



*ECOWAS Regional Centre for
Renewable Energy and Energy Efficiency*

*Centre Régional pour les Energies Renouvelables
et l'Efficacité Energétique de la CEDEAO*

*Centro Regional para Energias Renováveis e
Eficiência Energética da CEDEAO*

ECREEE Regional Workshop on the ECOWAS Solar Energy Initiative (ESEI)

Dakar, 18 - 21 October 2010

FINAL REPORT

I INTRODUCTION

1. The ECOWAS Regional Centre for Renewable Energy and Energy Efficiency (ECREEE), with the support of the ECOWAS Commission, the United Nations Industrial Development Organisation (UNIDO), the Austrian Development Agency (ADA) and the Spanish Agency for International Development (AECID), organised the first Regional Workshop on the ECOWAS Solar Energy Initiative (ESEI) in Dakar, from 18 to 21 October 2010. The workshop follows the endorsement, by the 38th Summit of Heads of State and Government of ECOWAS, of the initiative by H.E Abdoulaye Wade, President of the Republic of Senegal, to harness the region's solar energy potentials through the construction of solar power plants that will provide solar energy as a complementary source for meeting West Africa's energy needs. The Workshop was also held against the background that notwithstanding the abundant renewable energy resources within the ECOWAS region, it is generally acknowledged that without major investments in sustainable energy frameworks and infrastructure in West Africa, the regional energy access, energy security and climate objectives cannot be achieved simultaneously in the forthcoming decades.

2. The objective of the Forum was to bring together regional and international experts to analyse the technologies, applications, market potentials and investment opportunities for the large scale deployment of Solar Energy in the ECOWAS region. This was with a view to defining and adopting an operational solar energy road map for the region. The road map will take advantage of the full menu of feasible solar energy technology options, including centralized and decentralized systems for electricity generation, heating and cooling services. The potential of large-scale applications to meet the rapidly growing energy demand of urban areas as well as small-scale installations to support productive uses in rural and peri-urban areas was also considered in the roadmap. The final outcome of the roadmap is the provision of sustainable energy services through implementable solar energy programmes and projects.

3. Over 150 delegates participated in the workshop. They were drawn from:
- Ministries of Energy and Environment of ECOWAS member states,
 - Regional and International Organisations
 - Bilateral and Multilateral Partners
 - Financial institutions
 - Major Solar Energy Programmes
 - National regulatory bodies

The list of participants is attached to this report as Annex B.

4. The opening ceremony comprised speeches from Mr. Mahama Kappiah, Executive Director of ECREEE, who delivered the Welcoming Remarks. In his welcoming remark, he cited the sequences and rational for the establishment of the ECREEE as result of regional response to energy and climate change challenges: Dr. Pradeep Monga – Director of Energy and Climate Change Branch, UNIDO, who reaffirmed the commitment of UNIDO in promoting the productive uses of energy particularly the rural and peri-urban populations. He expressed the technical support of UNIDO in the establishment of ECREEE. Mr. Marcus Marinho, the Charge d'Affaire at the Embassy of Brasil in Dakar, in his intervention, delivered a message of solidarity from H.E. President Lula da Silva. He stated that Africa was a priority for Brazil, the the commitment of Brasil to the ECOWAS region as pronounced by HE President Lula da Silva of Brasil at the recently concluded Special ECOWAS Summit.

In his opening remarks, Mr. Johnson Boanuh – Director of Environment at the ECOWAS Commission highlighted the relationship between energy and the environment particularly the impact of the consumption of petroleum products for power generation and transport. On the basis of the above and given the abundant renewable energy resources, the ECOWAS Commission established the regional centre (ECREEE). This, Mr. Boanuh said, will provide the region with a platform for advocacy and the promotion renewable energy and energy efficiency in the region.

There was consensus amongst the speakers that the current energy challenges facing the West African region presents adverse implications for developing economic activities, providing basic social services and fighting poverty. There is therefore the need to attract the much-needed investment into the region's RE&EE sector.

