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Energy Newsletter

Quarterly news on GIZ's work on energy and climate protection
A service by GIZ Energy
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Dear Readers,

Welcome to the August issue of GIZ's Energy Newsletter. A central challenge of the 21st century will be to develop sustainable energy infrastructures that can guarantee secure supply, social and economic development and reduce greenhouse gas emissions. As a response to this global challenge, we are alereadly in the midst of mowing towards the increased use of alternative energy sources. This ambitious but feasible energy turnaround needs a collective efforts. GIZ supports the required processes of change. This newsletter provides information on GTZ's work on energy with updates on selected ongoing projects, events and publications. We appreciate your feedback. Feel free to forward this newsletter to interested friends and colleagues! If you have any questions about the projects and events highlighted in this newsletter or GTZ's work on energy in general, please feel free to contact us.

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(Head of GIZ energy and transport)

Contents

GIZ Brazil

2:0 for Brazil – First Solar Stadium in Latin America

The Bahian capital Salvador will get Latin Americas first stadium with a photovoltaic roof. The investment of about 2.5 million Euro for the installation of the PV panels of the Pituaçu-Stadium will be shared by the private utility COELBA and the State of Bahia.

GIZ Job Offers

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Recent publications

GIZ Energy
Energie ist Zukunft. Erfolgsgeschichten aus Lateinamerika.
April 2011
Download PDF 8.16 MB (German version)

GIZ Energy
Access to Energy – Newsletter Special
March 2011
Download PDF 0.28 MB (English version)

GBEP – Global Bioenergy Partnership
GBEP Sustainability Indicators for Bioenergy
May 2011
www.globalbioenergy.org/...

Endeva
Energize the BoP! – Energy Business Model Generator for Low-Income Markets A Practitioners' Guide
Gradl, Christina and Claudia Knobloch; 2011
Download PDF 0.77 MB (English version)

Upcoming events

13 September 2011
Berlin, Germany
Wind Energy and Development Dialogue 2011

Recommended newsletters

The idea was born in 2009. Brazilian energy experts and decision makers have been participating in a field trip to Germany, visiting solar stadiums and the respective PV industry, invited by GIZ. There, COELBA started an unofficial competition with the utility from the Minas Gerais state, CEMIG. Finally, Bahia won that competition, Pituaçu will be connected to the grid by the end of 2011 and it is expected to generate 650 MWh annually. Nevertheless, CEMIG did not fail: they are preparing the first solar stadium for the Football World Cup 2014 (with financial support from KfW).

Against worldwide competitors, the German medium-sized company Gehrlicher won the bid, together with its Brazilian junior partner Ecoluz, and will implement the project. Anyway, the project will be a joint action of various countries: the project manager of Gehrlicher is Spanish, the solar panels will come from the United States and China where they were made on German equipment, and the inverters are German as well. The PV-business is international, and assures numerous jobs.

On behalf of the German Ministry for Economic Cooperation and Development, GIZ supported the project from the very beginning, involving international expertise: design, preparation of the call, commissioning of the plant, regulatory aspects and capacity development of employees.

top

GIZ Brazil

Energy Efficiency Governance

The energy efficiency market in Brazil has access to a new instrument for improving its governance and increasing the use of energy saving performance contracts in the country.

ABESCO, the National Association of ESCOs, supported by GIZ, has developed a model contract for the ESCO market. Until now, there was no updated model contract in the market that could serve as a basis for both ESCOs, final consumers and financing institutes to implement energy efficiency projects in their facilities. The elaboration process of the contract has been organized as a multistakeholder process, taking into consideration the opinions of many different stakeholders in the Brazilian Energy Efficiency Market: financial institutions, insurance companies, ESCOs and companies that have implemented efficiency measures.

The aim of the model contract is to mitigate the legal and financial weaknesses and risks that banks had detected in the standard contracts presented to them. Communication between banks and ESCOs was crucial to respond to the concerns of the financial institutions, and improve the access of ESCOs to financing. This was mainly possible due to the meetings of the "Financing Work Group" led by ABESCO and supported by GIZ.

