EU launches a platform for sustainable bioenergy use in semi-arid Africa

By 2009, a pioneering EU funded project, plans to have established a bioenergy competence platform in Africa, to bring modern bioenergy to local populations, as well as to export green fuels to world markets. Entitled COMPETE - Competence Platform on Energy Crop and Agroforestry Systems for Arid and Semi-arid Ecosystems -Africa, the project aims to link modern bioenergy with rural development by implementing and studying pilot and best practice projects in semi-arid and arid regions in Africa.

EUBIA, the European Biomass Industry Association, a Member of the Alliance of Rural Electrification, participates in COMPETE along with 43 other project partners from across the globe.

Today, bioenergy use is confronted with many interrelated problems, such as the health and environmental consequences of expanded and uncontrolled use of traditional biomass fuels; the food versus food land use debate; soil degradation and deforestation; the impacts of, and on, climate change; water use; and, the potential for political conflict. These factors are closely linked to the problems that many regions in Africa are confronted with daily.

In fact, if Africa has vast and diverse natural resources, the continent also suffers from its lack of efficient technologies as well as of economical development. The level of income is not sufficient for people to use modern & clean energy supplies and about 80% of the people in Africa depend on charcoal and firewood to fulfil their energy needs and for their livelihood, these dependences contributing to massive deforestation in many developing countries. There is no easy alternative to traditional biomass use and serious policy challenges hamper the development of modern bioenergy systems, particularly at the community level. However, the development of energy crops and agroforestry systems may provide one such option and recent studies have concluded that Africa ranks first when it comes to the long-term sustainable bioenergy production potential by 2050*.

To face these challenges, a comprehensive approach is urgently needed. In this objective, COMPETE integrates the factors outlined above as well as the vast bioenergy potential of Africa into seven major co-ordination activities called ‘Work packages’ which are organised to carry out the tasks of the COMPETE project over a period of 36 months (the project started in January 2007 and will run until 2009). For its part, EUBIA’s main participation will be in the “Work package on South-South and North-South cooperation”, and additionally, contributing to the Work Packages on land-use, energy crops and agro-forestry, policy development and dissemination.
Furthermore, notable activities of the COMPETE consortium include a Work package on Sustainability and another on Policy Development. The former will coordinate activities on the sustainability analysis of land use for biofuels. It will look at life cycle analysis of biofuels, the consequences and effects of land-use changes, climate change, and mechanisms for monitoring sustainability and mechanisms for rewarding best practices.

The Policy Development component will coordinate policy research activities in African countries. Policy initiatives will be evaluated and developed in close cooperation with African multinational organisations namely, SADC, UEMOA, NEPAD and national African governments. By ensuring that this Work package is Africa-led, local site, climate, soil and cultural aspects will be part of this policy development.

2nd Compete Project Meeting and Outlook for 2008

Recently, the 2nd COMPETE project partner meeting took place during the International Conference ‘Stakes and Perspectives for Biofuels in Africa’ from the 27-29 November in Ouagadougou, Burkina Faso. The main points discussed at the project meeting included the sustainability criteria and the political strategies in African countries on biofuels. Project partners identified the COMPETE platform, as an opportunity to call on African stakeholders to analyze the recent industry and government led initiatives establishing sustainability criteria on biofuels, such as the Roundtable on Sustainable Palm Oil (RSPO) and the one on Sustainable Biofuels (RSB), and assess if the priorities of Africa are taken into consideration within the different initiatives.

The two working groups on Sustainability and Policy will have key roles in the 2008 in considering these significant issues. COMPETE will organise a policy conference in 2008 within the Work Package on Policy Development. Additionally, under the Work package on Sustainability, a COMPETE Meeting and Workshop on “Sustainable Biofuels – An African Perspective” will be organised by Imperial College London, a COMPETE partner in Tanzania from the 14-18 April 2008.

