



**Economic Commission
for Africa**

**REPORT OF THE AD HOC EXPERT GROUP
MEETING ON SUSTAINABLE ENERGY:
A FRAMEWORK FOR NEW AND RENEWABLE
ENERGY IN SOUTHERN AFRICA**



**7- November 2005
Lusaka, zambia**



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ACRONYMS AND ABBREVIATIONS

AFREPREN	African Energy Policy Research Network
BOOT	Build-Own-Operate-Transfer
BOT	Build-Operate-Transfer
CSIR	Center for Scientific and Industrial Research
CDM	Clean Development Mechanism
ECA-SA	Economic Commission for Africa, Southern Africa Office
EUEI	European Union Energy Initiative
IPPs	Independent Power Producers
MDGs	Millennium Development Goals
MESs	Modern Energy Services
NEPAD	New Economic Partnership for Africa's Development
OECD	Organisation for Economic Cooperation and Development
RE	Renewable Energy
REEP	Renewable Energy and Energy Efficiency Partnership
RETs	Renewable Energy Technologies
RISDP	Regional Indicative Strategic Development Plan
SADC	Southern African Development Community
SAPP	Southern African Power Pool
ZESA	Zimbabwe Electricity Supply Authority

EXECUTIVE SUMMARY

A meeting of experts in renewable energy policy development and regional integration took place in Lusaka, Zambia from 7 to 9 November, 2005 to consider a sub regional framework to harmonise new and renewable energy policies in Southern Africa. The priority areas for the promotion of renewable energy in the region identified by experts include – research and development, productisation and commercialization of research results, promotion of indigenous knowledge systems in renewable energy technologies, community participation in project development, gender, and enhancement of linkages between renewable energy development with other sectors in the sub regional economy.

The sub regional policy framework for the renewables sector provides a template to align national policies in the sector to the SADC vision of increasing the supply of affordable energy or modern energy services to the majority of Southern Africa's citizens in order to alleviate poverty. The framework is expected to help overcome the legislative and legal, economic and technical constraints to the use of renewable energy in the sub region. The meeting developed a time frame for harmonization in sector specifically in the areas of energy policy planning and promotion, R&D, investment regulations, fiscal environment, exchange controls and taxes, renewable energy skills development, regional trade in RETs, political, social and economic environment, gender mainstreaming and promotion of productive use of renewable energy.

In addition to bolstering regional integration and creating a harmonized political and institutional framework to widen access to energy services, the policy framework will help countries develop coherent energy policies centered on poverty alleviation and the supply of clean energy to all citizens. The policy framework will be submitted to the SADC Secretariat for consideration through the sub regional process.

1.0 BACKGROUND TO THE MEETING

1. The SADC Regional Indicative Strategic Development Plan (RISDP) has identified increasing access to energy, including renewables, as one of its strategies towards poverty alleviation. The exploitation of abundant and naturally occurring non-depletable sources of energy in the sub region has potential to enhance energy security, reduce problems of deforestation, improve health for women and children through a reduction in exposure to smoke, improve options to meet education, water and health needs, empower communities and increase local and sub-regional employment opportunities in energy developing infrastructure, manufacturing, installation and maintenance of energy technologies. Energy supply in remote areas will improve prospects for growth of small and medium scale industries utilizing both grid (localized) and non-grid electricity. The delivery of cleaner and less-polluting energy is crucial for poverty alleviation and the reduction of green house gas emission.

2. An effective and competitive policy framework to advance the use and management of new and sustainable energy resources in the sub-region to guide member States in developing consistent and gender-sensitive sustainable energy policies and support programmes is needed. The framework should eventually lead to a harmonised sustainable energy policy environment in the sub-region and will in turn facilitate development of renewable energy resources and contribute towards poverty alleviation. The main objective of the Ad Hoc Expert Group Meeting was to review the draft report on a framework for new and renewable energy in Southern Africa and contribute to the development of a SADC-wide framework in the renewables sector in line with the aspirations of the SADC Common Agenda and the Energy Protocol. The policy framework will be submitted to the SADC Secretariat for consideration.

2.0 ATTENDANCE

3. The Ad Hoc Expert Group Meeting on Sustainable Energy: A Framework for New and Renewable Energy in Southern Africa was held at Cresta Golfview Hotel in Lusaka, Zambia, from 7 – 9 November 2005.

4. A selected group of experts in energy policy development, harmonization and regional integration from academia, research institutions, energy industry associations, government ministries and departments of energy and sub regional and international development institutions attended the meeting. Staff members of UNECA-SA participated in the AEGM. Names of participants and their affiliation appear as Annex I.

3.0 OPENING SESSION

3.1 Introductory Remarks

5. The Director of ECA-SA Ms. Jennifer Kargbo, welcomed experts to the meeting and informed them that their knowledge and experiences in energy policy development and regional integration would be important in ensuring a successful outcome. She reminded the experts that ECA-SA was relying on inputs from the meeting to improve the draft document and especially the content and focus of the sub regional framework.

6. On development of a regional new and renewable energy policy framework, the Director highlighted that such a framework had to incorporate issues relevant for energy development and use from the three levels; household, community and national. She noted that the framework should address household level uses such as preservation of food items, cooking, lighting, heating and production as well as community and national issues in renewable energy including production, trade and technology.

7. The Director pointed out that 75% of the population of the sub-region has no access to modern energy sources and relied on the use of fuel wood creating massive environmental problems that needed to be addressed for sustainability. This situation makes it imperative for the sub region to promote the development of renewable energy sources.

8. She stated that the importance of a harmonized sustainable energy policy framework for the sub-region to help meet the energy needs of the region in future by removing barriers to the uptake of RETs.

9. In concluding her statement, the Director urged participants to thoroughly review the draft report and make suggestions to further improve the draft technical publication, outline specific concrete recommendations on possible actions to facilitate the development of sustainable energy policies in the sub region and come up with a time frame for harmonization in the sector.