In parallel to the Model Contract, GIZ has also supported Proquali – the programme for ESCO qualification. Proquali is an initiative that aims to provide documented credentials for the technical expertise of ESCOs in Brazil, based on their prior projects. In the first phase of the programme, fourteen companies were qualified. Proquali qualification is an important process that allows ESCOs to organize their portfolio of projects, and also to indicate opportunities for further capacity development.

For more information please contact Ludmilla Diniz (ludmilla.diniz@giz.de).

top

European Union Energy Initiative Partnership Dialogue Facility (EUEI-PDF)
EUEI-PDF newsletter

GIZ Transport Policy Advisory Services
GIZ Transport News (German edition)

GIZ
GIZ – International Fuel Prices
To subscribe, please contact Armin Wagner (armin.wagner@giz.de).

Programme for Basic Energy and Conservation in Southern Africa
ProBEC Mailing List (www.probec.org)

GIZ offers a range of company-wide and subject-specific newsletters listed on GTZ's newsletter subscription page.
More GIZ newsletters

Links

energypedia
www.energypedia.info

reegle – the Search Engine for Renewable Energy and Energy Efficiency (Renewable Energy and Energy Efficiency Partnership – REEEP & the Renewable Energy Policy Network for the 21st Century – REN21)
www.reegle.info

Renewables Interactive Map (REN21)
www.ren21.net/...

Back issues

Browse back issues of GIZ's energy newsletter.

GIZ Brazil

Brazilian National Service of Industrial Learning (SENAI) and GIZ

From 26 May to the 3 June, Suzano, a company active in the paper and pulp production sector and based in São Paulo, Brazil, was host of the second training module on "Energy Optimization in the Industry". The course took place in the scope of the cooperation between the Brazilian National Service of Industrial Learning (SENAI) and GIZ's Brazil-Germany Energy Programme. SENAI, a powerful industry owned institution for capacity development, started in 2010 a energy efficiency programme investing millions of Euro. The main goal of the course, which is supported by a german consultancy consortium, is to instruct SENAI's technicians in how to identify energy saving potentials and to design technical solutions.

The course is embedded in a larger training cycle aimed on providing SENAI with on-sight experience in energy efficiency and with management skills. In a previous stage, the participants went through a training and subsequent evaluation process by TÜV Rheinland, hence becoming the first consultants to receive the certification of the class in South America.
On a further level, the cooperation project supports SENAI in developing institutional capacities in order to structure and coordinate a national network of energy managers. With this two tier approach, SENAI expects to provide services to the Brazilian Industry in order to reduce their energy consumption, therefore contributing to national Energy Efficiency strategies and targets.

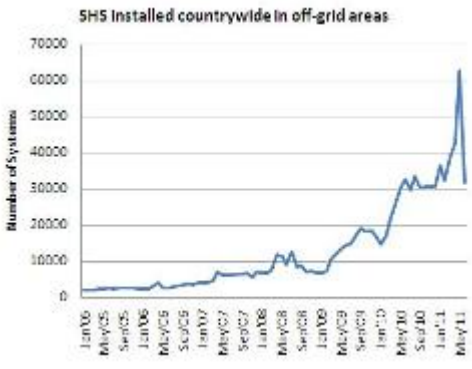
For more information please contact Ricardo Külheim (ricardo.kuelheim@giz.de).

Photo: Participant of the training collecting data for the preparation of an energy optimization report

top

GIZ Bangladesh

1,000,000 Solar Home Systems in Bangladesh



Up to 15 hours of power cut a day significantly hamper the social and economic development in Bangladesh and are the result of a gap of about 1,800MW in the power production. This is the situation of Bangladesh's electricity grid – and these statistics only describe the already electrified part of the country and thus account for 40% of the population. More than 80 million people in Bangladesh so far have no access to modern forms of energy. The sheer growth in demand of about 500MW worsens the prospects for a reliable energy supply in the future and poses a major challenge for the energy sector.

In 2004 the GIZ-PURE project began to support improving the energy situation and living conditions for Bangladesh's rural population. These efforts have been continued until today by the SED (Sustainable Energy for Development) project team and funding from Energising Development.