Bioenergy is now set to occur at very large scales in many African countries and could either be very damaging by locking Africa out of new development opportunities, or sustainable and beneficial to African development. This project will challenge all the COMPETE partners to ensure the latter option will indeed become reality.

For more information on COMPETE and the project’s work plan until 2009, please consult the project website: www.compete-bioafrica.net
News from the Alliance

New members in the Alliance

We are proud to announce that two organizations have joined the Alliance.

Following the adhesion of IDAE (the Institute for Energy Diversification and Saving), first, but hopefully not last, institutional member of the Alliance, we now count among our members a research institute (Fraunhofer ISE).

The IDAE, a public business entity attached to the Spanish General Secretariat for Energy promoting energy efficiency and rational use of energy with the objectives to increase the diversification of energy sources and to foster the use of renewable energy, is willing to increase its participation in international promotional activities in the field of renewable energy sources and to foster the exchange of experiences in the field of Rural Electrification.

The other newcomers is not really unknown within the immediate surrounding of the Alliance. In fact, this organization was already active in the Working group on Technological Solutions that ARE has created in 2006 and which is going to produce its first outcome (see below). It is after the success of the Working group that they decided to join the Alliance convinced of its added value.

The Fraunhofer Institute for Solar Energy Systems (ISE), a research center part of a very large constellation of German research Institutes, conducts research on energy efficiency and environmentally sound technologies in industrialized, threshold and developing countries. In this framework, it also acts as a service provider in a wide range of fields from fundamental scientific research relating to solar energy applications, through the development of production technology and prototypes, to the construction of demonstration systems.

We believe that the participation of organizations such as IDEA, or the ISE constitutes interesting contributions for the Alliance where private and non-lucrative actor can exchange and bring-in their own expertise. These new memberships are in line with our objective to set up a strong and large network built to influence and assist the creation of viable off-grid markets throughout the world, and we are very glad to count them among us.

THE MILLENNIUM DEVELOPMENT GOALS REVIEW 2008: “WITHOUT POWER NONE OF THE GOALS WILL COME TO LIGHT”...
The Alliance has launched collaboration links with “VRS Media” a media organization working for the promotion of the Millennium development Goals (MDGs) worldwide. Being in partnership with some of the world most known organizations fighting for poverty alleviation, they are reaching a very large audience and are an important vector for the promotion of the MDGs.

In October after a meeting which gathered in Kigali government and industry leaders, they launched the “MDGs Review 2007” a magazine largely diffused among public and private actors worldwide.

Due to the success of the meeting and the magazine, VRS Media has decided to concentrate on another issue: the private sector commitment to MDGs and its involvement into development actions. Energy being a central contributor to the success of the Millennium Goals, they have dedicating an entire section to this topic in the next issue.

In this perspective, ARE has been invited to introduce it with an editorial on rural electrification. The idea for the rest of the section is to present different renewable energy technologies produced the private sector. As a representative of major companies active in some developing countries we were also asked to propose to our members the opportunity to participate to the next issue by showcasing themselves.

You will find more information about VRS Media and the MDGs review in the following website:

www.vrs-media.com / www.mdg-review.com

We also keep at your disposal the form to participate and support the next issue.

WORKING GROUP ON TECHNOLOGICAL SOLUTIONS: THE BROCHURE HYBRID SYSTEMS PUBLISHED SOON!

ARE’s Working Group of Technological Solutions is launching its first tool to promote the use of decentralized renewable energy technologies within rural areas. The brochure: “Hybrid power systems based on renewable energies: a suitable and cost-competitive solution for rural electrification” will see the light on January 2008.

This brochure constitutes an informative instrument to raise awareness of the existence of a compelling technological solution to gain immediate access to reliable electricity at the lowest economic cost, thereby improving living standards and increasing productivity and economic growth. The Alliance will widely present and disseminate this document among the international community, relevant stakeholders and decision makers with the aim of stressing the importance of including renewable energies within the rural development agendas.