3.2 Organisational Matters

10. The meeting elected the following bureau:

Chairperson Mr. Buti Mogotsi, Acting Deputy Director, Department of Energy, Gaborone, Botswana

Vice Chairperson Mr. Gideon Nyirongo, Chief Energy Officer, Department of Energy, Lilongwe, Malawi

Rapporteurs Mr. Mongameli, Mehlwana, Resource Based Sustainable Development, Centre for Scientific Industrial Research, Johannesburg, South Africa

Professor Thomson Sinkala, Assistant Professor, University of Zambia, Lusaka, Zambia

11. The proposed agenda and programme of work (Annex II) were adopted with amendments for the second day.

4.0 PRESENTATION OF DRAFT REPORT ON 'SUSTAINABLE ENERGY A FRAMEWORK FOR NEW AND RENEWABLE ENERGY IN SOUTHERN AFRICA

12. In his presentation of the draft report to the meeting, Dr Muyoba Macwani concentrated on the components of the harmonized new and renewable energy policy framework for Southern Africa and the time frame for development of the harmonized policy environment. He emphasized that harmonization was premised on narrowing differences between the operating framework in the different countries while providing countries with the flexibility to harmonise as is appropriate.

13. He emphasised that the sub regional sustainable energy policy framework should focus on developing and streamlining legal and regulatory frameworks, integrating environmental sustainability in all energy programmes, developing linkages between energy, poverty alleviation and economic growth, promoting private sector participation in the development and distribution of RETs, developing capacity to monitor development of the sector and sharing of best practices, technologies and manpower and mainstreaming gender into all energy development initiatives.

14. Dr Macwani pointed out that to achieve a harmonized renewable energy policy framework, SADC had to develop and set targets, commit to these targets and put in place a monitoring and evaluation regime/process to track progress and make any necessary changes.

5.0 DISCUSSIONS OF THE EXPERT GROUP MEETING

15. During discussions, the meeting was made aware of written comments on the report from the Commonwealth Secretariat (Annex III) and from SDD at ECA Headquarters (Annex IV). Discussions on individual Chapters of the report were preceded by presentations from nominated discussants.

5.1 General comments on the report and study methodology

16. Participants made the following overall comments and observations on the report,

1. The report should clearly define and contextualise harmonization to build an understanding of the use of the term in the report;
2. The report should define the meaning of the term 'sustainable energy' as it is used interchangeably with renewable energies. Participants agreed that although sustainability was well understood to include environmental, economic and social issues, the term sustainable energy needed to be put in the proper context;
3. The report should include a discussion on renewable energy and the rural setting within which activities take, given that 70% of the sub region's population lives in the rural areas;
4. The report should allude to the country-specificity of the sustainability of sources of energy;
5. Although the focus of the report on renewable energies, participants observed that there was need to discuss the efficiency of conventional energy as a way to overcome the sub regional energy deficit;
6. The report should emphasize the importance of full participation by beneficiaries in project development in order to help determine the type of energy, which meets their needs. The framework should move away from policy makers setting the agenda for communities;
7. With reference to the gender issues raised in the report, participants observed that women's business activities which use energy should be highlighted and the participation of communities and women at all decision-making levels emphasized;
8. The report should include a more detailed problem analysis of the link between poverty and the lack of affordable energy, in order to provide the basis for the introduction of renewable energy;
9. The report should include an assessment of the reasons why previous SADC policies on renewable energy have not produced the desired results and constraints to various sub regional initiatives on renewable energy promotion;

10. The report should be restructured to include information on renewable energy worldwide and the politics of development of renewable energy technologies (RETs) in order to place the sub regional energy situation within the global context; and
11. Participants observed that the use of subsidies to promote different sources of energy was contradictory to the current sub regional thrust of privatization and agreements on free trade. The use of cost-effective tariffs, which prevented price distortions and are fair to both dispatchers and users, should instead be used. Participants also noted that lowering taxes was a better measure of promoting a particular type of energy compared with direct subsidies.

5.2 Overview of the Renewable Energy Sector in Southern Africa

17. The discussant observed that the executive summary gives the impression that the predominant focus was on electrical energy; however, the poor in the sub region tend to use non-electrical energy for their day-to-day requirements.

18. The meeting was made aware that some Modern Energy Services (MESs) have a greater impact on poverty alleviation compared with others and this had to be pointed out more clearly in the report, rather than generalise.

19. The presenter re-emphasized that given the disparity between countries in terms of the development of the renewables energy sector, understanding the local situation was important in developing approaches that best fit each country. For example, the targets for efficiency and MESs within the framework could be differentiated to accommodate peculiarities of countries. For example, Zambia with the highest rate for the use of charcoal in the sub region would require a different strategy from the other countries.

20. He noted that the report should emphasise the high dependence on biomass (mainly wood and crop residue) in the sub region compared to MESs and develop specific recommendations regarding enhancing efficiency in the use of biomass within the framework.

21. The presenter noted that the process of policy development had to be informed by the failure of the historical top down approaches in developing programmes and projects, which had led to poor adoption rates of biogas and wood stoves in some countries in the sub region. National ownership (at community level as well) of policies and programmes is important and this had to be built into the process of developing policies as part of the framework.

22. The presenter provided information on experiences in renewable energy in the sub region including the use and adoption of RETs in different countries and new legislated requirements for the Minister responsible for Energy in South Africa to maintain an energy database. He also informed the meeting of the widespread dissemination and subsequent general failure of bio digesters in Botswana and Zimbabwe. These initiatives had important lessons, which the report should capture.

23. The presenter also highlighted the importance of research-policy link and stressed the significance of ensuring a strong link between the two exists so that policies are relevant as research results feed into the policy development process.

24. The presenter discussed experiences in rural electrification programmes in Zimbabwe and South Africa involving the use of subsidies. The presenter used these as an illustration of different government-sponsored initiatives in the provision of electricity to rural areas.

Discussion

25. In the ensuing discussions, the experts re-emphasized the importance of ownership of the policy document to ensure successful implementation. Participants also noted that in the process of implementation, it is necessary to define the instruments, infrastructure, parameters and responsibilities for monitoring. A proper and solid understanding of problems in a bottom-up manner is important to ensure success in implementation.

26. The meeting noted that an economic feasibility of the various forms of new and renewable energy was needed before resources are committed to a specific RET.

27. The experts observed that it was important for researchers, policy formulators and implementers to develop synergies in order to meet the demands of various countries and take cognisance of the peculiarities of the different countries. Policies should emerge from the solutions to problems identified through research and these should be adequately supported (financially) and effectively monitored.

28. In the area of harmonization, it was important to come up with a regional approach in the implementation of renewable energy policies especially programmes, which are demand-driven with people participation. The focus should be on renewable energy projects for productive use.