II ELECTION OF BUREAU

5. The following Bureau was elected:

- | | | |
|-------------|---|---|
| Chairman | – | Dr. Vincent Dogo - Nigeria |
| Rapporteurs | – | Mr. N'cho Nguessan Pacome - Cote d'Ivoire |
| | | Mr. Wisdom Togobo - Ghana |

III CONDUCT OF DELIBERATIONS

6. ADOPTION OF AGENDA

The forum program comprised plenary sessions based on presentations and exchange of experiences in the region and globally. It sought to address the following issues:

- Renewable Energy Situation and Markets in the ECOWAS Region
- The Status and Potentials of Solar Energy Deployment in the ECOWAS Region
- Global Renewable and Solar Energy Development and Trends
- Solar Thermal Systems for Heating and Cooling
- The Case for Concentrated Solar Power (CSP)
- The Case for Solar Photovoltaic (PV)
- Case Studies – CSP and PV
- Solar Energy Support Policies and Mechanisms
- Investments and Financing Mechanisms
- Capacity Development and Education
- Bio-energy Production in Countries of Africa (Special Session on the ECOWAS-Brazilian Renewable Energy Partnership)

The agenda is attached to this report as Annex C.

7. PRESENTATION OF ITEMS OF THE AGENDA

During the plenary sessions, presentations were made on the following items on the agenda:

Introduction - Setting the Stage

This session included three presentations addressing issues related to the deployment of renewable energies such as obstacles to access to technologies and services and possible regional solutions in terms of programmatic approaches (GEF Program/UNDP) and actions likely to support the activities of ECREEE.

ECREEE Executive Secretary presented the Centre's objectives and missions to bring its contribution to the response to the overall issue of the RE and EE in terms of improvement of the stakeholders' intervention environment, co-funding of renewable energy projects and programmes to enhance the huge potential of renewable energy sources (solar, wind, biomass, hydroelectricity) that the sub-region is endowed with.

In his presentation on a programmatic approach for RE market development, UNIDO's Dr Pradeep Monga focused on the climate issues and the need to build on the regional level to ensure a scaling-up of the dissemination of RE technologies. The GEF Programme/UNDP for 18 sub-regional countries was presented as a perfect illustration, which is good for the development, attainment of the MDGs, and climate change mitigation objectives.

Mr. Quansah of the KNUST, while presenting the workshop discussion paper, took stock of the state of the art in the solar energy sector. Based on the trends, proven experiences and political will in some countries, he stressed the need to set up innovative mechanisms to ensure the development of the sector.

The interactive session included questions on:

- The share of ECREEE's budget dedicated to capacity-building
- The procedures for call for proposals
- The involvement of the banking sector
- Feed-in tariff for electricity generated from renewable energies
- The carbon finance opportunities available to the region

The session concluded with the following recommendations:

- Development of integrated renewable energy programmes;
- Support by ECREEE to all the countries to allow learning at the regional level, as well as information and knowledge exchange;
- Promotion of domestic equipment production to create more added value and jobs for domestic economic growth;
- Supporting the development of a policy likely to promote scaling in the acquisition of RE technologies;
- Development of mechanisms for purchasing electricity produced through renewable energy sources.

Session 1: Renewable Energy Situation and Markets in the ECOWAS Region

The session comprised a presentation on the role of renewable energy solutions for rural and peri-urban areas in the ECOWAS/UEMOA White Paper implementation; and eleven country presentations on the energy situation in ECOWAS member countries (Benin, Cape-Verde, Cote d'Ivoire, The Gambia, Ghana, Guinea, Liberia, Mali, Niger, Nigeria and Togo).

In his presentation, Dr. Smail Khenas, Regional Coordinator of the UNDP's Energy Program for Poverty Reduction (PREP), dealt with the energy trends and the issue of climate change within the ECOWAS region, where he noted that access to modern energy services had been decreasing and stressed the need to implement a feed-in tariff policy for renewable energies. He noted the huge energy potential available within the ECOWAS region, but paradoxically a very low penetration in terms of people's access to modern energy, in general, and renewable energies, in particular. In conclusion, Dr. Khenas recommended the maintenance of the regional approach in order to attain the objectives set by the ECOWAS/UEMOA White Paper.

The country presentation gave an overview of individual profiles, the energy situation, institutional structures, existing energy policies, legislative and regulatory frameworks and their respective achievements.

The **energy situation** in the West African countries is structured on energy resources, mix-energy and energy balance. It emerges from the presentations that West Africa has a huge conventional (uranium, mineral coal, oil, gas) and renewable (biomass, hydroelectricity, solar, wind) energy potential. It is noticed that the biomass, hydroelectric and solar potential have been estimated and well known. That is not the case of the wind potential, as a wind atlas proves necessary in most ECOWAS countries.

It appears from the presentations that the national energy balance shows that in the energy sector, the biomass is predominant, with more than 80% on average, followed by the oil products, and finally electricity. Unfortunately, the energy balance in most countries does not consider the renewable energies' share, which shows their insignificant contribution.