ARE BECOMES SUPPORTING ORGANIZATION OF THE PV-HYBRID CONFERENCE:

Talking about Hybrid and Mini grid systems the Alliance became a supporting organization of the PV - Hybrid Conference with which we have very good relations.

This conference is organized by OTTI - Ostbayerisches Technologie-Transfer-Institut e.V. – a non-profit organisation founded in 1977. OTTI is engaged in knowledge transfer between industry and science, business and administration and is offer training, seminars, and conference.

For More information about the Conference please see below. For more information about OTTI, website in German: www.otti.de
ARE Activities

PARTICIPATION TO THE GLOBAL COMPACT INITIATIVE:

The Alliance, organization representative of the Industry interests, has been accepted as an active participant of the Global Compact (GC) Initiative. This United Nation initiative is the world’s largest citizenship initiative with over 3800 business participants and other stakeholders located in approximately 100 countries.

The GC is a framework for businesses that are committed to aligning their operations and strategies with ten universally accepted principles in the areas of human rights, labour, the environment and anti-corruption. The GC initiative is first and foremost concerned with exhibiting and building the social legitimacy of business and markets.

The GC is not a regulatory instrument. It rather relies on public accountability, transparency and the enlightened self-interest of companies, labour and civil society to initiate and share substantive action in pursuing the principles upon which the Global Compact is based.

It involves all the relevant social actors: governments, who defined the principles on which the initiative is based; companies, whose actions it seeks to influence; labor, in whose hands the concrete process of global production takes place; civil society organizations, representing the wider community of stakeholders; and The United Nations, the world's only truly global political forum, as an authoritative convener and facilitator.

We believe that our participation to the Global Compact will bring to the Alliance, and ultimately to our members, several benefits:

- To demonstrate leadership by advancing responsible corporate citizenship.
- To participate to the urgent need for action and for a proactive stance on critical issues.
- To leverage the UN's global reach and convening power with governments, business, civil society and other stakeholders.
- To share good practices and learnings.
- To access the UN's broad knowledge in development issues.

The Alliance is particularly glad to reaffirm its commitment, and through ours the one of our members, to the global principles supported by this great initiative.

To participate directly to the GC or through the activities of the Alliance please contact us.

“ARE PROJECT SOLIDARITY MECHANISM”

In the continuity of our decision to provide the best support possible to some promoters of rural electrification projects, the Alliance has invented a new internal mechanism called: “ARE's project solidarity mechanism”.

This system will allow us to go a little bit further than the intermediary relations that we want to set up between projects’ promoters and interested industries and organizations to foster sustainable
rural electrification. Through this initiative we want to show and to prove our commitment by joining our efforts and those of our members to the ones of the International Community.

We want to encourage our members, partners and supporters to contribute to the implementation of rural electrification projects through the sponsorship of our activities. Concretely this mechanism will function as 10% direct debit from the sponsorship sum that companies will provide to support one of our events.

This mechanism will allow our members to bring a small but efficient direct support to a rural electrification project in developing countries and to be associated from the beginning to its implementation and its success.

In brief, it will constitute a painless way to develop new and constructive socially responsible actions while at the same time continuing the promotion of their company.

**UPDATE EUSEW 2008: THE KEY EVENT FOR RENEWABLES IN EUROPE AND BEYOND IS APPROACHING:**

ARE as Campaign Associate of the EUSEW 2008 is already preparing its event on renewable energies and rural electrification.

This week will be a great occasion to promote renewable energies for rural electrification, to present technological solutions for rural electrification and to reinforce the position of the Alliance and its members as key partners of the European Commission.

We have launched during the past few weeks a large sponsorship campaign engaging our members and other companies to participate along side with the Alliance to this fundamental week. This campaign has already been successful since by two very important companies willing to support our event have joined us and therefore are accessing at a very interesting position through our event but also through our place within the exhibition.

In fact, apart of our event organized on the 28th of January in one of the most modern and well situated building and room of the European Commission, ARE will have one of the most original and attractive stand of the important exposition center which will be set up.