29. The experts observed that the cause-effect relationship between poverty and lack of energy was not very clear in the report and needed to be strengthened.

30. The report has to emphasise sensitisation and education of renewable energy users to enhance appreciation of the importance of energy as an input into the production process. The framework needs to link renewable energy with other sectors like forestry and water.

31. The experts emphasised that it was important for feasibility studies to be undertaken to determine the viability of technologies before their introduction into communities. Participants noted that some rural electrification projects had failed in the sub region because the intended beneficiaries could not afford to pay for the power. Issues of availability, accessibility (and affordability) and acceptability were cardinal in the introduction of RETs.

32. Participants emphasised that both new and renewable energy sources and traditional energy sources had a role to play as sources of energy and their use should be promoted. The integration of new and renewable energy and traditional sources of energy is important to ensure security of supply of energy. The use of wood in rural areas for energy is widespread and the framework had to include recommendations to improve the efficiency of wood as a source of energy.

33. The meeting also agreed that the framework has to suggest ways to help people move to modern sources of energy, especially for productive purposes.

34. There was agreement that the report needed to,

1. incorporate and discuss lessons from specific renewable energy promotion initiatives in the sub region;
2. highlight disparities arising from differentiated priorities in different countries within the sub region;
3. incorporate discussion on implementation, gender, people participation and research in the whole report;
4. include a discussion on energy conservation as a cross-cutting issue; and
5. include a discussion on the link between poverty and energy use.

5.3 Regional Cooperation in the Energy Sector in Southern Africa

35. The discussant noted that policy harmonization should not be a copy and paste exercise from the developed world but instead should be driven by local conditions and requirements to benefit locals. The harmonized policy document should be a benchmark which individual countries should adapt to suit local conditions.

36. The presenter emphasized that in advocating for renewable energy the report should undertake a cost benefit analysis comparing renewable energy with other forms of energy to clearly bring out the benefits of RETs.

37. The report should also outline how the application of renewable energy could contribute to poverty reduction by outlining the specifics especially the productive use of renewable energy to achieve sustainable development and economic empowerment.

38. The discussant informed the meeting that access to affordable energy is recognised as a major constraint to development on the African continent. The NEPAD framework energy objectives capture clearly the importance of renewable energy and are an important basis for the sub regional framework. The objectives are;

- The need to increase availability of energy resources to ensure sustainability of development;
- The need to diversify energy sources;

- The need to ensure security of countries using hydrocarbons; and
- The better use of energy and achievement of self-sufficiency in food so as to improve standards of living especially in rural areas.

39. The discussant emphasized that the framework for new and renewable energy in Southern Africa should be guided by the SADC Energy Protocol, the legal instrument used in establishing modalities and procedures for cooperation in the SADC energy sector.

40. To emphasize the importance of regional cooperation in the energy sector and provide lessons for renewables, the discussant outlined the steps involved in the formation of SAPP, how it operates and the challenges it faces. He emphasized that from SAPP's experience; policy alignment and standardization should be an on-going process involving consultation with all key stakeholders to ensure that their different and changing needs are accommodated.

Discussion

41. The participants emphasized the importance of including local community needs and wishes in the standardization and harmonization process otherwise the whole process would be meaningless as the renewable energy was for the benefit of the community.

42. Participants agreed that a central coordination center was needed to monitor and implement the policies and objectives of SADC with respect to the renewable sector. This could assist in speeding up development of harmonized policies within the sub region. The operation of this center could learn from SAPP's experience and adapt accordingly.

43. Participants agreed that outcomes of the meeting be adequately informed by the SADC energy Protocol to ensure that the framework is relevant and conforms to what SADC intends to achieve in the renewable energy sector. Collaboration with SADC in this project was central to adoption of the framework.

44. Participants agreed that the promotion of cross and inter regional trade in RETs as well as the creation of an attractive investment environment were some of the major benefits of harmonization and these had to come out clearly in the report.

45. The meeting agreed that standardizing renewable energy systems would be helpful for system performance and physical resilience on the grid, as this would create less confusion in terms of understanding the operating system between countries and reduce operational costs. The meeting agreed that in standardizing, each country's needs should be taken into consideration, as the standards may not be equally applicable in all countries.

5.4 Renewable Energy Policies, Legal and Regulatory Framework, Codes and Standards in Southern Africa

46. The presenter emphasized the relevance of promoting affordable renewable energy for the benefit of both rural and peri-urban populations and pointed out that both renewables and non-renewable sources have a role to play in the sub regional energy mix and should be promoted.

47. He pointed out that there was a need to reassess the barriers of RETs uptake in the sub region from the various programmes that have been promoted and to develop strategies to overcome these barriers in the intended energy policy framework.

48. The presenter emphasised the need for research and documentation of results making use of existing centers of excellence and regional research alliances to enhance information sharing. He recommended the establishment of a sound energy database and information system at various levels of governance in Southern Africa and the use of established information systems for modeling plausible futures in the sub region.

49. The presenter noted that the database would create an effective energy information system for designing sound energy policies, a resource for monitoring development progress and governance in the sector, an information source for countries necessary to facilitate co-operation in the sector, a reliable and comprehensive tool for sound private and multilateral decision-making and a resource for education and training.

50. The presenter informed the meeting of plans to establish a database through the SADC energy network and plans to publish an energy statistical yearbook which would help energy planning issues in the region.

Discussion

51. Experts underscored the importance of ensuring that data collection at national and sub-regional levels is regular, standardized and accurate as this will help ensure that SADC's database is up to date and can be of good use for developing and monitoring policy.

52. The meeting also noted that setting standards was easier for renewable energy sources that generate electricity, but was much more complex for other forms of renewable energy such as windmills and biogas. However the meeting agreed that the framework should recommend the establishment of some kind of guidelines or specifications for those sources of renewable energy that do not generate electricity.

53. The meeting agreed that the focus of the report. should be on energy for economic development, i.e. economic empowerment through development of rural enterprises (small and medium scale industries), energy for transport or non-electric energy which is also important in rural development.

