



## **Executive Board of ECREEE approves 2011 Work plan and annual budget of the Centre**

ECREEE held its second Executive Board (EB) meeting on 28 January 2011 in Praia, Cape Verde. The Board reviewed and adopted the 2010 Status Report and the 2011 Work Plan of the Centre. The meeting was preceded by the 1<sup>st</sup> Technical Committee (TC) meeting on 27 January, which provided technical guidance as well as recommendations to the Board. The Board members commended the high performance rate of ECREEE regarding the execution of its 2010 work plan. It noted that within the relatively short period, the Centre had successfully:

- Established the Secretariat and its Network of National Focal Institutions (NFIs);
- Recruited key personnel from the ECOWAS region and internationally;
- Established the Governance Structure and organized two Executive Board meetings and one Technical Committee meeting;
- Established the internal administrative, management and financial procedures;
- Developed a short-term and long-term planning and reporting framework (annual status reports and work plans);
- Launched the core operational activities and created international and local awareness through public relation activities (e.g. website, newsletters);
- Organized first workshops and conferences with more than 200 participants;
- Sustained the program and project budget of the Centre for the next five years;
- Developed technically sound project proposals which received funding approvals from the European Commission and the Global Environment Facility;
- Built up a broad international and local network with like-minded partners.

The ECREEE Executive Director, Mr. Mahama Kappiah, delivered the welcome address at the TC meeting. He noted that the year 2010 was a significant year in the history of ECREEE, given the ambitious work plan and excellent level of execution. He therefore expressed gratitude for the unprecedented support of the ECOWAS Commission, and the partners: ADA, AECID and UNIDO, for this achievement. He also welcomed the incoming donors such as the Federative Republic of Brazil, Nigeria, USAID and the European Commission.

Mr. Amodou Diallo, Secretary General of the West African Power Pool (WAPP) expressed appreciation to the host country and other donors for their support to ECREEE. He stressed the major challenges linked to the sustainability of energy services. Mr. Alfred Braimah, Director of the Private Sector Department of the ECOWAS Commission, was elected Chairman of the TC, while Mr. Abrão Lopes, Director of Energy, Ministry of Tourism, Industry and Energy, Cape Verde, Mr.



Moussa Leko, Principal Project Officer of the Department of Environment of the ECOWAS Commission, served as Rapporteurs.

The Executive Board (EB) approved the ambitious 2011 Work Plan and annual budget of ECREEE. The work plan seeks to Implement 156 activities under 14 programs. The programs were defined as follows: Management & Administration, General Issues, Communication Program, RE Policy Development, RE Resource Assessment, Capacity Development, Solar Program, Bioenergy Program, Small Hydro Power Program, Wind Power Program, Energy Efficiency Program, RE&EE Observatory (EREO), Rural Energy and Project support. The activities under the programs contribute to the five result areas ECREEE is aiming at. The result areas directly respond to existing barriers for RE&EE deployment and usage in the West African region:

- Effective regional RE&EE promotion agency is created and efficiently managed;
- Funds for RE&EE programs and projects are mobilized and implemented;
- Effective partnerships/networks in the RE&EE sectors are created and executed;
- Tailored RE&EE policy, legal and regulatory frameworks are created and executed;
- RE&EE Capacities are strengthened and applied;
- RE&EE Knowledge base, awareness raising and advocacy are strengthened;
- RE&EE Business and Investment Promotion.

The Executive Board (EB) meeting was attended by the ECOWAS Commissioner for Infrastructure, Celestin Talaki, who is also the Chairman of ECREEE Board, the ECOWAS Director for Legal Affairs, the Executive Director of ECREEE, the Ambassador of the Kingdom of Spain to Cape Verde, H.E. Jose Miguel Corvinos Lafuente. Also present, were Representatives of the Minister for Tourism, Industry and Energy of Cape Verde, the Minister of State for Power of Nigeria, the Austrian Development Agency (ADA), the United Nations Industrial Organisation (UNIDO), and the United States Agency for International Development (USAID).

Declaring the meeting open, the Chairman of the Board, Mr. Celestin Talaki, conveyed the goodwill message and appreciation of the ECOWAS President to the members of the Board, particularly the core donors for their invaluable support to ECREEE. He also welcomed the incoming partners. H.E. Jose Miguel Corvinos Lafuente, the Ambassador of the Kingdom of Spain to Cape Verde, in his address, congratulated the ECOWAS Commission for the foresight in creating such a Centre and commended the Executive

Director for the impressive results achieved within the short period. While reiterating Spain's commitment to ECREEE, he urged the Centre to replicate similar awareness in the ECOWAS region in 2011, as attained Internationally in 2010.

Dr. Vincent Dogo, representing the Honorable Minister of State for Power of Nigeria, also expressed appreciation to the core partners of ECREEE, and re-affirmed the commitment of Nigeria to make ECREEE a success.

Mr. Hannes Bauer, expert on sustainable energy at the Austrian Development Agency, conveyed the compliments of Ms. Ursula Stella (ADA) and Dr. Pradeep Monga (UNIDO), and expressed appreciation to the ECOWAS Commission, Spain and UNIDO for their support to the Centre. He also provided inputs for possible programs and projects to be explored and jointly implemented.

## Kick-Off for the ECOWAS Renewable Energy Facility (EREF) of ECREEE

*Call for proposals open from 31 May to 15 July 2011*

ECREEE recently launched the ECOWAS Renewable Energy Facility (EREF), one of its flag-ship programs to be implemented over the coming years. The "Green" Facility is managed by the ECREEE Secretariat, based in Praia, Cape Verde, and provides grant co-funding for small and medium scale renewable energy and energy efficiency projects and businesses in peri-urban and rural areas of West Africa. "We thank the Austrian Development Cooperation (ADC), the Spanish Agency for International Development Cooperation (AECID) the United Nations Industrial Development Organization (UNIDO) for their initial financial and technical support and would like to invite other financiers to join this important Facility.", Mr. Mahama Kappiah, Executive Director of ECREEE, speaking at the official launch.

Under the EREF, the Centre undertakes demand-driven regular call for proposals. The first call is now open for submissions from 31 May to 15 July 2011. West African and international applicants are invited to submit concept notes in English, French or Portuguese in accordance with the guidelines available in a special EREF section of the ECREEE website (<http://eref.ecreee.org>).

Project proposals will involve one or more ECOWAS countries: Benin, Burkina Faso, Cape Verde, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, and Togo. All appropriate and sustainable renewable energy and energy efficiency technologies are eligible. Proposals can be submitted by one applicant or a group of partners led by a lead applicant. International applicants are expected to have a West African partner and create local added value. Also eligible are private or public-private companies, individual consultants and project developers, governmental institutions (e.g. ministries, utilities, rural electrification agencies), municipalities, universities, research centers, NGOs, or cooperatives.

In the scope of two financing windows the Facility provides small grants in the range of 5.000 to 50.000 Euros per project. The first financing window supports pre-investment activities such as strategic studies, site assessments, financial project structuring (including CDM) and the installation of small-scale pilot projects in rural communities. The window on business development aims at strengthening local energy service and manufacturing companies and promoting technology and know-how transfer. Applications are to be prepared according to the provided EREF templates and forms which can be downloaded from the EREF website <http://eref.ecreee.org> in English, French and Portuguese.