In terms of mix-energy, about 90% of the ECOWAS countries are typically using the biomass, imported oil products and gas, others use mineral coal, imported hydroelectricity, and a small number of those countries use solar energy and windmills.

All countries have an **energy policy** individually (energy policy for some and energy policy statement for the others). However, those policies, due to a lack of harmonization at the regional level, are most of the time inadequately clear on the renewable energies in terms of orientation.

Every country has at least **an institution in charge** of the energy issues, which includes the body specifically dealing with the renewable energies, but it is noticed that there are ambiguous situations in some countries.

As far as the **legislative and regulatory framework** is concerned, it is almost inexistent. According to the speakers, the draft texts are being passed by the assemblies in some countries and are being developed in others.

Achievements were roughly presented, as there are currently no reliable statistics in the sector.

After the various presentations, the participants made **comments** and asked questions relating to the following:

- Most ECOWAS countries lack specific renewable energy strategies. Because without strategy, there will be neither clearly defined vision nor target.
- It was deplored that no country presentation referred to the energy efficiency. However, the renewable energies go hand in hand with the energy efficiency if we really want to contribute to the fight against climate change through the reduction of the greenhouse gas.
- The participants wondered why energy policies were so diversified. It is time to harmonize the energy policies at the regional level. For this purpose, they wonder whether the ECREEE is entitled to propose a common renewable energy policy to the ECOWAS.
- It was finally noted a lack of human resources in the renewable energy area in most ECOWAS countries. Hence the need to focus on capacity building at the national and regional levels.

Session 2: Global Renewable and Solar Energy Development and Trends

The session gave an overview of global renewable energy resources and highlighted the potentials likely to be mobilized. With focus on proven technologies, it was stressed that it is useful to distinguish grid connected and off grid systems. It is also important to distinguish between solar for electricity on one hand and solar for heating and cooling on the other hand. Various technologies were presented regarding solar heating and cooling. A breakdown according to the type of demand was presented households, institutions (hospitals, schools,). It was noted that solar for heating and cooling is not very capital intensive and also a good value regarding jobs creation. Furthermore there are prospects for local manufacturing of capital goods.

It is worth mentioning that electricity production using concentrated solar power technologies is not new to the continent as it goes back to the beginning of the 1900s. Key technologies were presented eg solar tower, Fresnel Technology, Dish Sterling. As far as the production is concerned 2 GW are in operation/construction in Spain and the USA.

Session 3: Solar Thermal Systems for Heating and Cooling

The session gave an overview on the broad range of solar thermal applications ranging from solar hot water systems, solar air conditioning and cooling, industrial applications to large-scale systems in the MW scale. It also had a special focus on African experiences and applications like solar water heating, solar crop drying and agro-processing sectors, as well as water treatment. Initiatives such as the 1million solar water heating programme in South Africa were recommended to be studied for useful lessons in expanding the use of solar water heating systems which have the ability to displace the use of biomass and fossil-generated electricity. It was also noted that system outputs in the ECOWAS region is expected to be much higher than what obtains in Europe. Configuring systems for combined heating and cooling also have the potential to enhance solar resource utilization efficiency.

The session emphasised the need to view solar energy as a business, and not as a donation or aid. In this regard, heating needs assessment should be conducted for different industrial processes in various sectors of the West African economies. Industrial solar heating projects should consider cost-effectiveness, economic and social impact. While noting that it is important to promote local manufacturing, the session cautioned that this should be done with the need for good system performance and quality assurance in mind.

Session 4: The Case for Concentrated Solar Power (CSP)

The session gave an overview of concentrating solar power (CSP) technologies, the state of the art, prospects and possible applications/technology transfers for West Africa. It was noted that several CSP technologies are currently commercially available and compared to Spain, CSP production should be 25 % less expensive within the ECOWAS region. The discussions addressed various issues, including the maintenance cost of for example, the reflecting surfaces of the mirrors. In conclusion, it was noted that there was a need to create a conducive investment environment as well as the necessary political support.

Session 5: The Case for Solar Photovoltaic (PV)

This session included presentations, which addressed the following themes:

1. The case of photovoltaic applications in Africa – challenges and opportunities;
2. Photovoltaic options for rural electrification in West Africa (technologies and management);
3. Private sector experiences and recommendations for successful rural electrification using solar power.

Several concerns were raised: how can solar power contribute to meet people's energy needs and at which cost is it possible? Which legislative and regulatory framework to put in place to support the harmonious development of this form of energy? How to solve the problem of spare parts and that of pollution resulting from the batteries? What must be the governments' level of commitment to make sure that local people enjoy the real benefits of photovoltaic technology? What strategy to implement to ensure the maintenance and training of qualified technicians in the sector?