54. Experts emphasised that the report should discuss the production of bio fuels and the role it plays in the transport sector.
55. Although the report focuses on RETs, the role of non-renewable sources of energy should not be under-valued and the framework should recommend an integration of grid and non-grid supply of power.
56. The meeting agreed that the integration of energy into other development issues should be reflected in the sub-regional framework.
57. The meeting agreed that the experience of power utilities in the region with respect to gender representation should be part of the sub-regional framework for renewable energy. ZESA and ESKOM have a quota system in terms of gender representation and this could be made a requirement for IPPs in renewable energy.
58. The report should re-look at existing policies in detail and identify gaps, differences and similarities and then recommend the mechanisms for standardization and harmonization to come up with a regional framework.
59. The meeting emphasized the report should make it clear that member States have the responsibility of formulating energy policies in conformity with the sub-regional framework. The implementation of policy is the responsibility of all stakeholders including government. The responsibility of SADC is to develop guidelines or a framework to guide member States in formulating policies and provide guidance in harmonization of policies.

5.5 Definition of Harmonisation and its Rationale

60. The discussants emphasized that the objective of the harmonized framework was to promote equitable access to quality renewable energy services at the lowest possible cost while protecting the environment. The presenters reiterated that harmonization in the SADC was design to strengthen economic interdependence and build a sub-regional community through development of aligned policies in all sectors.
61. The presenters noted that in harmonizing, through policy alignment and standardization, differences between countries had to be factored in, the policies have to be mutually supportive and the new framework should be based on similar principles.

Discussion

62. Participants stressed the importance of including the wishes or expectations of local beneficiaries and communities in the harmonization framework and suggested that there was need to find ways of involving local communities in the development of harmonization standards. Participants noted that some communities in the sub region had developed codes of practice with respect to harvesting of wood, for example, and these could be incorporated into the framework or could be improved on.

63. The meeting noted that the benefits of harmonization should be described to include easier interregional trade in energy services, easier accessibility of all countries by investors (due to the level playing field) and reduced costs of maintaining equipment due to standardized country operating systems.

64. The meeting agreed that standards for some RETs already existed in some countries and these should be harmonized. In cases where standards do not exist or are not easy to develop, the harmonized framework should advocate for the development of appropriate operating guidelines or codes of practice.

5.6 An Overview of Issues for Harmonisation

65. The presenter noted that the term sustainable energy did not embrace all renewable energy sources and should be replaced with the term modern energy services which includes all renewable energy sources.

66. To strengthen the discussion, the report should provide a review of global trends in new and renewable energy development and promotion and link sub region initiatives to international developments.

67. The presenter reiterated that the framework has to demonstrate how the energy resources will impact on the productive and productivity capacity of the poor since its focus is on poverty alleviation.

68. The presenter emphasized that the promotion of RETs is not a new phenomenon in the sub region, the report has to use case studies to show why previous approaches failed and identify and strengthen success factors. Best practices from the sub regional experience should be the starting point in promoting RETs. An audit of existing initiatives in new and renewable energy approaches in the sub region would provide this information and enable policy to be developed from real cases/experiences. The presenter noted that this then strengthened the call for reliable databases with up to date information, which can be shared between countries.

69. The presenter observed that details on gender mainstreaming in new and renewable energy were missing in the report and needed to be included. The report should answer the how question with respect to gender mainstreaming.

70. The presenter reiterated that there is need for harmonization between policy and practice since most policies do not capture the real issues of poverty. She emphasized the need for inclusion of community participation to ensure policy development is demand-driven and to incorporate local situations.

71. She suggested that an audit of good practices on community participation in policy development be undertaken and progressive approaches be incorporated in the framework.

72. The presenter further recommended inclusion of gender mainstreaming, HIV/AIDS, fair trade, and research and development in the checklist of the framework.

Discussion

73. Participants emphasized the importance of integrating gender into each of the sections of the report instead of making it a stand-alone chapter. The meeting observed that gender mainstreaming into the harmonized framework involves ensuring that gender gaps in the document are addressed adequately. In this regard, the meeting suggested that the linkages between gender and energy be explained in the document highlighting the issues of women and children being deprived of opportunities for education and productive activities due to time spent collecting firewood, the health risks they are exposed to due to smoke emissions and the limited participation of women in the energy sector.

74. The meeting also raised the need to identify best practices on the promotion of gender equality in energy policies in order to come up with benchmarks or codes of practice that can be used in the harmonized framework.

75. The importance of community participation was re-emphasized from project inception right through to delivery as it was important for successful implementation of RE projects. The report should adequately discuss these non-technical issues within the sub regional framework.

5.7 Issues for Harmonisation

76. The presenter noted that harmonization had to deal with many questions including whether all renewable resources could be governed by a common policy, whether harmonization is possible among countries of the SADC, and whether there are sufficient commonalities that renewable resource development may be handled as a generic issue within the sub region. The starting point is to clearly define what needed to be harmonized, outlining clearly the specifics and then deciding whether only one sub regional policy to harmonise the sector was needed or not.

77. The presenter noted that in developing policy, implementation should be kept in mind, as the policy should be implementable otherwise the whole process is futile. The three implementation approaches for the renewables sector are grid-connected projects,

distributed generation and self-generation (centralized or decentralized). Each method has its own specific requirements which may or may not necessitate a separate policy and this has to be borne in mind when developing the harmonized framework.

78. The presenter re-emphasized that policy development to promote RETs should be cognizant of three key issues – availability, accessibility (affordability) and acceptability. The bottom-up approach in promoting RETs has been proven to be viable in other regions and should be recommended for the development of the framework.

79. The presenter outlined a six-step approach for potential, accessibility and acceptability assessment of RETs before introduction. The steps are;

Step 1: Assess the potential for each resource and each project type

Step 2: Assess the costs/affordability – ability to pay

Step 3: Assess the acceptability of the project in terms of poverty alleviation and environmental issues, for example

Step 4: List impediments/barriers

Step 5: Develop solutions and policies that address the barriers

Step 6: This set of policies becomes the harmonized framework for SADC

80. The presenter noted that barriers to uptake are usually policy elements related to the inability to attract capital to the sector. Policy elements to attract capital/reduce cost which could be included as part of the regional framework include; fiscal policies such as income tax relief, tax credits, exemption from duties and accelerated depreciation and pricing policies such as producer and consumer subsidies. Instruments such as guaranteed minimum purchase and guaranteed collection of revenues can attract investors to RETs. Regulations on public private partnerships in the sector, build-own-operate-transfer (BOOT), build-operate-transfer (BOT) and donor financing can be attractions for investors in the sector.