Along side with several Member States and International organizations representations’ stand, ARE will be exposing during the whole week a life-sized model of a typical hybrid system in the exhibition center. It will be the occasion to show one of the most suitable technological solutions for rural electrification provided by the industry in one of the most exposed places of the EUSEW; a guided tour through the Exhibition center with Press and high level representatives is already planned. Some companies have already leap on this opportunity to be part of the exposition furnishing component to our stand giving themselves a very interesting exposure to their products. **We hope more will join.**
During the whole week the ARE Stand will have significant importance. Being the only one devoted to rural electrification and the off-grid markets, it will be a meeting point for rural electrification stakeholders and will provide logistical support to our members and sponsors.

These companies are already sponsoring the Alliance for the EUSEW 2008 join them, join us!
The PLATINUM SPONSOR has been chosen by:

SMA: Platinum Sponsor of ARE’s activities within the EUSEW 2008

One of the SILVER SPONSOR has been chosen by:

Isofoton: Silver Sponsor of ARE’s activities within the EUSEW 2008

Paul Horsman is a consultant and the project co-coordinator for the “Positive Energy Sore” (PES) project of Greenpeace. During this interview he exposes us this project, the lessons to retain as well as the potential that the PES represent for the developing countries but also for the renewable energy world and in particular the industry...

Paul Horsman will also be present as a speaker during the EUSEW 2008

Could you please shortly explain the concept of the "positive energy store" and describe its implementation especially in South Africa? According to you what is its originality in comparison with "more classical" rural electrification project?

P.H.: The PES is a concept based on sustainability. It is not just a concept that provides renewable energy, but it is a whole package of which the energy source and supply is a key part. The package includes the development of enterprises enabling people to earn an income, partly from the supply and maintenance of renewable energy but also partly to utilizing the energy to run small businesses. The package also includes support for the individuals running businesses, monitoring to ensure that any problems are ironed out and follow-up to ensure sustainability.
The Store powers small businesses in remote rural areas with renewable energy. With solar panels, small wind turbines and micro-hydro the store can generate renewable energy for local community businesses. The concept is flexible so that the store can be adapted to the needs of the area in which it is placed; training is provided so that local people can not only operate the store but also earn back their investment and manage it themselves making it possible to preserve the store in the long term.

The positive energy store takes the concept of productive use containers (PUC) and uses a renewable energy and business focus to create appropriate and financially sustainable small businesses in remote rural areas to benefit rural entrepreneurs and rural consumers. The commercial foundation of the concept, with its focus on skills development and capacity building, business models and viability is designed to ensure that the store would provide a sustainable and valuable contribution to productive use and energy development.

You did your analyze on South Africa but you also shortly mentioned in your work other experiences in Brazil and Mexico. How are the project in Brazil and Mexico going? Did you use the same technique and the same partners (Funding entirely produced by Greenpeace and E+Co as main implementing partner etc...)?

P.H.: In Brazil and Mexico the concept was applied differently. In Brazil the store provided sufficient energy to run an office for an established rural business (extracting nut oil for natural cosmetics). In Mexico it was used to provide refrigeration for agricultural produce to extend the marketable period for the produce. Different funding and partners were used. In Mexico there was strong collaboration with Universidad of Chapingo (national school of agriculture), Universidad Autónoma Metropolitana (efficiency energy department) and Ecoturismo y Nuevas Tecnologias (engineering bureau).

According to these different experiences, do you judge the PES projects "easily" replicable or do you see any particular limit (geographical, socio-economical etc.) that could prevent a successful implementation?

P.H.: The importance of the concept lies in its replicability and the fact that it is an entire package which includes support and monitoring. The financial arrangements can be flexible and made appropriate with a mix of fund and/or grant. Is it "easy"? This is difficult to answer. Replicating the concept is theoretically easy, but the reality is that with any such real solution, the answers are not "easy" as it requires sustainable commitment. But in order to provide real sustainable solutions is not easy and I believe the value of this is that it does entail the 'buy-in' of all those involved from the community, to the support networks, funding arrangements and authorities.