In the example of Ghana, the solar applications have been extended to several areas, notably the connection of the solar systems to the national electrical grid, the development of a rural electrification program, with more than 5,000 individual solar systems, which has provided the country with the highest power in the sub-region in terms of photovoltaic solar.

Regarding the Brazilian experience, it is a model called « Fee-for-Service, » for which the basic conditions have been set: a comparison was made between the various approaches, a classification of the systems is made according to the levels of consumption, a service, maintenance and training model involving the NGOs is in place, a cost structure (tariff regulation) is established. The model is implemented under a procedure based on the ISO 9000 standard. All these measures have allowed to reach 100 domestic solar systems in an area of 500 km² and resulted in a reliable and appropriate system enabling people to benefit from the basic energy services.

Session 6: Case Studies - Concentrated Solar Power (CSP) and photovoltaic (PV)

This session focused on CSP and PV case studies. The first presentation was a case study of a 7.5 MW solar photovoltaic plant in Cape Verde, developed by Martifer and Electra. It stressed that the success of the project, though a turnkey project, was due in large part, to the political will of the Cape Verdean government, and the collaboration of the private sector, which provided the institutional, technical and managerial capacities required. It analysed the type of tariff agreed, and the cost of electricity per KWh delivered to the grid which demonstrated that large scale grid-connected PV systems are a lot more financially attractive than diesel generation.

The second presentation focused on the MACSEN-PV project, for the promotion of the implementation of renewable energy systems (PV) for electricity supply in Tenerife and Senegal, with actions addressed to improve the capacity of local Authorities and technicians. In this project also participates the Tenerife Energy Agency (AIET), and, as Senegalese partners, ASER and CERER. One pilot PV plant for grid connection is going to be built in CERER facilities (Dakar). The project will collect social and economic data to be used for the installation of a 1,5 KW PV system. However, beyond energy supply to the population, the project will address the important issue of technology transfer and capacity building of the population. It was noted during the discussions that projects of such a small dimension do not necessarily create added value to Senegal. It will thus be useful to focus on the local manufacturing of these equipments, the technology transfers and job creation in the long term.

The third presentation focused on CSP Projects from the Spanish industry. It discussed the state of art of the technology, the legislation and incentives such as guaranteed tariff that allows for return on investment during the lifespan of the plant which served as a motivation for the private sector to invest in the sector and enabled Spain to lead in the CSP industry.

The fourth presentation focused on a hybrid electricity grid system composed of different energy sources (thermal, solar, CSP, wind, hydro, PV, etc). This system allows the grid to manage the different sources to satisfy the load demand for heating, cooling, domestic, and industrial. Smart grids are therefore recommended for ECOWAS countries.

Session 7: Solar Energy Support Policies and Mechanisms

The session gave an overview of appropriate and implementable policies and legal framework and support mechanisms for renewable energy. It identified the absence of such frameworks as the bane for renewable energy development in the region. Also it was obvious from the presentations that most RE development programmers and projects in the region have not been sustainable due to a lack of the right electricity policy frameworks in place, notwithstanding the high RE potentials in the Region.

The session examined the feed-in-tariffs mechanism, stressing the need to have the right policy framework in place without which the region may not make appropriate progress in renewable energy development and deployment. With the right policy, a FIT allows electricity producers of various capacity levels (from small to large-scale developments (private investors)) to participate in the renewable energy market. It is not sufficient to have a bill or law for the sake of having one but a reliable and implementable law capable of guaranteeing job creation, investment security, improved socio-economy development, and technology innovation and development.

ECOWAS member countries should be encouraged to put in place appropriate policies and legal frameworks that will support the rapid development of the region's renewable energy market.

Session 8: Investments and Financing Mechanisms

This session focused on the various financing mechanisms available to the RE&EE sector. It was noted that technology was not the major constraint. Representatives of various financial institutions, including the World Bank, the African Development Bank, the AFD, IFC, etc informed participants of the funding schemes available within their respective organisations and affirmed their readiness to partner with the private sector to deploy these technologies across the region.

Session 9: Capacity Development and Education

This session focused on capacity building regarding the RE&EE sector, as local capacity is crucial for the sustainability of the sector. It covered different methods of training, ranging from campus based, industry specific, online and distance learning. It also recommended that courses should be pursued according to relevance and target groups, eg. technicians, engineers, policy-makers, etc. The importance of African training, in Africa, for Africans, to work in Africa was stressed. It was recommended that collaborations and partnerships be developed between national and international research and academic institutions.