81. The presenter observed that there were probably enough commonalities between the SADC renewable energy policies for smooth harmonization. All the same, the harmonized policy should contain sufficient flexibility to allow for national differences to be factored in.

82. The presenter noted that the development of the sub regional framework could be approached from different angles including developing policies for specific project types (grid, off-grid or individual) or policies for specific energy resources used (wind, biomass, hydro, solar, for example). Further, a policy could be harmonized per type of resource and approach, for example wind off-grid projects would have specific policies as distinct from those for wind grid projects.

83. The presenter re-emphasised that the report has to be cognizant of the fact that energy is a factor in productivity improvement and poverty alleviation only if other factors are made available (factors such as machinery and equipment).

84. The presenter informed the meeting that in some countries in Latin America, in the short to medium term, access to subsidized energy led to improvement in the standard of living of communities. Regional policy development has to be cognizant of such experiences.

85. The presenter cautioned that in considering international best practice to model the sub regional framework for promoting renewable energy, it was important to factor in local structural factors such as capacity to pay, nature of the markets (liberalized or controlled) and the profitability of providers of RETs. The presenter noted that renewables require assistance (in the form of subsidies) to penetrate the market before economies of scale make them competitive.

Discussion

86. The meeting agreed that an assessment of the framework should consider a combination of renewable and non-renewable sources of energy in the energy mix. The meeting agreed that the six step approach suggested by the presenter was appropriate at both national and sub regional level because it enables one to identify barriers and recommend specific actions to address the barriers, which at the sub regional level will form the core of the harmonization framework.

5.8 A Time Frame for Harmonization and The Way Forward

87. The need to have a Time Frame was very important as experience had shown that regional energy policies in the past had failed due to lack of time frame for implementation. A time frame was important for the setting and realization of targets especially those to do with harmonization. They were also useful for monitoring and evaluation of policy implementation.

88. The presenter emphasized that sub regional sustainable energy policy should focus on,

- Developing and streamlining legal and regulatory frameworks
- Integrating environmental sustainability in all energy programmes
- Developing linkages between energy, poverty alleviation and economic growth
- private sector participation in the development of RETs and in the distribution of renewable energy
- Developing capacity to monitor development of the sector
- Sharing of best practice, technologies and manpower

89. The presenter noted that key strategic areas that need to be addressed in facilitating the development of an enabling environment to enhance the uptake of renewable energy in the sub region are:

- Capacity building and education
- Awareness raising
- Technology development
- Development of appropriate legal instruments
- Provision of financial support through appropriate instruments

90. The presenter emphasized that in order to facilitate the promotion of RETs, the sub region had to,

- Set targets for energy efficiency, adoption of renewable energy and funding in national budgets;
- Have the political will from all regional member states to implement the framework;
- Develop an institutional framework within SADC to monitor and evaluate the implementation of the framework;
- Encourage a holistic approach towards promotion of RETs so that energy becomes a component of the developmental mix in rural areas;
- Find the most effective entry strategy for harmonization in the region. Biofuel promotion could be one of the strategies. If conditions are conducive and the sector can operate profitably with support from the governments in SADC;
- Recommend the order in which harmonized standards and codes of practice could be introduced;
- Develop capacity in the national and sub-regional energy regulators
- Link up with other international initiatives like Renewable Energy and Efficiency Partnership (REEP) to tap onto initiatives from other countries;
- Develop sub regional mechanisms to tap funds from international donors and funding initiatives like the Clean Development Mechanism (CDM) and the European Union Energy Initiative (EUEI); and
- Create an enabling environment in the region for the private sector to participate in the exploitation of RE sources

Discussion

91. The meeting noted that the time frame for harmonization would depend on the acceptance of the proposed framework by member States through SADC.

92. The meeting agreed that the implementation process had to be more practical and should conform to processes currently in motion in the sub region. Participants agreed that the implementation strategy should be left to SADC to develop after consulting all

stakeholders. The meeting also noted that a review of the SADC energy policy should be the first step to a successful development of the harmonized framework.

93. The meeting lamented the poor results coming from rural electrification programmes in most countries in the sub region. They noted that the focus of most sub regional governments has been on electricity at the expense of other forms of non-grid energy. Participants hoped that the harmonized framework would help tackle poverty by focusing on all forms of renewable energy.

5.9 The Outcomes of Group Synthesis

94. To assist in developing concrete recommendations, groups were requested to - outline of the objectives of the report; define the focus of the report, identify elements to be incorporated in the report and provide a way forward.

95. Group 1 observed that,

1. The overall policy objective should be to secure an affordable and cost-effective source of energy for social and economic development taking into consideration social and environmental dimensions. The study should define the renewable energy policy framework and develop an institutional monitoring framework and implementation plan;
2. The framework should place importance on the putting into place the necessary conditions to facilitate development of new renewable energy projects and focus on projects that will have a direct impact on poverty alleviation, sustainable development and gender equality;
3. The report should outline tools for assessing energy resources and technology, and ways to evaluate end-user energy requirements that need to be satisfied. Productive uses of energy should be prioritized;
4. The sub regional policy framework should go beyond pure harmonization and develop an indicative implementation plan; and
5. The final report should incorporate comments from workshop and be re-circulated before finalisation. The final report should be sent to the SADC Secretariat.

96. Group 2 observed that,

1. The background to the report should include a contextual overview including the membership of SADC and sub regional social and demographic issues such as poverty and gender;
2. The report should provide a renewable energy policy context in terms of global trends and an overview of SADC renewable energy polices and also include an analysis that shows the need for the study, its background and objectives; and
3. The report should include other issues for harmonization, provide a glossary of terms used and append some of the tables. The report should be made shorter so that policy makers can go through it quickly.