Would this kind of project be replicable in the case of larger installations including with a public interest (Local Hospital, Schools etc.)? Would economies of scale be possible if the projects were replicated at a larger level?

P.H.: There is no doubt that the concept could support larger developments such as hospitals or schools. In theory economies of scale would indeed 'kick-in' but it has not been done in practice and it would be well worth investigating.

From these different experiences do you think that the PES projects are or could be financially viable on a medium-long range view?

P.H.: One important factor is the finances and it is important to acknowledge that a medium to long term view is require as well as understanding that economic rates of return may not, in the short-term, be available. But real and lasting solutions require a longer term view as there is no 'quick-fix'
but it is in developing the concept and moving it forward that a wide range of social and developmental benefits can accrue - and these are not just measurable in purely financial terms.

In your opinion would (should) the Renewable energy industry be interested in the PES and have an economical-commercial interest to participate into them (through joint venture, financial investment, direct productive actions etc.)? Or do you think it should be kept in a logic of "Socially responsible action"? Do you think the intermediary partners (E+Co in this case) are unavoidable?

P.H.: The RE industry should indeed be interested but, as I remark above, it requires a longer term view and a re-assessment of the types of return expected. No doubt in some cases the use of intermediary partners is unavoidable, and it is likely that the time-period for the need for such partners is for a start-up. But there will need to be some creative economical and social arrangement developed to enable uptake to progress. There is, in theory, no reason that would prevent economic uptake - it requires, as I have said, a re-assessment of expected returns and a longer-term view.

What kind of financial partnership (and financial tools) are/would be the most suitable to involve more the industry into this kind of projects (Actors: World Bank, Private investment fund, etc.; Tools: Micro credit, Grant, Loans...)?

P.H.: There are different actors for different situations. Clearly, where there is a greater chance of a better rate of return, commercial actors are more interested, eg Shell* (as a part of Shell Foundation) has also been involved in developing the productive use concept, but have restricted their interest to places and situations where the returns are greater. Poorer areas like much of sub-Saharan Africa will most need the involvement of actors working within development and aid fields where commercial return is not the key driver, but social and sustainable development (poverty alleviation) are the driving force. It is unfortunate that most of the development funders (World Bank, MDBs, Export Credit, etc.) are geared up to lending for large industrial scale projects (because this is the 'development model' they follow) and do not have the capacity, infrastructure or indeed the culture geared to funding smaller and diverse enterprises. This problem must be addressed.

Paul Horsman

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**NEWS FROM THE RURAL ELECTRIFICATION WORLD**

**Zimbabwe: Electrification Agency Considers Solar System**

The Herald (Harare), December 3 2007

The Rural Electrification Agency is considering introducing solar mini-grid systems to reduce demand on hydro-electricity in light of the power deficit threatening countries in the SADC region.

REA project manager Mr Emmanuel Midzi said the agency had started installing the solar mini-grid systems in rural clinics and in secondary schools that received computers from President Mugabe.
Mr Midzi said advantages of the mini-grid system were that the consumable spare parts such as globes were readily available in the country and it used energy efficiently that the battery would last up to four days without sunshine.

He said the other advantage was that the system used the same wiring infrastructure with the electricity grid so that it did not have to be dismantled when connecting to the national grid.

As a result of interest the public was showing in the mini-grid system, REA was exploring supply markets for the cost-effective equipment. He said REA expected the local industry to participate in the programme by manufacturing the components that they could.

http://allafrica.com/stories/200712030492.html

**Energy plan aims to meet rural demand**

China Daily (China), November 24 2007

A top energy team under China's cabinet is drafting a strategy to increase access to sustainable energy among the rural poor. The plan will be based on research of other countries' experiences and is scheduled for release next year, the United Nations Development Program (UNDP) announced on Friday. The UN agency will help the Energy Leading Group affiliated with the State Council to attract global energy experts to work on the draft.