Up to today, SED in close cooperation with KfW, World Bank, IDB, ADB and GEF and together with the local Partner IDCOL have supported the dissemination and installation of more than 1,000,000 Solar Home Systems between 10Wp and 130Wp with an average of approximately 50Wp each. That's a total of over 50MW installed capacity and 70-80GWh of usable energy for around 5,000,000 people in off-grid areas every year! Nowadays local businesses sell, install and service around 35,000 Systems and thus sustainably provide another +1.75MW installed capacity every month, indicating the establishment of a healthy market for standalone solar systems.

The large scale introduction of high quality solar lamps will be the next major challenge to make modern, improved lighting appliances available and affordable for poor rural households. With panels of around 3Wp, these systems will cover the basic energy needs for lighting and charging mobile phones in a household. A successful and fast start-up of the dissemination is expected, since a sales infrastructure of more than 2,000 shops that sell solar appliances has already been established by the Solar Home System vendors.

Besides these developments and a visibly increasing acceptance of solar systems, the SED Team is also happy to announce that 1,500 Biogas have been constructed with support of the project. Also 35 efficient rice parboiling systems have been built, and are the beginning of many more to come. Additionally more than 350,000 efficient wood fuel stoves have been disseminated to rural households.

top

EUEI-PDF – European Union Energy Initiative Partnership Dialogue Facility

Renewable Energy Cooperation Programme (RECP)

An integral part of the Africa-EU Energy Partnership (AEEP), the RECP seeks to accelerate the use of renewable energy in Africa in order to increase access to modern energy services in Africa by making the continent a prime destination for renewable energy investments. Moreover, these efforts and initiatives contribute to the ambitious AEEP 2020 Political Targets which seek in particular to bring access to modern and sustainable energy services to at least an additional 100 million people on the African continent.

With initial funding from the European Commission for the programme's Start-up Phase, the RECP seeks to prepare the ground for renewable energy investments by improving the policy framework in African regions and countries and building capacity in the African banking sector. The RECP has now commenced its first activities in providing support on regional level for the elaboration of renewable energy policy guidelines to the ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE), based in Cape Verde. With a view to later piloting on a national level, the support to ECREEE envisages contributing to the facilitation of renewable energy investments and applications on regional and national level in the West African region.

At the same time, the main programme of the RECP as proposed by the AEEP structures is being established for the period up to 2020 and may include additionally to a scaling-up of policy advisory services and a component on private sector cooperation between African and European businesses in the spirit of the Africa-EU Energy Partnership, as well as a project preparation and investment component and support to research and higher education on renewable energy in Africa.

For more information on the RECP and the AEEP, please consult the Joint Website of the AU and the EU Commissions, the website of the EUEI PDF, or contact the EUEI PDF through info@euei-pdf.org.

top

GIZ Kenya

German chancellor's visit to Kenya – a boost for renewable energy

German chancellor Angela Merkel visited Kenya on the 12th of July with the aim to usher in new investments from Germany into Kenya's economy and to boost trade ties. She was accompanied by a German business delegation. Issues related to the energy industry were at the top of the agenda, also given the fact that Germany is a leading country in renewables. Dr. Eisenblätter was also part of the delegation.

During her stay, the Chancellor visited the United Nations Environment Programme (UNEP) to attend roundtable discussions focusing on environment and renewable energy issues.

The delegation's attention was also drawn to the 515kW solar PV plant – installed on UNEP's roof by the German company Energiebau Solarstromsysteme GmbH - mainly with technology “made in Germany”. On behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), GIZ has joined hands with the German private sector (Energiebau, SMA, Schott) through a development partnership which aims at showcasing solar plants as viable source of energy in East Africa.