97. Group 3 observed that,

1. The objective of the study should be defined as - to develop a framework for new and renewable energy policy harmonization in the Southern African sub-region in order to; improve access to affordable new and renewable energy, enhance security of energy supply, contribute to sustainable development, and assist in the alleviation of poverty;
2. The report should specify that the gender-sensitive policy framework would provide the basis for the development, regulation, utilization, and market stimulation and trade in renewable energy within the sub region. The framework should be competitive to improve the significance of its delivery;
3. The report should emphasize that renewable energy must be produced from local resources for local consumption, and not to only import technology or, at least, to reduce to a minimum the imported technology so as to contribute to sustainable development;
4. The renewable energy resources utilized must provide local employment and involve direct participation of local people in the production process in order to reduce poverty;
5. The report should not confine itself largely to electricity but should adequately include all new and renewable forms of energy.
6. The report should adequately address gender issues, with more emphasis on end-users of RETs. The report must cross-referenced with previous and on-going work in the SADC region in order to provide a basis for further progress;
7. The report should also address the aspects of bringing the user onboard on demand-driven basis as well as to promote and emphasize research in new and renewable energy technology suitable for the SADC region as it is an essential part of the support infrastructure in energy development;
8. The promotion of entrepreneurship is paramount, e.g.; creating companies that can develop the needed infrastructure. The importance of the possible trade with other regions and commercialisation of new and renewable energies should be adequately addressed; and
9. The final report should be circulated to SADC in order to ensure alignment with existing SADC documents.

6.0 RECOMMENDATIONS OF THE MEETING

98. In addition to specific issues raised under the respective sections in this report, the meeting made the following overall recommendations drawing from discussions during the meeting,

99. Regarding the objectives of the meeting, participants recommended that,

1. The framework harmonising national policies on renewable energy should conform to international and regional best practices in order to enhance the significance of its delivery;

2. The report should emphasise the role of renewables in the energy mix and diversity to enhance security of supply;
 3. The report should emphasise on energy services that can be produced from local renewable resources for local productive use and improve livelihoods of communities;
 4. The report should emphasise renewable resources which can be utilised to provide employment, involve direct participation in the production process, and promote self-sufficiency; and
 5. The gender dimension and community participation issues should be addressed throughout the report as crosscutting issues.
100. Regarding the content and structure of the report, the meeting recommended that the structure be recast to include the following sections,

1.0 Background

1.1 Contextual overview

SADC, its membership, resource summary, demographic (gender, poverty, energy, rural/urban...)

1.2 Energy Policy Context

Global trends (gender, environment, MDGs, energy...)

1.3 SADC Energy policies-overview

Status of national policy documents (some are still drafts, white papers etc), state of completeness, inclusion of implementation strategy, targets, comprehensiveness of coverage of issues (environment, gender, productive uses for the poor, HIV..)

1.4 Status of SADC Protocol on Energy (especially renewable)

2.0 Analysis showing need for this study and its background, objectives.

101. Regarding elements to be incorporated in the report, the meeting recommended that,

1. Research in new and renewable energy technology suitable for the SADC region should be emphasised than is currently in the report as it is an essential part of the support infrastructure in energy development;
2. Promotion of local innovation and entrepreneurship in productisation of research results should be incorporated;
3. The suggested elements of focus on standardisation should be tailored and expanded to incorporate new and renewable energy only rather than use the ones for electricity which already exist;
4. In view of the possible trade with other regions in RETs, aspects of commercialisation of new and renewable energy products and technologies should be adequately addressed;

5. Past and current regional initiatives, their limitations and/or successes must be referenced and discussed;
 6. The report should recommend that the process of policy alignments be participatory to enhance ownership and uptake;
 7. The report should underline the linkages of renewable energy with other sectors of the economy (development sectors);
 8. The report should re-examine barriers against renewable energy uptake using empirical evidence from the different countries in the sub region;
 9. The report should adequately include all new and renewable forms of energy rather than confine itself to electricity;
 10. The report should include a glossary of terms used to provide an understanding of the context, and
 11. Some tables in the report should be moved to appendices to improve the flow of the report.
102. Regarding the acquisition of additional information, experts agreed to provide detailed information in relevant sections of the report.
103. Participants also recommended that contact with the appropriate division at SADC be made to obtain up to date information on renewable energy issues in the sub region and ensure ownership of the report at SADC level.
104. On procedural issues regarding the finalisation of the report, the meeting recommended the following,
1. the review incorporates comments from this workshop;
 2. the report be re-circulated for additional contributions;
 3. the revised report be re-circulated to experts; and
 4. contact is made with AFREPREN to obtain additional information to enrich the report.
105. Participants agreed on the following timeframe to finalise the report and the framework,
1. Inputs and corrections by experts to be submitted by Wednesday 16th November 2005;
 2. Consolidation of inputs for circulation to experts the following Monday 21 November 2005;
 3. Circulation of the Revised Draft Report to Experts and SADC focal point on energy by 30th November 2005;
 4. Inputs on the revised draft from experts by 7th December 2005;
 5. Final Report to be circulated to Experts and SADC Secretariat by 15th December 2005;

7.0 CLOSURE OF THE MEETING

106. The Chairperson of the meeting, Mr Buti Mogotsi, thanked ECA for organising the Meeting and noted that policy development required a participatory approach as the ECA had demonstrated by inviting experts to review the draft framework. He commended the rapporteurs for a job well done in capturing all discussions and recommendations. Mr Mogotsi thanked the participants for lively discussions during which a lot was shared and learnt and expressed appreciation of the cooperation received from all experts.

107. In her closing remarks, the Director of ECA-SA Ms Jennifer Kargbo, expressed her gratitude to all the participants for their contribution which would enrich the final document. She thanked the experts for three days of intense work which demonstrated a high level of commitment to development of a framework to improve access to energy in the region.

108. She informed the experts of a new initiative in ECA to introduce a “Directory of Experts” to create better networking and interaction among experts in the sub region within an institutional framework. The meeting was informed that ECA wished to expand networks beyond governments and to include other partners, groups of people and institutions dealing with economic and social issues. Profiles of institutions and individuals would be built into a database to provide a resource base to draw upon to meet the needs of the ECA and help link institutions with others with expertise in specific areas.