The call has a two-stage application and selection process. Interested applicants submit Concept Notes in the first stage. If the Concept Note is evaluated positively the successful applicants are invited to prepare a full project proposal. ECREEE undertakes the appraisal of the proposals in cooperation with its National Focal Institutions (NFIs) situated in all ECOWAS Countries.



The proposals are evaluated according to the following criteria: relevance, impact, effectiveness, feasibility, efficiency, capacity and experience of partners, sustainability and regional replication and innovation potential. Successfully appraised proposals are ranked according to their scores and submitted to the EREF Evaluation Committee (EC) for approval.

"With the Facility, we seek to mitigate existing financial barriers for renewable energy and energy efficiency projects and businesses in rural and peri-urban areas of West Africa, explains Mr. Mahama Kappiah. The rural markets provide manifold investment and business opportunities due to the unserved demand for modern energy services and the currently untapped RE potentials. Currently, only 8% of the rural population in West Africa has access to electricity and other modern forms of energy services. Electricity networks are often not developed and serve mainly urban centres. The transportation of fossil fuels to remote areas is often costly and rural communities have to pay higher prices for energy services compared to the population in cities. The poor are particularly vulnerable to price fluctuations such as the recent price escalation for oil based products.

In this context, decentralised RE&EE technologies are well prepared to promote sustainable development. Available solar, wind, bioenergy and small-hydro systems are already more cost-effective than the widespread diesel based solutions - particularly when considering the life time costs and negative environmental externalities. Improved biomass stoves can reduce indoor pollution and fuel wood use. Sustainable energy solutions meet the priority needs of the rural poor, boost local productive activities, contribute to poverty reduction and help to create wealth, improve healthcare, create jobs and enhance water supply and sanitation. They are tools for harnessing processing and conserving agricultural products (e.g. solar drying of crops or ice production in the fishery sector) and for the improvement of access to essential services (e.g. cooking services, solar cooling of vaccinations in health posts, basic lighting for rural schools, water pumping and desalination).

Mr. Martin Lugmayr, ECREEE-UNIDO expert, noted that the Facility will contribute to the implementation of the ECOWAS/ UEMOA White Paper for energy access in peri-urban and rural areas. The policy foresees that at least 20% of new investment in electricity will be derived from renewable sources and calls for the establishment of an innovation fund to raise funding for at least 200 demonstration projects. The Facility also contributes to the achievement of the UN Goal on Universal Access to Clean, Affordable Energy by 2030, reduction of GHG emissions and the 2012 International Year of Sustainable Energy for All.

## **SENSITIZATION TOUR TO ECOWAS MEMBER STATES**

The first quarter of 2011 was particularly busy for ECREEE, with the commencement of a sensitization tour to the ECOWAS member states. This afforded opportunity to present the mandate and work plan of the Centre. In the first phase of the regional tour Mr. Mahama Kappiah, Executive Director, and Mr. David Vilar, ECREEE renewable energy expert, visited Nigeria, Benin, Togo, Ghana, Guinée-Conakry, Senegal Burkina Faso, and Mali.

These visits were jointly organized with the National Focal Institutions (NFI) of ECREEE and in close collaboration of the Ministers of Energy in each Member State. Since the creation of ECREEE, it has been imperative for the Center to forge greater collaboration and understanding between the national institutions and the regional Centre, with a view to strengthening collaboration for the effective implementation of programmes.



**Visit to the Republic to Benin**

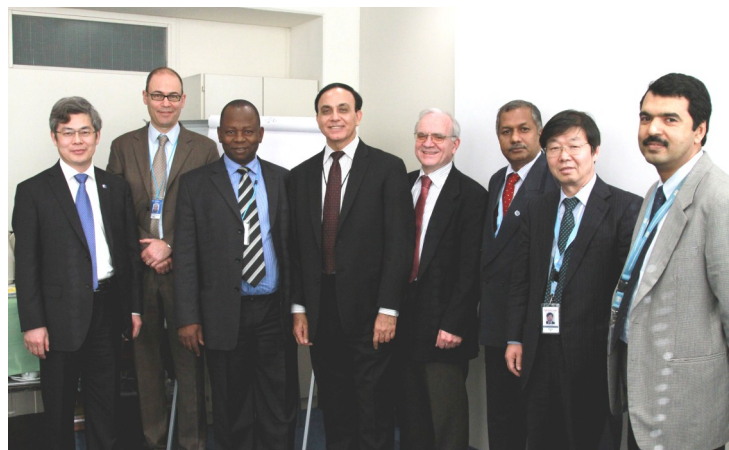
The following activities were conducted during the visits:

1. Strengthen the relationship with the NFIs and discuss ongoing RE&EE policy processes, programs and projects;
2. Establish contact and/or partnerships with relevant national institutions (government and private sector institutions, academic institutions including universities, renewable energy and energy efficiency associations, civil society and other relevant stakeholders)
3. Follow-up on the situation of RE&EE projects proposals and project implementation for information gathering to update ECREEE database
4. Gathering RE&EE data and documents for the RE&EE baseline study and resource assessments
5. Hold wrap-up meetings with all the relevant stakeholder institutions including the media to present ECREEE
6. Promote awareness on ECREEE and the ECOWAS Renewable Energy Facility (EREF) through media activities.



**5 MW Grid-Connected PV Station in Praia, Cape Verde: The current largest installation in Sub Sahara Africa**

## **UNIDO Technology Centers join forces**



**Pradeep Monga, UNIDO Director of the Energy and Climate Change Branch, meets Directors of Technology Centers (ITCs)**

UNIDO continues to enhance South-South cooperation within its energy technical cooperation programs. In March 2011, representatives of the UNIDO International Technology Centres (ITCs) held a series of meetings in Vienna to discuss ways to further strengthen collaboration, delivery of services, scaling up and replication of initiatives and technology transfers between developing countries.

The meetings also provided an opportunity for the ITCs to showcase activities and best practices, and to focus on priorities for strengthened cooperation. The meetings set a new strategic framework of collaboration to promote South-South cooperation and the project activities being led by the ITCs.

There is an agreed consensus that the ITCs will become more involved in projects related to energy and climate change, which will build on the lessons learned from the strategic partnership programs of the ECOWAS Regional Centre for Renewable Energy and Energy Efficiency (ECREEE) in Cape Verde and the Observatory for Renewable Energy in Latin America and the Caribbean.

ECREEE agreed on a further cooperation with some of the UNIDO Centers. The ECREEE IT expert will participate in a six months fellowship program on Geographic Information Systems at the UNIDO-International Centre for Science and High Technology (ICS) in Trieste, Italy. Cooperation with the UNIDO Small Hydropower Centres in Nigeria, China and India is also under discussion.

## **ECOWAS Green Headquarters Project**

ECREEE has launched an important demonstration project which will create regional awareness for sustainable energy solutions in the ECOWAS region.