The establishment of business ties in renewable energies comes at the right time as decision makers in Kenya are increasingly taking an interest in creating legal and regulatory framework conditions in order to tap the great potential of renewable energy. GIZ will continue to support solar market development through develoPPP.de and the Project Development Programme (PDP) in the framework of the "Renewables – Made in Germany" Initiative.

top

GIZ Kenya

Solar-powered development – German Solar Academy opens in Nairobi

The German Solar Academy has opened its doors starting with a one week training in June 2011. More than 40 participants from Kenya, Tanzania, and Rwanda broadened their technical knowledge in PV systems on the basis of high-quality components "made in Germany". Topics of the training course included planning, installation, operation, and maintenance of both grid-connected and off-grid solar systems. Training units were also conducted at the 515kW solar PV plant at UNEP, which the delegation of German Chancellor Angela Merkel inspected during her state visit to Kenya. Bernd Wolff from Energiebau Solarstromsysteme says: "Through the capacity building of local professionals on high-quality products and processes, we would like to establish solar energy as viable and competitive energy source in East Africa". "A strong local private sector ensures the long-term operational capability of the PV systems", adds Aregash Asfaw from GIZ.

The Solar Academy is part of a development partnership which GIZ, on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), entered with the three German companies Energiebau Solarstromsysteme, Schott Solar, and SMA Solar. Besides capacity building, key components of the strategic alliance also comprise the installation of pilot plants, policy advisory on framework conditions, and targeted PR work.

The German consortium involved in the training was overwhelmed by the

response from the Kenyan private and public sector with more applicants than available places. This showcased the great demand in the sector. The next training will take place in October.

Hands-on training at the Solar Academy in Nairobi (Photo: Energiebau)

top

Project Development Programme (PDP) East Africa

Giving a push to solar market development in Kenya

With the 515kW solar PV plant at UNEP's Headquarters in Nairobi and the 60kW grid-connected PV plant at the SOS Children's Village in Mombasa, two of Sub-Sahara's biggest solar plants have already been realized with technology "made in Germany".

To further spur the promising trends for future private sector investment, the six German solar companies involved in the projects visited Kenya in early July 2011 to attend the GIZ "Solar Business and Technology Forum". The Forum, which was carried out in the context of the Project Development Programme East Africa, brought together 70 key energy players with the aim to discuss perspectives for the Kenyan solar market and the way forward. A direct exchange between public and private sector representatives was initiated.

While providing a platform for networking and business initiation, the Forum gave insights into business models and financing, and allowed for discussions on feed-in-tariffs, net-metering, and tender processes.
Prior to the Forum, the German solar companies conducted a hands-on-training at the grid-connected PV plant in Mombasa, providing insights in all aspects of the system's design as well as in operation and maintenance.

Photo: Capacity building on-site: Frank Heise from CentroSolar AG with local technicians

top

GIZ Uganda

GIZ's Energy Programme in Uganda – Supporting the energy sector

GIZ's Energy programme in Uganda is at the forefront of promoting renewable energy technologies and energy efficiency, as a way to improve access to modern energy for the poor in Uganda.
Whereas Energy is vital for economic growth and development of a country, Uganda's energy sector, like most other sectors, is largely informal and under developed. Only about 5% of the entire population is connected to the national electricity grid. The other percentage uses household diesel generators, dry batteries and kerosene lamps for most of their lighting needs. These waste fuel and pollute the environment. The bulk of the population

(93%) relies heavily on biomass, especially for cooking.

In the face of these challenges, the Energy Ministry relies on GIZ, among other Aid agencies, for support to fulfill its mandate. GIZ's support has so far yielded job creation in the stove industry. The programme has facilitated the electrification of 3 schools through grid densification, 78 households and 1 shop, using pico hydropower and 2000 households and 68 institutions (schools and health centers), through adoption of solar PV systems.

Also, 228,736 households have acquired energy saving stoves and about 200 institutions can now save on wood consumption because they use improved institutional stoves and ovens. Energy Efficiency Campaigns are ongoing in most parts of the country. Through these activities, GIZ hopes to address energy access needs, promote poverty eradication and work towards the achievement of the Millennium Development Goals. For more information please contact Markus Exenberger markus.exenberger@giz.de.

Photo: Training solar technicians

top

GIZ Uganda

Blazing trails: Uganda Energy sector moves to standardize energy appliances

Owing to the high costs of manufacturing, Uganda has always imported its electrical appliances. The demand for these comes from industries, SMEs, households and commercial and public buildings. Because there aren't any existing standards on energy performance at present, the country has been flooded with low quality, second hand and often outdated technologies. As a result, Ugandans often purchase and use appliances which do not conserve energy and at times release harmful gases into the atmosphere, causing gradual damage to the environment.