Details of the draft's contents were unavailable but Ma Xiaohe, vice-president of the Academy of Macroeconomic Research under the National Development and Reform Commission, confirmed that an overall rural energy strategy is being developed.

Energy demand in rural areas is expected to increase rapidly in the run-up to 2030 and is expected to reach between 1 and 1.4 billion tons coal equivalent by 2015, compared to 370 million tons in 2000. Currently, renewable energy accounts for only a small amount of rural energy supplies. But according to Ma, green energy will reach 400 million tons of coal equivalent by 2020.

The country has set a goal of raising the ratio of renewable energy in the total energy supply to 15 percent by 2020, compared to the present 8 percent.


**Mozambique: Solar Panels to Electrify Rural Areas**

Agencia de Informacao de Mozambique ; November 27 2007

A number of districts not covered by the country's power grid will receive solar panels in 2008. This investment, by the National Energy Fund (FUNAE), is to cater mainly for the districts that are not yet benefitting of the power distributed by the publicly owned Mozambican electricity company EDM, and for which perspective for that effect are not for soon.

Energy Minister Salvador Namburete said in Maputo on Sunday that this project is to create conditions for providing electricity at least to key sectors such as education and health in those districts, particularly in the least favoured localities.

In a first stage, this project is to benefit 150 schools and a similar number of health units.
Less than eight per cent of the Mozambican population had access to electricity in 2005, and in the rural areas only two per cent had access to this commodity.

FUNAE has been counting on the support of international institutions, including the World Bank and other private partners to work on the electrification of districts across the country.

http://allafrica.com/stories/200711280199.html

**Tanzania: Zanzibar to Spend $1.5m On Power Sector Consultant**

The East African (Kenya), December 3 2007

Zanzibar is seeking an international consultant firm to turn around the ailing Zanzibar Electricity Corporation (Zeco). Mwalim Ali Mwalim, Permanent Secretary in the Ministry of Water, Construction, Energy and Lands told The EastAfrican that the consultancy will be funded by the government of Sweden to the tune of $1.55 million through its development agency, the Swedish International Development Agency (Sida) and will commence next February.

He added that the consultancy will among others things formulate a concrete strategy to sustain the implementation of power projects and marine cable projects. The project is part of phase one of an energy sector programme for Zanzibar.

The Swedish government runs long term development co-operation projects in the energy sector aiming at improving access to energy for the great part of the world's population that is today denied reliable and efficient energy supply.

The extension phase started in October 2006 and is supposed to establish access to electricity for 32 villages with an estimated number of households of 7,130 at Unguja (Zanzibar island), and for 31 villages with an estimated number of 17,580 households in Pemba. A new agreement with Zanzibar was signed in 2006 on the electrification of Pemba, a preparatory phase for an under sea cable from Tanga to Pemba for $5.4 million. An eventual implementation phase for such a cable project is expected to ensure a continued stable power supply to Pemba's 390,000 inhabitants.

http://allafrica.com/stories/200712032012.html

**Douglas Alexander announces doubling of UK support for African Development Fund**

DFID, November 27  2007

A big increase in UK backing for African economic growth and social development was announced in Tanzania today by International Development Secretary Douglas Alexander.

The UK is more than doubling its support and will contribute £417 million to the African Development Fund (ADF) over the next three years. The fund – which is part of the Africa Development Bank group – gives grants and long term, interest-free loans to poor African countries to help them fight poverty and increase economic growth.

The extra money will help the Fund work over the next three years with 40 African countries to build better infrastructure – including improved water and sanitation and new energy projects.

Over the last 3 years, ADF projects have had a real impact across Africa: Almost 6 million people now have improved access to health services and more than 40,000 jobs have been created.
In the energy sector, ADF projects were able to leverage three times its own resources in co-financing. Overall, more than 700,000 households across Africa were provided with new or improved access to electricity.