Similar to the Renewable Energy House of the European Union in Brussels, the ECOWAS Headquarter Project will showcase the social, economic and environmental benefits of renewable energy solutions and the cost-effectiveness of energy conservation and efficiency measures in a life-cycle view. In the first phase of the project a 100% renewable energy based external lighting system will be installed, while a comprehensive energy audit and planning exercise will be undertaken. A public tender for a consultancy was launched by ECREEE (to be continued next page).

## ECREEE STRENGTHENS COOPERATION WITH OTHER INSTITUTIONS

The contract was awarded to the Spanish company, **Solaria Energías Renovables**. The project started in February 2011 and is ongoing. The energy audit will define the energy consumption patterns of the current building. Initial conservation measures and different options for the further integration of renewable energy components will be elaborated.

### **ECREEE and the ITC sign MOU**

*(Canarias, 28<sup>th</sup> March, 2011)*

The Instituto Tecnológico de Canarias (ITC), represented by the Chief Executive Officer, Juan Ruiz Azola and ECREEE, represented by the Executive Director, Mr. Mahama Kappiah, signed an MoU on a series of joint actions in the field of renewable energy and water technologies.

The Instituto Tecnológico de Canarias (ITC) was established in 1992 as a Technology Centre of the Canary Island Regional Government (Gobierno de Canarias). It carries out applied research activities in different technology fields. One field of expertise is the area of renewable energy and water technologies for desalination and purification. ITC also advises the Canary Island Government on the its Regional Innovation Policy. It also advises different public institutions which belong to the Local or Regional Administrations.

For more than 10 years, the ITC has successfully transferred its know-how to developing countries. ITC has significant experience in carrying out international cooperation projects in developing countries covering sustainable energy, water supply and treatment, capacity building, consultancy and knowledge transfer. ITC has particular experience in rural electrification by building-up renewable energy based mini-grids of hybrid systems.



Juan Ruiz Azola and Mahama Kappiah signing MoU in the Canarias

The agreement between ECREEE and ITC allows both partners to take advantage of their comparative advantages. ITC offers know-how and ECREEE contributes with its experience and contacts in West Africa as well as identified project possibilities. Both institutions agreed to cooperate on a variety of projects and activities in the 2011 work plan and beyond.

The proximity of ITC to Cape Verde and other countries in West Africa, allows easy exchange of know how and information. Particularly, Cape Verde can benefit from the renewable energy and water treatment experiences of the Canary Islands. The first two activities to be developed under the MOU are two concrete project proposals for rural electrification and the implementation of a training seminar for senior energy officials and experts from the ECOWAS energy ministries and electricity utilities.

### **ECREEE and ARE sign MOU**

*(Brussels, March 2011)*

A Memorandum of Understanding was signed between Mr. Mahama Kappiah, Executive Director of ECREEE and Mr. Simon Rolland, Secretary General of the Alliance for Rural Electrification (ARE) in Brussels.

The cooperation aims to boost the rural energy profile of both organizations and will contribute to the ECOWAS' policy objective of at least 20% of new investments in electricity generation in rural and peri-urban areas originating from renewable energy sources.

ARE promotes off-grid and distributed renewable energy solutions for rural electrification in developing countries. ARE serves as an international platform for sharing the knowledge and experience of the private sector interested in operating in developing countries. Based on their experience, it develops



Simon Roland and Mahama Kappiah signing a MoU

technological, political and financial recommendations, which are made available for policy makers and other actors in the field of rural electrification. ARE, today is comprised of more than 55 members, including many market leaders.

ECREEE on the other hand, is the specialized promotion agency of ECOWAS which aims at the establishment of regional renewable energy and energy efficiency markets by supporting various activities to mitigate existing technical, financial, economic, legal, institutional and capacity related barriers.

These activities include the creation of policy and regulatory frameworks, capacity development, awareness raising and knowledge management as well as business and investment promotion.

In this framework, ARE and ECREEE are ideal partners to address the questions and needs of local authorities in West Africa and disseminate the private sector's best practices in order to maximize existing and future rural electrification and renewable energy programs.

At the signing ceremony both sides stressed the importance of the ECOWAS Renewable Energy Facility (EREF) and the ECOWAS Renewable Energy Observatory (EREO). The Facility and the Observatory will open up opportunities for innovative North-South partnerships between ARE's members and local companies and institutions.

## ECREEE delegation visited Spain

An ECREEE delegation visited Spain in May 2011 to participate in the GENERA2011, one of the most important Spanish fairs in the renewable energy sector. ECREEE's presentation at the conference was followed with keen interest by a large number of Spanish companies. The huge turnout was made possible by the support of the Spanish Agency for International Development Cooperation (AECID) and the Instituto para la Diversificación y Ahorro de la Energía (IDAE), which were both represented by the Advisor for Multilateral Affairs and the Secretary-General respectively.

Under the auspices of AECID, the ECREEE delegation also held meetings with relevant institutions such as the Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT), Instituto para la Diversificación y Ahorro de la Energía (IDAE), Oficina Española de Cambio Climático (OECC), la Universidad Politécnica de Madrid (UPM), el Ministerio de Industria, Turismo y Comercio, el Instituto Español de Comercio Exterior (ICEX), Centro Nacional de Energías Renovables (CENER), Centro Nacional de Formación Profesional en Energías Renovables (CENIFER) and various departments of AECID.

Several opportunities and partnerships were identified in the different fields of expertise of the Spanish Institutions which will foster ECREEE's mandate to promote the deployment of renewable energy and energy efficiency technologies and services in West Africa.

The ECREEE delegation also visited demonstration sites of CENER and CENIFER in Navarra, a hub for renewable energy installations and know-how in Spain. There was also the opportunity to visit the Control Centre and other renewable energy installations of the Spanish company - ACCIONA ENERGIA - in the outskirts of Pamplona.

Overall, the visit reinforced the valuable collaboration between Spain and ECREEE. It also brought to the fore the strategic role that ECREEE can play, in partnership with various Spanish public and private institutions, in the development of renewable energy and energy efficiency services in West Africa.

### ***Regional Seminar: Integration of Renewable Energy into the Energy Systems of the ECOWAS Region, 15 –17 June 2011, Canary Islands, Spain***

ECREEE, in collaboration with the Instituto Tecnológico de Canarias (ITC) organized a Regional Seminar on the "Integration of Renewable Energy into the Energy Systems of the ECOWAS Region" from the 15th to 17th of June 2011 in the Canary Islands, Spain. The Seminar brought together key Decision Makers and Chief Executives of the Electricity Utilities' of ECOWAS member states and Spanish specialized institutions on renewable energy and energy planning.

The objective of the Seminar was to examine the Canary Islands' experience in electrical grid planning and the challenge posed by high penetration of renewable energies in the electricity system. The seminar also assessed the readiness of ECOWAS countries with regards to the integration of renewable energies into their national electrical grids. It concluded with site visits to renewable energy installations and control centres.



**ECREEE discussed CSP options for West Africa with CENER**

## Spanish RE&EE Profile

The Spanish economy is characterized by relatively higher energy intensity than the rest of Europe, by a high dependence on energy imports (self-sufficiency ratio of 25.9 % in 2010), but also by rapid changes of the energy system in the last few years. Indeed, security & diversity of energy sources remain the major driving forces for the growth of Spain's renewable energy industry.