ANNEX I

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ANNEX II

AGENDA

1. Opening Session
 - Welcome Remarks
 - Introduction of participants
2. Organizational Matters
 - Announcement of Bureau
 - Adoption of Agenda and Programme of Work
3. Presentation of Draft Report on Sustainable Energy: A Framework for New and Renewable Energy in Southern Africa by Dr M. Macwani
4. Plenary Discussions
5. Presentation of recommendations
6. Closure of Meeting

PROGRAMME OF WORK

DAY 1 NOVEMBER 7, 2005

- | | |
|---------------|---|
| 08.30 – 09:00 | Registration |
| 09.00 – 09:30 | Introductory Session <ul style="list-style-type: none">• Objectives of meeting, Director UNECA-SA• Introduction of participants• Organizational Matters• Announcement of the Bureau• Adoption of the Agenda and Programme of Work |
| 09.30 – 10.30 | Presentation of draft report on “Sustainable Energy A Framework for New and Renewable Energy in Southern Africa” by Dr. M. Macwani |
| 10:30 – 10:45 | Coffee/Tea Break |
| 10.45 – 11.45 | Discussion Session 1: General comments on the report, study methodology, layout and flow, Facilitator: Chairperson |
| 11.45 – 13.30 | Discussion Session 2 – Overview of the Renewable Energy Sector in Southern Africa, Discussant: Mr. Maxwell Mapako |
| 13.30 – 16.30 | Lunch Break/Free time |
| 16.30 – 18.00 | Discussion Session 3 - Regional Cooperation in the Energy Sector in Southern Africa, Discussant: Dr. Lawrence Musaba |

DAY 2 NOVEMBER 8, 2005

- 09:15 – 09:20 Opening Remarks, Chairperson
- 09:20 – 10:00 Rapporteur's Report/Discussion
- 10.30 – 10.15 Coffee/Tea Break
- 10:15 – 11:00 Discussion Session 4 – Renewable Energy Policies, Legal and Regulatory Framework, Codes and Standards in Southern Africa, Discussant: Mr. Mongameli Mehlwana
- 11.00 – 13:00 Discussion Session 5 – Definition and rationale for harmonisation, Discussants: Ms Tuvoye Hasheela / Mr Dick Kruger
- Discussion Session 6 - Areas of harmonization, Discussants: Ms Khamarunga Banda / Mr Daniel Dumas
- Discussion Session 7 - Time Frame for Harmonisation and Way Forward, Discussant: Mr Geoffrey Musonda
- 13.00 – 14:00 Lunch Break
- 14:00 – 16:00 Group Discussions
- 16.00 – 16.15 Coffee/Tea Break
- 16:15 – 17:30 Plenary (Group Reports)
- 18.00 – 19:00 Chair, Vice Chair, Rapportuer and Secretariat finalise recommendations.

DAY 3 NOVEMBER 9, 2005

- 09.00 – 11.00 Presentation of AEGM recommendations by Rapporteur and discussion
- 11.00 – 11.30 Coffee/tea break
- 11.30 – 12.00 Closure of the meeting, Director, UNECA-SA
- 12.00 – 17:00 Lunch and Tour of Lusaka

ANNEX III

COMMENTS ON THE REPORT: SUSTAINABLE ENERGY: A FRAMEWORK FOR NEW AND RENEWABLE ENERGY IN SOUTHERN AFRICA

Economic and Legal Section, Special Advisory Services Division,
Commonwealth Secretariat

General Comments

The objective of the study is to develop a framework for new and renewable energy policy harmonisation in the Southern African sub-region in order to improve access to affordable new and renewable energy and enhance security of energy supply. The approach adopted in producing a harmonised framework for sustainable energy policy in Southern Africa focuses on the need to encourage member countries to develop regionally consistent and gender sensitive new and renewable energy policies. The paper provides a good starting point for the consideration of the issues relating to the harmonization of policies in the new and renewable energy sector.

In our view it is important to distinguish between the concept of market integration and the concept of policy harmonization. Market integration assists when many national markets are too small to justify the investment needed to develop particular energy supply opportunities. Joining regional markets can provide the economy of scale to overcome this. It can be argued that market integration could perhaps be achieved without extensive regional policy harmonization but by putting in place regulatory trading rules, open access and technical ground rules to assist market integration. Policy harmonization goes far beyond market integration and a clear understanding (and agreement) on the environmental, social, economics objectives sought need to be achieved. This would be a considerable challenge since the local conditions and resources are quite different from country to country within the Southern African region.

We agree that policy harmonization has to recognize that energy development must be decentralised to position and empower local people themselves at the heart of planning and implementation. Bottom-up, people-led development shows the best promise of achieving sustainable development of renewable resources. This is a challenge in itself since policies are, by definition, a macro concept.

It should be noted that in relation to the examples of OECD countries referred to in the study OECD countries, such as the U.K. have enormous structural strength and resources to provide the necessary “push” to renewable energy. For instance, in Germany only, re-

newable energy and co-generation are supported by €2.5 billion per year, with another € 5 billion collected through the electricity tax.

The report seems to carry an underlying assumption that the liberalisation and opening of the energy markets will result in improved energy availability and renewable energy in the region. Again, the document refers to experience in developed countries. Actually, experience has shown that in most liberalized markets, except some exceptions, have seen a very limited number of new renewable energy projects been build. As a matter of fact, although we do not have the exact statistics, we would strongly suspect that markets with still vertically-owned utilities have produced much more additional renewable energy in the past ten years than liberalized markets. One would have to look if this is really the case and understand the reasons why this is the case.

The AEGM needs to consider the resources implications for Southern African region in the development of a strong renewable policy and whether a policy option may well be to pursue the objective in the first instance of providing commercial access to both new and renewable energy at the best affordable rates to the highest number of people. We feel that this issue need to be clarified and addressed to facilitate effective harmonization.

We would also suggest that the question of traditional fuel and non-commercial energy should be approached a bit differently. Traditional energy should be addressed in the policy framework. It seems that because these traditional sources of renewable energy supplies are mostly non-monetized, they are therefore not considered in the policy planning process. For more than a billion people in the world today and for many hundred millions in Africa, traditional fuel is the primary source of energy. A realistic policy framework has thus to be inclusive of these sources of energy. Their contribution to national energy consumption needs to be appreciated and the impact on the household capacity to pay (from switching from a non-monetized source to a commercial source that has to be paid) has to be considered.

The paper states that a review of the renewable energy policies and regulatory frameworks of eight SADC countries was carried. It would be useful if a description of the key features and shortcomings of the individual policy and regulatory frameworks could be set out country wise in the report. One issue which could be addressed is the distinguish between renewable and non renewable energy sectors and to consider the peculiarities of each and the manner in which to tailor the policies and regulatory framework in respect of each to address these differences.

