey Musonda     | М | EECZ Lusaka (Resource Person/Seminar Staff)      |
| 36. | Mr. Oscar Kalumiana      | М | Department of Energy (Resource Person)           |
| 37. | Mr. Lukonde Mfula        | М | Energy Regulation Board (Resource Person)        |
| 38. | Mr. Charles Mulenga      | М | Department of Energy (Resource Person)           |
| 39. | Mr. Austin Muneka        | М | ZCTU (Resource Person)                           |
| 40. | Ms. Violet Tembo         | F | Ministry of Trade, Commerce and Industry (RP)    |
| 41. | Mr. Webster Kalaluka     | М | Economic Association of Zambia (Resource Person) |
| 42. | Mr. Wankunda Siwakwi     | М | Department of Energy (Resource Person)           |
| 43. | Ms. Emelda Musonda       | F | Seminar Assistant                                |
| 44. | Mr. Michael Schultheiss  | М | Friedrich Ebert Stiftung (Seminar Staff)         |
| 45. | Mrs. Kathryn Sikombe     | F | Friedrich Ebert Stiftung (Seminar Staff)         |
| 46. | Ms. Florence Mulenga     | F | Friedrich Ebert Stiftung (Seminar Staff)         |
| 47. | Mr. Higgins Chisono      | М | Friedrich Ebert Stiftung (seminar Staff)         |
| 48. | Dr. A N Ngandu           | М | UNZA BOX 32379(Conference Chairman)              |
| 49. | Mr. Michael Mulasikwanda | М | Department of Energy                             |
| 50. | Ms. Musonda Sinkala      | F | Department of Energy                             |
| 51. | Ms. Harriet Zulu         | F | Department of Energy                             |
| 52. | Mr. Ignatius Makumba     | М | Ministry of Tourism and Natural resources        |
| 53. | Ms. Annie M Ngoma        | F | Ministry of Energy & Water Development           |

| 54. | Ms. Chishimba Nkoloma      | F | Ministry of Energy & Water Development                |
|-----|----------------------------|---|---|
| 55. | Mr. Richard Mwala          | М | Ministry of Energy & Water Development                |
| 56. | Mr. Ndopu Imbua            | М | Ministry of Science and Technology                    |
| 57. | Mr. Alex Mangamu           | М | ZESCO   |
| 58. | Mr. Moses Zulu             | М | ZESCO   |
| 59. | Mr. Alexis Matale          | М | ZESCO   |
| 60. | Mr. Edward Zulu            | М | Environmental Council of Zambia                       |
| 61. | Ms. Lubinda Tafire         | F | Zambia Alliance for Women                             |
| 62. | Ms. Edina Sichiyasa        | F | Zambia Association for Research and Development       |
| 63. | Mrs. Patricia Nawa Milambo | F | Women for Change                                      |
| 64. | Mr. Hason Sindowe          | М | Copperbelt Energy Corporation                         |
| 65. | Mr. Titus Mwandemena       | М | Copperbelt Energy Corporation                         |
| 66. | Mr. Teza Nchinga           | М | Vice President Federation of Free Trade Unions (FFTU) |
| 67. | Ms. Clotilda Mwanza        | F | EECZ  |
| 68. | Mr. Charles Changa         | М | EECZ  |
| 69. | Mr. Maka Sikazwe           | М | EECZ  |
| 70. | Mr. Aggrey Siuluta         | М | EECZ  |
| 71. | Mr. Kasongo Chiwama        | М | EECZ  |
| 72. | Ms. Rebecca Hakantu        | F | EECZ  |
| 73. | Mr. Chricent Sialyainda    | М | EECZ  |
| 74. | Ms. Delphiter M. Zulu      | F | EECZ  |
| 75. | MS. Esther Samutele        | F | EECZ  |
| 76. | Mrs. Moydah Mubanga        | F | EECZ  |
| 77. | Mrs. Alice Goma Lungu      | F | EECZ  |
| 78. | Mr. Kapalu Chilila         | М | EECZ  |
| 79. | Mr. Kafula Chisanga        | М | EECZ  |
| 80. | Mr. Abel Mbozi             | М | Times of Zambia                                       |
| 81. | Mr. Joseph Banda           | М | Times of Zambia                                       |
| 82. | Mr. Martin Kapende         | М | Daily Mail  |

| 83.  | Mr. Singy Hanyona   | М | Green Times- Environmental Newspaper |
|------|---------------------|---|--------------------------------------|
| 84.  | Mr. Benny Ndonyo    | М | EECZ                                 |
| 85.  | Mr. Teddy Mwale     | М | ZESCO                                |
| 86.  | Mr. Yohane Mukabe   | М | Energy Regulation Board              |
| 87.  | Mr. C Nthana        | М | ZESCO                                |
| 88.  | Ms. Lisa Hedin      | F | Gothenburg University Sweden         |
| 89.  | Ms. Elisabeth Unden | F | Gothenburg University Sweden         |
| 90.  | Mr. M.M Lidunda     | М | Kariba north Bank                    |
| 91.  | Mr. Nsondo Hamuuna  | Μ | FOCE                                 |
| 92.  | Mr. T. Ngandwe      | М | Box 32295                            |
| 93.  | Mr. A Mukuka        | М | Box 106                              |
| 94.  | Mr. N.C Kaimba      | М | Box 36212 Lusaka                     |
| 95.  | Mr. G M Kasonde     | М | Box 35362                            |
| 96.  | Mr. Kennedy Mambwe  | М | Box 32056                            |
| 97.  | Mr. Billy Kazoka    | М | Radio Phoenix                        |
| 98.  | Mr. Zama            | М | Box 71869 Ndola                      |
| 99.  | Mr. Danstan Kaunda  | М | MISA Zambia                          |
| 100. | Ms. Faith Lukango   | F | Zambia Trade Network Box 39362       |
| 101. | Mr. Tommy Mumba     | М | Africa Today Magazine Box 333611     |
| 102. | Mr. Mwenya Mukuka   | М | Yatsani Radio                        |
| 103. | Mr. Joshua Jere     | М | ZNBC Box 50015                       |
| 104. | Mr. K. T Zulu       | М | MISA- Zambia                         |
| 105. | Mr. S Mulyata       | М | ZNBC Box 50015                       |
| 106. | Ms. Mirram Mulopo   | F | ZANA Phone 251240                    |
| 107. | Ms. Chanshi Musonda | F | ZANA Phone 251240                    |
| 108. | Mr. Evans Kasela    | М | Radio Q FM                           |
| 109. | Mr. S Chifuwe       | М | The Post                             |
| 110. | Mr. K. Kaswede      | М | The Post                             |
| 111. | Mr Francis Lungu    | М | National Mirror                      |

| 112. | Mr. R. D Nyambose | М | Ministry of Energy and Water Development |
|------|-------------------|---|--|
| 113. | Patrick Shawa     | М | WECSZ, P O box 30255 Lusaka              |