A stable legal framework based on feed-in tariffs with premium price recognizing the environmental benefits promotes the development of renewables. Spain has become the world's first largest producer of CSP electricity and one of the largest producer of wind and PV power.

The successes in the development of wind power in Spain have been accompanied by the creation of competitive companies now active in the international technology markets. The photovoltaic energy is characterized by a similar industrial development. Most of the companies in the renewable energy sector are assigned to four areas of activity: PV (54.6 %), Thermal Solar (41.8 %), Wind (24.4 %) & Biomass (22.1 %).

By 2010, renewable energy had increased its share in the Spanish energy matrix to reach 13.2% of final energy, about 1 point above that accounted for 12.3% in 2009, putting Spain on the path required to achieve the EU target of 20% of final energy consumption from renewable sources by 2020. The most ambitious/optimistic scenario indicate a total RES consumption share of 27.8% in gross final energy consumption (99.80 Mt CO<sub>2</sub>eq emissions reduced)

The development of renewable technologies has been greater in the electricity sector and in 2010 accounted for 32.6% of the total, a more than 7 points increase over the previous year and 2.9 percentage points above the target set in the 2005-2010 Renewable Energy Plan.

Other objectives include achieving a 20% energy consumption saving through greater energy efficiency. Furthermore, 10% of transport needs would be covered by biofuels.

Spain has institutional, academic and entrepreneur support to develop the sector. It also fosters research, with the realization of new projects like REVE ([Regulación Eólica con Vehículos Eléctricos](#)).

## VALIDATION WORKSHOP OF THE UNIDO/GEF PROJECT:

### *Promoting Market Based Development of Small to Medium Scale Renewable Energy Systems in Cape Verde, 24<sup>th</sup> March 2011*

The Validation Workshop of the GEF/UNIDO project named “Promoting Market Based Development of Small to Medium Scale Renewable Energy Systems in Cape Verde” took place with the presence of approximately 57 participants from 30 organisations. The project was developed by UNIDO in cooperation with the Ministry of Tourism, Industry and Energy (MTIE) in Cape Verde and the ECREEE Secretariat. Consulting services were provided by IT Power Ltd., based in UK. The Workshop’s main objective was to discuss the proposed projects with relevant stakeholders. The discussions were chaired by Mr. Jansenio Delgado, ECREEE-UNIDO renewable energy expert from Cape Verde. The project aims at boosting sustainable development and the reduction of global GHG emissions, by creating enabling market conditions for the deployment of small to medium scale renewable energy systems. This will be achieved through:

1. Demonstrating the technical feasibility and commercial viability of small to medium scale renewable energy systems, either in grid connected or stand alone format, via the installation of 1.5 MW pilot demonstration projects (total capacity). The selected projects on different islands of Cape Verde will avoid approximately 4,000 Tonnes CO<sub>2e</sub>/annum.
2. Preparing an investment strategy for scaling up or replicating pilot projects, and establishing a dedicated seed fund as part of the ECOWAS Renewable Energy Facility (EREF). This will provide co-funding for the development of small to medium scale renewable energy projects in Cape Verde.
3. Conducting a study on how to achieve the goal to make the electricity system of the island Brava 100% renewable.
4. Strengthening the regulatory framework to effectively promote and support small to medium scale renewable energy development within economic and social sectors;
5. Strengthening the institutional capacity, and address the insufficient technical capacity within market enablers and market players (especially entrepreneurs, banks etc) to identify, develop, appraise and implement renewable energy projects.

The Workshop was attended by Mr. Abraão Lopes, Director general at the Ministry of Tourism Industry and Energy (MTIE) who, while declaring the workshop opened, stressed the important contribution of the project in achieving the ambitious renewable energy targets of Cape Verde. The Government has set the goal of generating at least 50% of its electricity from renewable



*Cross-section of participants*

energy sources by 2020. Mr. Moisés Borges, GEF Operational Focal Point, in his remarks, strongly emphasized the importance of the project to: achieve the Cape Verde National Policy objectives; avoid carbon emissions along with contributing to an increased access to electricity; stimulate private sector participation in the renewable energy sector of Cape Verde; build capacity

and awareness on the enormous renewable energy potential that exists in Cape Verde; and contribute to providing solutions to social problems due to the nature of the projects to be installed as demonstration projects, thus integrating political, economical, environmental and social concerns.

Mr. Rui Levy (UNIDO) and Mr. Alois Mhlanga (UNIDO) presented the various activities of UNIDO in Cape Verde. The key pillars of the GEF/UNIDO West Africa Energy Programme which will mobilize around 100 million USD for RE&EE projects in West Africa were also highlighted.



*Mr. Abraão Lopes Director-General, Ministry of Tourism, Industry and Energy (MTIE), Cape Verde*

Mr. Bah Saho and Mr. Martin Lugmayr, both ECREEE experts, encouraged renewable energy companies in Cape Verde to export their services and experience to the rest of the ECOWAS region. They noted that, with the high demand for decentralised small and medium scale renewable energy solutions in rural and peri-urban areas of West Africa, the GEF/UNIDO West Africa Energy Programme and the regional promotion activities of ECREEE are creating a vibrant space for investments and businesses.

ECOWAS has set the policy objective that at least 20% of new energy investment should originate from renewable sources in rural and peri-urban areas. Currently, in rural areas only 8% of the population in West Africa has access to electricity. In this regard, Mr. Lugmayr presented the ECOWAS Renewable Energy Facility (EREF) which will make available co-funding for small and medium scale renewable energy projects and businesses in Cape Verde and the whole ECOWAS region. It is expected that around \$1 million USD will be available for projects in Cape Verde. The first call for proposals of the EREF was launched on 31 May 2011 (see <http://eref.ecreee.org>).



*Jansenio Delgado, ECREEE-UNIDO expert from Cape Verde*

## THE 6TH JOINT EXPERTS GROUP (JEG) MEETING OF THE AFRICA-EU ENERGY PARTNERSHIP, PORT LOUIS, MAURITIUS



### DELEGATES AT THE AEEP MEETING in Mauritius

The 6th Joint Experts Group Meeting of the Africa-EU Energy Partnership was held March 16-18, 2011 in Port Louis, Mauritius. The Africa-EU Energy Partnership, one of eight partnerships in the Africa-EU Joint Strategy, is a long-term framework for structured political dialogue and cooperation between Africa and the EU on energy issues of strategic importance, reflecting African and European needs. The official opening session included speeches by H.E. Ahmed Rashid Beebeejaun, Deputy Prime Minister of Mauritius (who officially opened the meeting), Mr. Aboubakari Baba Moussa, Director for Infrastructure and Energy in the African Union Commission, and Ambassador Alessandro Mariani, Head of the EU Delegation to Mauritius.

The meeting was attended by the AEEP Co-Chairs (African Union Commission, Mauritius, Germany, and Austria), representatives of 9 African and 4 European countries, the European Commission, the African Union Commission (AUC), Regional Economic Communities (RECs), Regional Power Pools (RPPs), the African Development Bank (AfdB), International and African Specialized Organizations, and other organizations in an observer role, including the ECOWAS Regional Centre for Renewable Energy and Energy Efficiency (ECREEE), among others.