Presentation and Adoption of a Road Map for the ECOWAS Solar Energy Initiative

The summary of the Road Map for the ECOWAS Solar Energy Initiative was presented by the Chairman of the Bureau and debated by participants. It was thereafter moved for adoption by Liberia, seconded by Ghana, and subsequently adopted.

The Summary of the Roadmap is attached to this report as Annex D.

Special Session on the ECOWAS-Brazilian Renewable Energy Partnership

The session featured a presentation by FGV Foundation, which examined methodologies for developing sustainable bio-fuel projects. It indicated that tropical regions are favourable for biofuels production. While oil prices are sensitive to demand, the numerous benefits of biofuels production can be used as a powerful tool for leveraging the economy, protect the environment, create jobs and reduce poverty. It was however noted that there is no environment solution without social solution.

The panellist featured the various processes used in the biofuels production cycle to make it sustainable. These include feasibility analysis for all aspects of the production cycles for crops, soils, water, weather, etc. The analyses culminate in the mapping/zoning of weather, soils, crops (for food and biofuels).

A business model was also presented. It was however explained that the business model used by FGV is not an academic exercise but a practical way of bringing the technology and knowledge transfer to the investors within the region. This model is particular true for biofuels because the experience from Brazil is that the capacity and technology should be available backed by adequate policies, legal and regulatory regime.

A synopsis on the feasibility study being conducted in Senegal was presented with mapping/zoning for the entire country for biofuels production. On jatropha, it was advised that there is need for research and development. Jatropha needs to be domesticated and caution taken in introducing the crop due to some difficulties expressed at different quarters.

ECREEE, in collaboration with Brazil, intends to conduct a detailed feasibility assessment for biofuels production in the region with mapping/zoning of energy crops for effective planning and project development and implementation.

IV CONCLUSIONS

From the proceedings of the workshop, the following conclusions were drawn:

- The ECOWAS region possesses huge energy potentials, but paradoxically a very low penetration in terms of people's access to modern energy in general, and renewable energies, in particular.
- In terms of energy-mix, about 80% of the domestic energy requirements in most ECOWAS Member States is met by traditional biomass. The unsustainable harvesting and utilization of biomass is causing deforestation and localized desertification. Above all, the domestic use of biomass poses a health risk as it has been proven that over one million people in developing countries, particularly women and children, die annually from respiratory illnesses associated with in-door pollution.
- Most of the electricity generation in the region is from petroleum products. As most countries in the region are net importers of petroleum products, the high price volatility of petroleum product have always had severe impact on the balance of payment of most ECOWAS Member States. Moreover the environmental impact of these technologies is not taken into account.
- All countries have individual energy policies (energy policies for some and energy policy statements for others). However, those policies, due to a lack of harmonization at the regional level, are often inadequate. As far as legislative and regulatory frameworks are concerned, it is almost inexistent. Currently, draft legislations are currently before national assemblies in some countries and are being developed in others.
- Most countries have at least an institution or department dealing specifically with renewable energies, but it is noticed that this is ambiguous in some countries.
- Solar for heating and cooling is not very capital intensive and has the potential to relieve the grid of energy intensive equipment such as air-conditioners, water heaters, boilers and absorption chillers in commercial buildings, household and industry. Furthermore there are prospects for local manufacturing of systems/components and job creation.
- CSP are matured technologies and can favourably compete with conventional technologies for power generation if deployed in a large scale. CSP technologies are not new to the African continent as the use of this technology dates back to the early 1900s when it was deployed in Egypt. System outputs in the ECOWAS region are expected to be much higher than what obtains in Europe where these technologies are already widely deployed. These technologies also promote local manufacturing, technology transfers and job creation in the long term as these systems can easily be produced locally.

- Solar PV applications are financially attractive when deployed as large-scale grid-connected systems. Solar PV system can also be effectively deployed in mini-grids and smart grids to promote energy access in rural communities.
- Bio-energy has the potential to overcome the challenges of oil price volatility, and can also be used as a powerful tool for leveraging the economy, protecting the environment, creating jobs and reducing poverty. However, caution should be taken in the production of some bio-energy crops, such as jatropha.
- Most RE development programmes and projects in the region have not been sustainable due to a lack of the right policy frameworks in place, notwithstanding the high RE potentials in the Region. It is necessary to encourage member countries to put appropriate policies and legal frameworks in place that will support the rapid development of the region's renewable energy market.
- Several funding schemes are available to the RE&EE sector and financial institutions are available to partner with the governments and the private sector to deploy these technologies across the region.
- Finally, for the region's RE&EE sector to be sustainable, local capacity must be developed.
- Very useful recommendations and declarations were drawn by the Third ECOWAS Business Forum in Abidjan on 1st October 2010, and by the ECOWAS Parliamentary Hearing Committee on Renewable Energy and Climate Change in Akosombo, Ghana on 21st September 2008 without any follow-up.