In our view the policy should be kept as simple as possible. Also the policy needs to consider local differences as much as possible. One size will not necessarily fit all. Local authorities have often the best insights into local needs and priorities and a policy has to take this into account and provide the necessary flexibility. We think bottom-up, people-led development still shows the best promise of achieving sustainable development.

We would suggest that the document should lay down the necessary steps ahead in a very concrete manner. For one thing, we think the first step would be to do a critical and thorough analysis of the current policy and regulatory framework of member countries. Another step would be to understand very clearly the real obstacles inhibiting private in-

vestments in the region generally, whether in sustainable energy or not. Once this is done, we believe the region will be in a much better position to address these impediments in order to develop a suitable policy framework for new and renewable energy.

We believe the policy should clearly be divided in three different avenues in developing renewable projects: grid-connected projects, distributed generation and self-generation. The first avenue deals with projects that can be connected to the main grid and have an intrinsic advantage in terms of market and guarantees. These are often larger projects and require a substantial amount of capital. The second type is addressing the needs of local isolated system, not connected to the main national grid but where there is a sufficient load potential to justify an investment in centralized generation. These are often the best solution to increase access and availability of energy in remote areas. The third avenue can either be centralized or decentralized. It can consist of installation of individual equipment, on houses and buildings such as small wind turbine, solar panels to provide energy to individual buildings. But it can also include industries or commercial customers that could develop on-site generation for their own use and sell surpluses to the grid. Depending of the local context of each country, the “mix” of these avenues will need to be different. Once again, this is an example where the policy can be harmonized in its structure but nevertheless need to be “flexible” in its application to accommodate local realities.

We also believe that it could be beneficial in order to take into account these local realities, to proceed with a thorough assessment of each type of renewable energy for (hydro, wind, solar, geothermal) for each country. This should be done keeping in mind the three above-mentioned avenues. This assessment would include the technical potential for each source, followed by an economic evaluation (costs) and high level estimation of benefits for each source in terms of environmental impact, job creation, health improvement and overall economic spin-offs. Again these evaluations could be quite different from one country to another. The assessment should identify the impediments making these projects difficult to realize. The present report does cover quite well impediments such as lack of capital, risks, lack of training, technological difficulties but a more detailed analysis would assist the process.

Specific Comments

Renewable Energy

Most renewable sources of energy (except hydro) actually do require quite a bit of maintenance and re-investment to retain their level of output. Also, because the equipment is more sophisticated, it usually requires specialized maintenance and expensive spare parts, most of them imported. The life-span of the equipment is also often much shorter than a simple thermal plant for instance. In addition, the operation of the latter requires much less sophisticated maintenance. So renewable projects do rely on a renewable source but are only sustainable with not only sufficient front-end capital but also continuous capital inflows to keep the equipment operational.

We also note that in the proposed definition only hydro plants below 10 MW are considered as renewable sources of energy. This position is based on the argument that environmental impacts of large dams tend to make a hydro project less “renewable” if larger than 10 MW. As a matter of fact, recent studies tend to show that, since the environmental impact of a hydro project is concentrated on the shoreline areas, a 100 MW may in some circumstances have less environmental impact than ten 10 MW projects.

Investment in renewable - overall investment strategy

One of the challenges is that there are issues overlapping. The first layer is made of the difficulties of attracting investments and raising the necessary capital to finance these investments in order to increase capacity and expand access at an affordable price. This is a major issue in itself. Thereafter the question of promoting renewable sustainable energy is a further challenge. We believe that only after the policy has properly addressed the underlying issues relating to the primary question can it effectively tackle the secondary question that deals more specifically with renewable energy.

As one of the characteristics detrimental to renewable projects is the fact that they require a much higher upfront capital investment than most non-renewable projects. For an investor, this represents quite a higher amount of risk. A renewable cost structure is often 70-90 % upfront cost for only sometimes 15-30% for non-renewable. For a non-renewable project this higher investment risk could be counterbalanced by a fuel cost risk. But since, most of the time, this fuel cost risk is passed to the purchaser, the investor would much rather, at equal generation cost, build a non-renewable project.

Investment Environment In general, we feel the focus should be on both the macro aspects such as training, research as well as the hard issues leading to concrete action plan. Although the lack of training or research is a important constraint it may not be the only impediment to the initiation and development of renewable projects. Lack of necessary investment pre-conditions and lack of access to credit and capital could rank higher in weighting of critical issues.

In the policy it would be important to bear in mind the two ways that incentives may be provided for renewables that is on the generation side and the distribution side. When trans-border transactions or arrangements are involved consideration would need to be given to safeguard measures to prevent companies from excessive benefits at both ends across the borders.

In terms of the necessary pre-conditions, as shown in a survey of major energy sector investors on their views of the most important factors determining making an investment a list of key factors consistently appeared on the top of the list. These top five (5) elements were: legal protection of investors, payment discipline, government and/or multilateral guarantees, government efficiency and independence of the judiciary. We feel these elements should be kept in mind while developing the policy.

Gender Mainstreaming We agree with most of the comments related to this issue. It should be borne in mind that by collecting wood-fuel, women are actually playing a key role in the subsistence of the household. Although this activity does not seem to be recognized as an economic activity since it is not monetized, but it actually is. If women have to work outside the house in order to gain sufficient money to pay for the additional cost of commercial energy there may well be no net economic gain or loss as such but a transfer of economic activity.

ANNEX IV

COMMENTS FROM SUSTAINABLE DEVELOPMENT DIVISION (SDD), ECA HEADQUARTERS, ADDIS ABABA. Mr Pancrace Niyimbona

In addition to comments made directly in the report, the following should be taken into consideration in revising the report;

1. The structure of the report should be thoroughly revised in order to show the linkages between access to modern energy services, particularly in rural areas, and the application of renewable energy technologies (RETs) to generate electrical and mechanical power for productive uses and produce gaseous and liquid fuels needed for cooking and heating purposes.
2. The report should also stress that fact that conventional approaches to improving access to modern energy supplies in rural areas (through grid extension, diesel-powered mini-grids, petroleum-based fuels) have failed in most cases and provide reasons the failure.
3. The report should note that, the Southern African Power Pool (SAPP), while being a success story in terms on promoting regional electricity cooperation and integration and regional energy trade, cannot provide the framework for the promotion of renewable energy sources and renewable energy technologies.