Highlights of the meeting included the presentation of the draft status report on the implementation of the 2nd Action Plan. The report focused on EU contributions and examples of on-going projects in the six priority areas of the 2nd Action Plan. As part of follow-up actions to achieve the 10 000 MW in hydropower capacity target by 2020, the AUC presented the regional generation and interconnection priority projects to be considered under the 2nd Action Plan.

Participants specifically highlighted a number of priority areas of the action plan, of which they emphasized capacity building, research & development and technology transfer, and the necessity to indicate concrete tools for facilitating the implementation of projects through the Partnership.

The EU Energy Initiative Partnership Dialogue Facility (EUEI PDF) and Agence Française de Développement (AFD) also provided an implementation status of the AEEP Renewable Energy Cooperation Programme (RECP) start-up phase. The EUEI PDF is responsible for coordination on the European side and activities related to RE policies and markets development, while the AFD is concerned with activities related to financial mechanisms and preparation of bankable projects.



At the margins of the JEG Meeting, the 4th Meeting of the African Implementation Team was also held, as well as the presentation of the study on the Institutional Architecture for Investment Development in Africa (IAIDA).

In line with the outline of the activities of the start-up phase, the ECOWAS Renewable Energy Policy Development project was endorsed by the JEG. The RE policy will facilitate the widespread adoption of regional and national policies promoting the deployment and usage of RE&EE technologies and services in the ECOWAS region.

The AEEP RECP is potentially useful in policy advisory services; private sector match making; flagship investment projects; and technology innovation and capacity development. Further issues to be considered under the programme include improved use of traditional biomass for mechanical power, cooking, lighting and heating, solar water heating, the provision of credit lines for local banks to implement concrete and immediate action on the ground, such as solar lighting for households, decreasing the knowledge gap of actors such as small enterprises and medium size companies through adequate training and capacity building measures, amongst others.

## ***Academy to Train 1000 Nigerians in Renewable Energy***

The Renewable Energy Academy of West Africa has concluded plans to train 1000 Nigerians in Renewable Energy application and entrepreneurship by 2012 in support of the much needed infrastructural development and youth employment in the region.

According to Emmanuel Emielu, the Chief Executive of the Academy, "we must invest in developing the entrepreneurial and technical skills needed to achieve a massive diffusion of renewable energy technology in Nigeria and across Africa because it is the entrepreneurs that will create the jobs and make the investments required for the growth of the sector".

Emielu, who is also a member of the African Renewable Energy Alliance (AREA), disclosed that the Academy has laid out a number of specialised programmes with the support of its German partners, RENAC AG, and other sponsors. Top on the list are an international seminar in Ghana in April 2011, and a Renewable Energy Business Summit in Abuja in October. Others include the Renewable Energy Summer School Programme for Nigerian youths, he added.

At a time the world is experiencing a wave of environmental disasters, analysts believe investment in renewables is an opportunity whose time has come. Renewable Energy as a development enabler may well become elusive for Nigeria and Africa, except there is a massive attention to entrepreneurial education and skills development, he warned.

## Sierra Leone Energy Profile

**Summary:** Post-civil war Sierra Leone makes giant strides in rehabilitating its energy infrastructure and diversifies its energy mix through renewable energy sources.

Sierra Leone possesses substantial mineral, agricultural and marine resources (e.g. diamonds, rutile, bauxite, gold, iron). However, the majority of the population particularly in rural areas live below the poverty line. Sierra Leone is gradually recovering from dramatic socio-economic and political instability that culminated into an armed conflict, which lasted from 1991 to 2002. Energy plays a key role in the future socio-economic development of the country. However, most of the energy infrastructure remains destroyed and the country is facing a chronic energy crisis which is characterized by energy poverty, lack of energy security and scarce financial resources to reinvest in the sector.

Today, Sierra Leone has very low modern energy consumption rates. The vast majority of the population depends mainly on wood-fuel for cooking and kerosene for lighting, which have negative consequences on the environment and the quality of life. Significant energy access and energy pricing inequalities exist between urban and rural areas. Whereas urban areas tend to use energy higher up in the energy ladder (e.g. electricity, charcoal, kerosene etc.) rural areas continue to rely on traditional biomass for meeting their energy requirements. Household access to electricity services is less than 10% country-wide and less than 1% in rural areas where 62% of the population are based.

Sierra Leone is confronted with the reality of energy vulnerability, fuel price volatility and an unreliable electricity system. The electricity industry is facing tremendous challenges due to the growing gap between predicted demand particularly in urban areas and the insufficient supply capacities. Already today, the electricity production remains far below the requirements of the economy and is not able to meet the basic human needs of the 5,4 million population of the country. The available generation capacities vary considerably due to technical and commercial losses of the electricity system (estimated at 30% to 38%) and the low capacity factors of some generation plants. The electricity network serves only the main towns and suburbs. It consists of the Western Area grid centered in Freetown and 12 provincial grids. Due to the ravages of war, most of these networks and power stations are still in a state of total disrepair. The state owned National Power Authority (NPA) operates the major electricity network in the Freetown area and a smaller one in the towns of Bo and Kenema through the Bo-Kenema Power Services (BKPS).

The chronic generation gap led to frequent power outages and load shedding with customers being supplied only an average of twelve hours over two days. Between 2002 and 2008, the overall annual electricity generation fell from 142

GWh in 2002 to 40 GWh in 2006, 45 GWh in 2007 and increased to 157 GWh in 2008. It is estimated that in 2010 around 89 MW installed electric capacity was provided by NPA in the Freetown area, around 11 MW by BKPS in the towns of Bo and Kenema and 25 MW by independent power producers (from the mining, industrial and commercial sector). Electricity production is predominantly dependent on expensive imported petroleum products (e.g. diesel) and is a severe burden for national households in Sierra Leone. The steadily increasing and fluctuating petroleum prices in recent years had a devastating effect on the economy of the country. Large businesses and public institutions have to maintain expensive backup diesel generators due to the frequent power cuts.

Previous policy instruments, legal and regulatory frameworks did not respond effectively to the country's severe energy crises. Against the backdrop of the generation failure in 2007, the Government of Sierra Leone adopted an Energy Sector Emergency Plan. In 2009 the new National Energy Policy of Sierra Leone was passed and the implementation of key power projects was accelerated. The new energy policy aims at long-term sustainability and incorporates renewable energy alternatives.

No major viable fossil fuel resources have been discovered in Sierra Leone so far. The country has a vast cost-effective hydro power potential which remains largely untapped due to various technical and non-technical barriers. The estimated potential of Sierra Leone is 1,513 MW from which only 56 MW were exploited as at 2010. This figure is based on projections from 27 different sites but does not include the potential for mini hydro systems smaller than 2 MW. At the end of 2009, the Bumbuna hydropower station with an installed maximum capacity of 50 MW was commissioned.

Apart from hydro potential the country can also rely on a high solar radiation which lies between 1460 to 1800 kWh/(m<sup>2</sup>/y). In 2011 a US\$29 million solar lighting project covering Freetown and other parts of the country was launched in cooperation with the ECOWAS Bank for Investment and Development (EBID). Moreover, experts estimate that agricultural wastes in Sierra Leone could provide 2700 GWh of electricity annually. In 2011, an ethanol project capable of producing 960,000 tons of sugarcane and 90,000m<sup>3</sup> of ethanol annually was launched with support of the African Development Bank (AfDB). The ethanol will be partly exported and around 165 GWh of electricity will be generated annually through a 32 MW co-generation plant. Sierra Leone has also some moderate potential for wind generation. The existing data on wind velocities indicate a countrywide average speed of 3–5 m/s.