V RECOMMENDATIONS

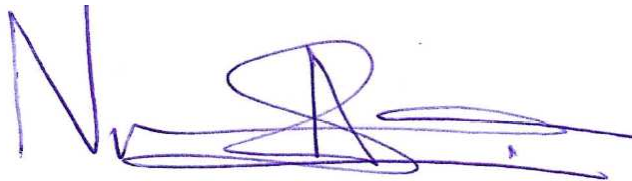
At the end of the workshop, the following recommendations were reached:

1. A regional approach should be maintained in order to attain the objectives set by the ECOWAS/UEMOA White Paper on Energy services;
2. ECREEE should encourage member-states to put in place appropriate policies and legal frameworks that will support the rapid development of the region's renewable energy market. ECREEE should expedite action on a regional policy framework for RE that will serve as a guide for national policies;
3. Member states should be encouraged to establish dedicated institutions dealing specifically with renewable energies;
4. ECREEE should promote solar for heating and cooling to relieve the grid of energy intensive equipment such as air-conditioners, water heaters, boilers and absorption chillers in commercial buildings, household and industry, and to this effect, encourage local manufacturing of systems/components.
5. ECREEE should explore the possibility of deploying large-scale CSP plants, grid-connected Solar PV applications, mini and smart grids in rural communities, to address the chronic energy crises negatively impacting the economies of the region;
6. ECREEE should develop a regional strategy on bio-energy detailing feasibility assessments for resource mapping/zoning of bio-energy crops for effective planning and project development;
7. ECREEE should follow up on the finalization of the MoU on the ECOWAS-Brazil Renewable Energy Partnership, which should include a biomass strategy, bio-energy resource mapping, capacity building and the renewable energy observatory;
8. ECREEE should explore the various funding schemes available for the RE&EE with financial institutions and facilitate effective partnerships with governments and the private sector to raise funding for the programmes and projects. ECREEE should therefore organise periodic coordination meetings with partners, international and multilateral agencies and member-states to harmonise strategies;
9. For effective implementation of the region's RE&EE programmes and projects, local capacity must be developed. In addition, collaborations should be forged between national and international research and academic institutions, and ensure that specified objectives are achieved;
10. The possibility of National contributions based on individual GDP or other criteria should be explored for the implementation of the ESEI and the development of the regional RE&EE market;

11. A consultant should be commissioned to elaborate a detailed Road Map for the ECOWAS Solar Energy Initiative;
12. ECREEE should take concrete steps and necessary measures for the implementation of the recommendations of the ESEI Workshop, the Third ECOWAS Business Forum, and the declaration of the ECOWAS parliamentary hearing committee on Renewable Energy and Climate Change.

Finally, the meeting applauded ECREEE for organising the workshop, the first of its kind in the region, and recommended that the report and roadmap be presented to the meeting of ECOWAS Energy Ministers, the ECOWAS Council of Ministers and the Authority of Heads of States and Governments for their endorsement and the necessary political backing/support.

**Done in Dakar
21st October 2010**



**Dr. Vincent Dogo
Chairman**

ANNEX A

VOTE OF THANKS

THE PARTICIPANTS AT THE REGIONAL WORKSHOP HEREBY EXPRESS THEIR SINCERE APPRECIATION TO THE GOVERNMENT OF SENEGAL, THE ECOWAS COMMISSION, THE UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANISATION (UNIDO), THE AUSTRIAN DEVELOPMENT AGENCY (ADA), AND THE SPANISH AGENCY FOR INTERNATIONAL DEVELOPMENT (AECID) FOR THE CORDIAL AND WARM HOSPITALITY ACCORDED THEM DURING THEIR STAY AND ESPECIALLY THE EXCELLENT WORKING CONDITIONS THAT FACILITATED THE SUCCESS OF THEIR MEETING.

DAKAR
21ST OCTOBER 2010

ANNEX B

The list of Participants

ANNEX C

The Agenda

ANNEX D

Summary of the Solar Roadmap