New renewable energy law adopted in Morocco:

GTZ Energy News No. 7, November 2007

In Morocco, a new law for the promotion of RE and EE was passed in May 2007. It introduces a set of important new regulations for increasing RE use and improving energy efficiency: A target of 1000 MW wind power up to 2012 is fixed (and an overall share of 10% for RE in total primary energy supply as well as 20% in electricity production), Third Party Access is guaranteed, the maximum capacity of RE facilities operated by “Auto-Producteurs” is raised to 50 MW and a tranche of secondary legislation is announced. The building code will be amended with the objective of better efficiency performance and greater use of solar thermal systems for hot water, solar heating and cooling. An ordinance for audits especially in the industrial sector will be another task as well as the development of a biomass master plan. The Centre for the Development of Renewable Energies (CDER) will be transformed into an Agency for Energy Efficiency and Renewable Energies (Agence pour le Développement des Energies Renouvelables et l’Efficité Énergétique, ADEREE) and will focus more on the implementation of government programmes by branching out with subsidiaries in all major Moroccan cities.

RURAL ELECTRIFICATION AND RENEWABLE ENERGIES
EVENTS: INCOMING APPOINTMENTS

Organizers: The Moroccan National Office for Electricity (ONE) and the National Federation for Electricity and Electronic (FENELEC).

Energy and Development are central to all international reflections. Security in energy supply, interaction with economic development, human dignity and environmental impact all place the dynamics of rural electrification within the framework of Sustainable Development. Electrification has become a major stake for developing countries. Electricity is an indispensable pillar for human development, especially in rural areas. Yet millions of rural households throughout the world and particularly in Africa and Asia do not have access to electricity, thus missing a chance for a better life. Being aware of these problems and deeming rural electrification as one of the essential components
of any Sustainable Development, Morocco has taken up this large-scale challenge. The experience of the Global Rural Electrification Program (PERG) conducted by the ONE represents a great interest and includes several lessons.

In this context, the ONE and the FENELEC jointly organize the International Conference on Rural Electrification confirming further the will for sharing experiences. This event is an unseen initiative for rural electrification. The CIER is expecting to gather 500 participants from all over the world. The conference will allow them to debate of the existing opportunities and the partnership possibilities and will exchange on their own experiences.

The Alliance for Rural Electrification will have a speaker during this conference and therefore directly participate to this very important international meeting.

More information at: www.cierg.org

Organizers: OTTI

This European Conference with world wide importance will review recent progresses and achievements on PV system components and design development, with emphasis on hybrid and Mini-grid topologies. The event will be accompanied by an industrial exhibition.
Encouraged by the increasing success of the 3 previous PV-hybrid and Mini-grid events, the organizers are expecting the submissions of excellent papers not only in the traditional technical areas of components for autonomous PV power supply systems but also, in the fields of marketing and financial issues, legislative / regulatory frameworks as well as, socioeconomics, national programs and policies.
Smart grids are now under continuous development to ensure high quality, efficient and cost-effective power supply in a sustainable way. Such new grid approaches will be based on distributed generation systems which would consist of both renewable and efficient energy technologies. The role of utilities in adapting solar energy in the planning of future electricity networks is vital for the success market penetration of PV technology and Mini-grid topologies. Effectively, the role of PV-hybrid and Mini-grid systems is of great importance to fight poverty in the developing world.

More information at: www.otti.de

Energy is vital for the social and economic development of Libya. Although Libya is well known as a significant oil producer, in the present day global scenario, energy demand is on the increase, fossil fuel reserves are dwindling and environmental concerns are increasing. Renewable energy resources are now the only viable option for sustainable development.

“REC 2008” Renewable Energy & Water Libya 2008, in association with 1st Conference on Renewable Energies and Water Desalination Technologies are important events for the future of Libya; as they are inviting exhibitors, delegates and speakers to share their experiences, technology and expertise with us.

“REC” will feature an exhibition showcasing the latest technologies and equipment related to renewable energy utilization and water desalination.