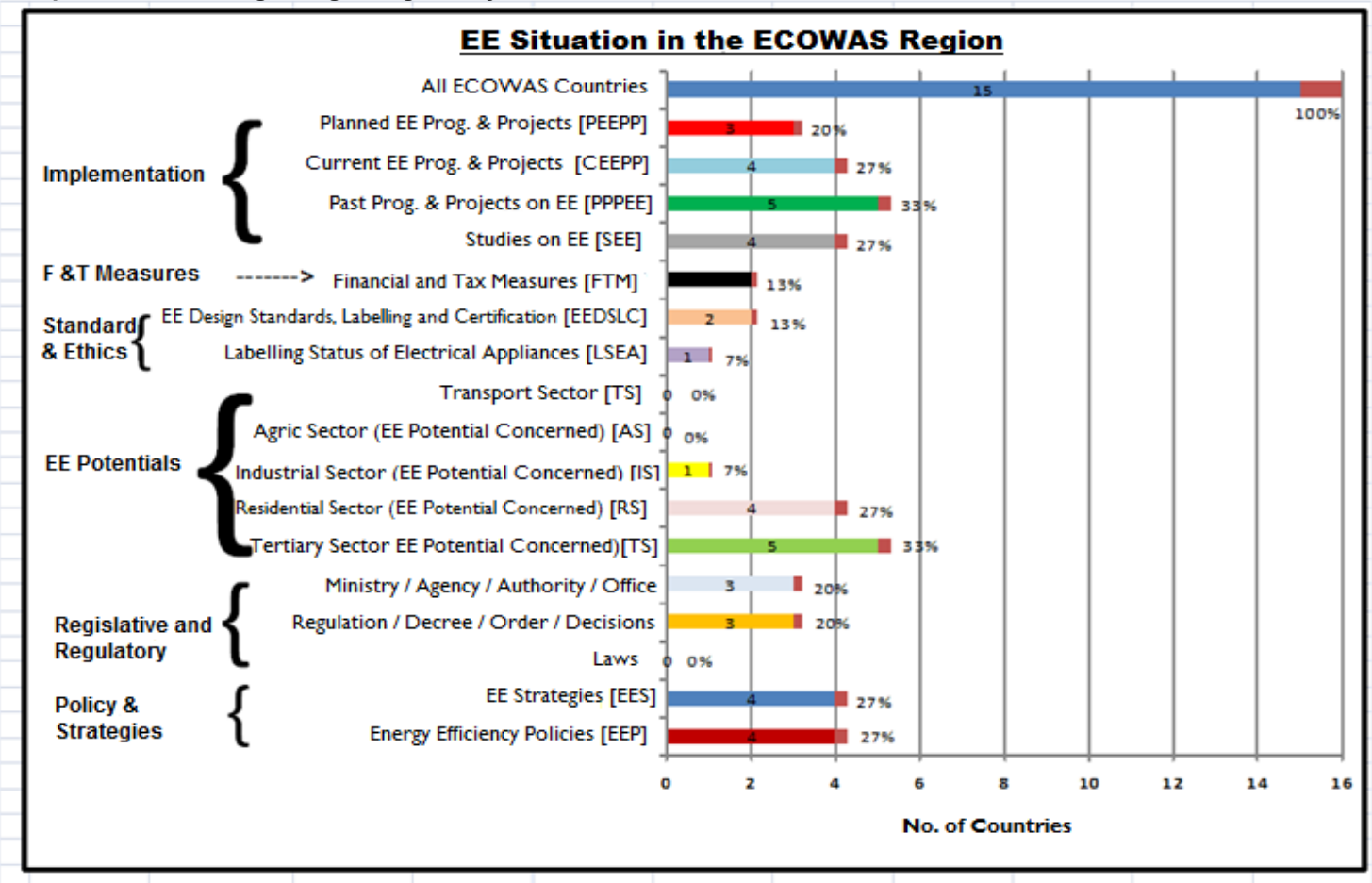
*Further readings: National Energy Policy of Sierra Leone (2009), Republic of Sierra Leone.*



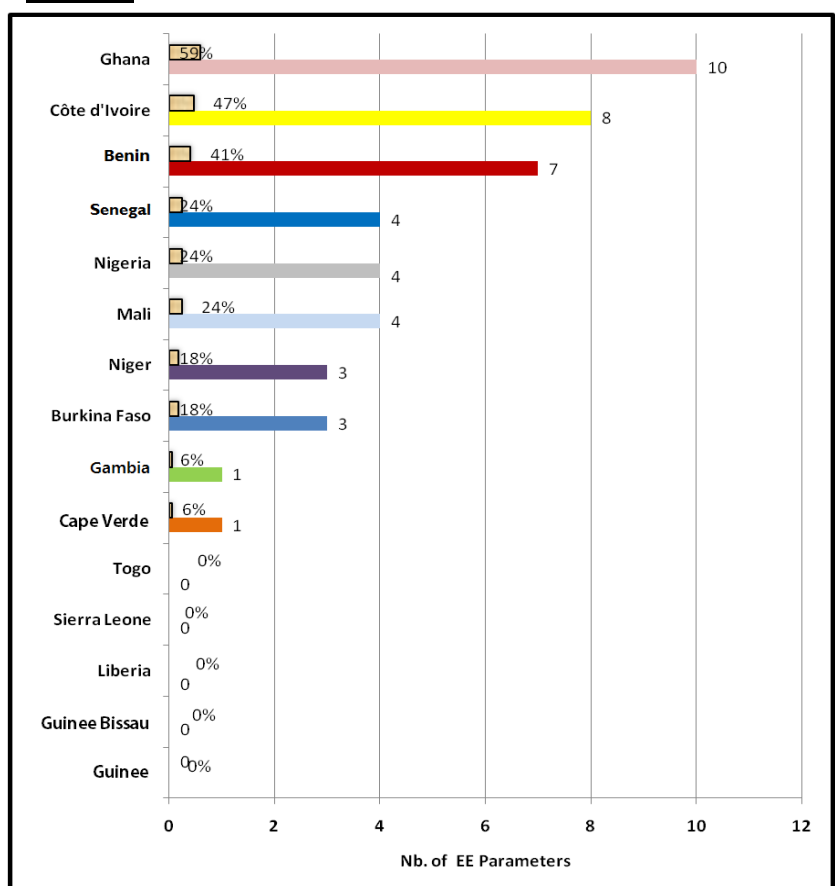
## ENERGY EFFICIENCY (EE) REVIEW OF THE ECOWAS REGION

The EE situation in most ECOWAS countries is not well assessed due to the lack of information and data systems. Based on country studies conducted by the National Focal Institutions (NFIs), Mr. Ibrahim Soumaila, ECREEE energy efficiency expert, elaborated a review on West Africa. It reveals that only a small number of countries have a legal, regulatory and institutional framework for EE in place and undertake targeted programs or projects.

**Graph 1 : Stocktaking of legal, regulatory and institutional EE frameworks in the ECOWAS**



**Graph 2 : Classification of ECOWAS member Countries**



**Graph 1:** Describes the ECOWAS member countries situation in 2010, according to their level of execution of seventeen (17) basic energy efficiency measures. In 33% of the ECOWAS states representing 5 countries, the EE potential in the tertiary sector was assessed and pilot projects were implemented. In 4 countries, representing 27%, we see the existence of energy policies and strategies. In 27% of the countries, the EE potential for the residential sector was assessed. Fully established institutional and regulatory frameworks for EE exist only in three (3) countries, or 20%. Thirteen percent (13%) of the countries have attempted to establish standards and implemented financial support measures. Currently, no country has a legislative framework for EE in place.

**Graph 2:** shows the classification of ECOWAS member countries in relation to their current level of enforcement of EE measures, according to the 17 established EE parameters. We see that Ghana is leading with 10 points or 59%, followed by Côte d'Ivoire with 8 points, or 47%, then Benin with 7 points or 41%, Senegal, Nigeria and Mali each with 4 points each, or 24%. Burkina Faso and Niger are in the 6th place with 3 points each or 18%, Gambia and Cape Verde with 1 point each or 6% and Guinea, Guinea Bissau, Liberia, Sierra Leone and Togo are yet to implement any measures in relation to EE.

## INTERVIEW WITH MR. SIMON ROLLAND, SECRETARY GENERAL OF ALLIANCE FOR RURAL ELECTRIFICATION (ARE)

### **1. Could you brief us on the objectives and structure of ARE, and some of its flag-ship activities.**

ARE is the only international business association in the world focusing on the promotion of off-grid and distributed renewable energy solutions for rural electrification in developing countries.

We have over 50 members throughout the entire rural electrification project chain which allow us to approach decision-makers messages based on unique and practical experience.

Much of our activities involve educating and communicating stakeholders in the energy sector about the benefits of renewable solutions in developing countries. Our members are organized in Working Groups engaged in finding solutions and developing recommendations for specific issues, such as regulation. We are also developing and promoting awareness campaigns with other organizations such as the UN's International Year for Access to Sustainable Energy for All and Practical Action's make the Call.

### **2. It's now 5 years since the creation of ARE, how would you assess its achievements so far, in relation to its goals and objectives. How will the population in rural and peri-urban areas benefit from ARE activities particularly in West Africa?**

We started 5 years ago with 5 members, the brain-child of some of the renewable sector most influential trade associations, but since then we have created our own place in the market. We now have over 50 members – that's an average of almost 1 member per month.

But more than that, we have become a respected business organization among the sector's movers-and-shakers and decision-makers. It's exactly because we have gained a voice that we can directly benefit West Africa. We generate and focus attention on sustainable energy solutions for rural electrifications, we speak at major conferences, we have produced publications and speak to the media about this and through it try to create the right political and social environment that will advance renewable energy sources.

One concrete example is our work in designing the European Union's Energy Facility, a programme that will benefit Africa through dozens of projects on increasing access to sustainable and affordable energy services for the poor living in rural and peri-urban areas.

### **3. Heat for cooking services is the most important energy for rural and peri-urban population groups. Why is ARE only focused on electrification technologies and not other solutions?**



*Mr. Simon Roland*

Other organizations are working and doing good work on cooking services, however it is not part of our members' business portfolio, so it is outside our scope of work. We acknowledge that it's in cooking that rural and peri-urban populations spend more time, energy and money currently in the developing world.

However, looking at the bigger picture, only through electrification will these populations be able to create long-term economic development, growth of public services such as hospitals and schools and alleviate poverty in general. Seven of the eight Millennium Development Goals, for instance, are only possible with electricity.

### **4. You recently signed a Memorandum of Understanding with ECREEE, in what way do you think the Alliance could benefit by having established such a relationship? Where do you see the added value of ECREEE?**

If you look at both organizations' work and objectives we are obviously natural partners. From ARE's perspective, ECREEE offers us a unique point of contact with the region's 15 governments. Our members were very encouraged by the creation of ECREEE, since it gives clear signs of the region's commitment to energy efficiency and renewable energy sources.

We would like to create a constant flow of information and knowledge sharing between the two organizations and to develop a project to address the barriers to the development of the private sector in the region.

### **5. It is estimated that over 1.6 billion people worldwide do not have access to electricity, and about \$8.1 trillion, equivalent to an average of \$300 billion per year is needed until 2030 for the developing and transitional economies to meet their energy needs. And coupled with the rapid growing population particularly in Sub Sahara Africa, what are your strategies towards meeting this growing demand?**

These are generally accepted but should not become dogma, especially because if you take "\$300 billion per year" to heart, you might as well give up. At ARE, we approach the problem through its solutions, meaning, how do we create the right market conditions to establish a healthy and long-term sustainable energy market?

One thing is for sure, the first step is an alignment between the private sector and governments. We need to together create the right fiscal, regulatory and financial conditions to enable the take-off of renewable energies, especially in rural and peri-urban areas in Africa, where they are the only sustainable way to reach the population. The private sector must, of course participate in these investments, but only if the political support exists.

**6. What are the RE technology solutions so far identified most suitable for rural electrification? Are they cost-effective when compared with other alternatives?**

No one technology is a silver bullet for solving every energy challenge. And actually, that is the strength of renewable energy solutions: they are extremely flexible and can adapt to varied social, cultural and geographical conditions. For instance, one village's location could be ideal for the implementation of a small hydro facility, while another would better benefit from a PV mini-grid and other still a small-wind installation.

Whatever the conditions, at this stage of its market development, renewable energy is still an expensive solution, especially in the more isolated areas of developing nations. However, when looking at the long-term and considering the full life-cycle of the different energy solutions, renewables prove to be most cost-effective, healthy and environmentally-friendly compared to candles or diesel. We have recently published a study together with the USAID that proves exactly this point. Its available on our website.

**7. ECREEE is interested to support the establishment of business-to-business partnerships between West African and international companies. Is there any interest coming from the European private-sector?**

There is definitely an interest, or else we wouldn't exist. However, there is still a lot of work to be done to ensure a relationship of trust, especially with governments. I believe that organizations such as ECREEE and ARE are well positioned to build and strengthen this relationship.



**ECREEE-USAID executes regional GIS based solar and wind resource assessment in West Africa**

ECREEE and USAID undertake a detailed wind and solar resource assessment which covers the whole West African region (including Mauritania). The data and maps will be disseminated through the ECOWAS Renewable Energy Observatory (REO). This task is being implemented through an existing technical Assistance Program (TAP) awarded to Nexant Incorporated.

The assessment will be executed in two phases and will consider already existing data of other initiatives (e.g. NASA, JRC, UNEP-SWERA, TERNA-GIZ). The initial task focuses on building up the baseline for bankable wind and solar energy resource data and the drawing of detailed GIS maps. The solar resource assessment includes all relevant data streams needed for on- and off-grid PV and solar thermal based investments (e.g. CSP, heating and cooling). It will also identify promising investment sites by considering other important socio-economic factors (e.g. population density, proximity to the grid, cost-effectiveness).

The second phase focuses on project support aimed at bringing selected projects to closure. This, according to Hyacinth Elayo, Energy Policy Analyst at ECREEE, represents a concrete follow-up to the first Regional Workshop on the ECOWAS Solar Energy Initiative (ESEI) held in Dakar, Senegal from 18th to 21st October 2010, which saw to the adoption of an operational solar road map for the ECOWAS region. The solar resource mapping was identified as a priority action in the road map.



**AREA SC members: From left, Anthony Ighodaro, AREA SC Chairperson - Director, KXN Nigeria/ Solarsolve (AI), Mr. Mahama Kappiah, Director ECOWAS Centre for Renewable Energy & Energy Efficiency (MK), Adeola Eleri, Renewable Energy Department, Energy Commission of Nigeria (AE), Ansgar Kiene, AREA Coordinator - Director Africa, World Future Council Foundation (AK) and Joseph Nganga, CEO, Renewable Energy Ventures Kenya .**

**African Renewable Energy Alliance Meeting**

Mahama Kappiah, Executive Director of ECREEE hosted the Steering Committee meeting of the African Renewable Energy Alliance (AREA) in Praia from the 8 to 9 of April 2011. The committee discussed joint activities to be implemented in the forthcoming months including the Power Kick for Africa (conference and solar public viewing) planned for Abuja, Nigeria from 29 June to 1st July 2011. This follows on the phenomenal success of the last Power Kick Africa event which held in Accra and Obodoaka, Ghana from 21 to 23 June 2010.

The Committee members were also received by Mr. Abraão Andrade Lopes, Director for Energy, who outlined the ambitious renewable energy targets of Cape Verde and the measures being put in place to achieve them. The meeting also included site visits to the largest solar PV installation in Africa, located in the city of Praia, and a *Jatropha* research centre in Sao Domingos.

The forming of the Alliance was the result of a workshop that was jointly organized by the World Future Council (WFC), the Alliance for Rural Electrification (ARE) and the Heinrich Böll Foundation under the patronage of Dr. Tewolde Berhan Gebre Egziabher, Director General of the Ethiopian Environmental Protection Authority and WFC Councillor. AREA has set itself the mandate to promote the massive uptake of Renewable Energy for both urban and rural African population centres, with a view to ensuring that millions of African citizens have access to a better quality of life in the future.

**TV-Documentary on RE in Cape Verde**

At the invitation of ECREEE, the **German Broadcasting Station Deutsche Welle** produced a documentary on "Renewable Energies in Cape Verde" which also features an interview with the Executive Director of ECREEE. The documentary was produced in English, German and Spanish and is available on the ECREEE website or <http://www.dw-world.de>.

## ECREEE Business Plan 2011 to 2015

During the first quarter of 2011, the draft Business Plan of the Centre for the period 2011-2015 was elaborated by ECREEE with technical assistance of Nexant Inc. and funding from the United States Agency for International Aid (USAID).



Mr. Edward Hoyt and Lauren J. Wygonski, Nexant Inc., and the ECREEE Team work on the Business Plan of the Centre

The Business Plan also contains an analysis of the current situation of ECREEE with its strengths and weaknesses. It defines a strategy for ECREEE to fulfil its mandate in the coming years. The strategy includes the definition of objectives and milestones, monitoring indicators, an annual action plan, a human resources strategy and projected budgetary requirements to fund ECREEE activities over the next five years.

Measureable indicators allow for the monitoring and evaluation of the progress and impact made by ECREEE in the five defined result areas of the Centre:

1. Effective regional RE&EE promotion agency created and efficiently managed

2. Funds for RE&EE programs and projects mobilized and implemented
3. Effective partnerships/networks in the RE&EE sectors created and executed
4. Tailored RE&EE policy, legal and regulatory frameworks created and executed
5. RE&EE Capacities are strengthened and applied

6. RE&EE Knowledge base, awareness raising and advocacy strengthened
7. RE&EE Business and Investment Promotion

In the forthcoming months the Business Plan draft will be reviewed by ECREEE's partners, the National Focal Institutions (NFIs) and other relevant stakeholders. The Business Plan will be formally reviewed and approved at the next ECREEE Technical Committee and Executive Board meetings at the end of 2011.

The ECREEE Team expresses sincere appreciation to the United States Agency for International Aid (USAID) and Nexant Inc. for their assistance in this comprehensive planning and formulation exercise.



"BIOMASS WEST & CENTRAL AFRICA CONGRESS 2011" will unravel the complex and rapidly shifting factors that impact wood biomass pricing and trade, and how regional and local opportunities await those with the medium and long term objectives to succeed in the vast new playing field. Biomass global market structure, pricing, tariffs, demand and supply matrices; real investment opportunities in ECOWAS; and unraveling opportunities in Central Africa forestry and trade.

BIOMASS CONGRESS 2011 aims to provide networking opportunities for key buyers, suppliers and investors in African biomass industry.

Visit the event website for more information (<http://www.magenta-global.com.sg/biomass2011>). OR CONTACT: Ms Reema Raj, Marketing Manager, Magenta Global. PHONE: +65 6391 2530, EMAIL: [r.raj@magenta-global.com.sg](mailto:r.raj@magenta-global.com.sg).

## PROCUREMENT AND EMPLOYMENT NOTICES

Interested RE&EE experts, consultants and supplier companies are invited to regularly visit the service section of the ECREEE website for the latest procurements and recruitments: [www.ecreee.org](http://www.ecreee.org).

### Ongoing:

1. Call for Proposals of the ECOWAS Renewable Energy Facility (EREF) was launched; applicants can download the guidelines and templates in English, French and Portuguese from the EREF section of the website: <http://eref.ecreee.org>; deadline 15 July 2011;
2. Green ECREEE Headquarters Project: ECREEE calls for offers to design and implement a grid connected photovoltaic (PV) system on the roof of the building of the ECREEE office based in Praia, Cape Verde; deadline 30 May 2011;
3. ECREEE is seeking project proposals for innovative investment and demonstration projects in the area of grid-connected CSP and PV, solar cooling, bioelectricity and small hydro power as foreseen in the ECREEE 2011 work plan. ECREEE is primarily supporting pre-investment activities. Proposals shall be prepared according to the guidelines and templates for ECREEE co-funded projects and involve co-funding from other sources;
4. ECREEE seeks support for the upgrade of the ECREEE CMS website, the planning and creation of the web-based ECOWAS Renewable Energy Observatory (EREO) and a web-based project cycle management system for the calls of the ECOWAS Renewable Energy Facility. Qualified companies can send their applications; deadline 30 August 2011;
5. ECREEE published the recruitment for a Knowledge Management and Public Relations expert to be based at ECREEE headquarters in Praia, Cape Verde; deadline for applications: 17 April 2011.

**ECREEE is supported by**



Austrian  
Development Cooperation



ECREEE Secretariat, Achada Santo Antonio Electra Building, 2nd Floor C. P. 288, Praia, Cape Verde

Tel: (+238) 2604630 / 2624608, E-mail: [info@ecreee.org](mailto:info@ecreee.org) Skype: info-ecreee