To combat this, the Uganda Ministry of Energy and Mineral Development (MEMD), supported by the GIZ Energy Programme in Uganda, is working to better monitor and control the appliances coming into the country. This will be done through an Energy Efficiency Standards and Labelling Programme. Together with the Uganda National Bureau of Standards, the Ministry has developed standards and labels for five appliances namely; lighting devices, electric motors, air conditioners, refrigerators and freezers. These are pending endorsement.

As a first step, MEMD is pursuing a voluntary approach to implementing these standards and labels for the five appliances. It has encouraged various energy sector stake holders (traders, consumer groups, industries, manufacturers' associations and policy makers) to promote the programme. The ministry plans to carry out nationwide sensitization in this regard so as to get general support and adherence to the new standards and labels. These will go a long way towards building a more energy efficient economy.

For more information please contact Markus Exenberger markus.exenberger@giz.de.

top

Improving access to modern Energy in Northern Uganda

Bilateral negations between Germany and Uganda concluded that German support should focus on the northern part of Uganda. This is because northern Uganda has the highest levels of poverty in the country. 63.3% of its inhabitants live in abject poverty compared to the national average of 37.7%. The region was under civil war for over 20 years and as a result, more than 1.8 million people were forced to flee their homes and instead live in squalid displacement camps.

GIZ's Energy Programme, in support of the Ministry of Energy and Mineral Development, therefore came up with pro-poor strategies, based on some of the programme's components, to support access to modern energy for the population in northern Uganda. These included disseminating energy efficient wood and charcoal stoves, promoting solar energy for both households and small and medium enterprises, as well as small hydropower schemes and grid extension.

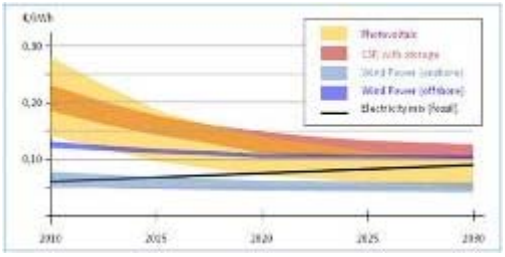
To have a significant impact, GIZ obtained about 3,000,000 Euros co-financing from the European Union Energy facility to scale up their activities in the area. The three year support to northern Uganda ended this May and some of its impacts can be viewed in a documentary at http://www.youtube.com/... . For more information please contact Markus Exenberger markus.exenberger@giz.de.

Photo: A woman cooking using an efficient stove

top

GIZ Technology Cooperation in the Energy Sector

Renewable energy technologies: Grid parity comes close



The sector project on Technology Cooperation in the Energy Sector has elaborated an overview of cost trends of renewable energy technologies for the power generation. The key aspects determining the costs of renewable systems are their investment cost and the natural resource availability. While individual technologies, e.g. onshore wind turbines at advantageous sites have already reached grid parity, other technologies such as photovoltaic or concentrated solar power (CSP), may take a few more years until their electricity production costs are competitive with a fossil fuel mix. Eventually it is not possible to make statements which are globally applicable about the cost development of individual renewable energy technologies.

However, with the help of forecast models, models of learning effects and economies of scale, an approach to the cost development of the technologies can be assessed. Depending on the location, the levelized electricity costs (LEC) may vary strongly. In Germany the LEC for PV are comparatively high, between 0.21 and 0.29 €/kWh. In countries with a higher solar irradiation, such as e.g. Brazil or Morocco the LEC for PV are around 0.14 €/kWh. In such countries grid parity may be reached before the end of this decade. The

potential for further cost reductions of wind energy technologies is far below the cost reduction potential for PV or CSP technology due to the fact that (onshore) wind energy technology has already reached a comparatively higher technical maturity.

The paper presents cautious forecasts for the development of costs of individual technologies. The emphasis is on technologies for wind and solar energy. For more information please contact Stephan Remler stephan.remler@giz.de

Cf.: Kost C. / Schlegl T: Stromgestehungskosten erneuerbare Energien, 2010, Fraunhofer ISE (Editor)

top

GIZ Policy Advice for Sustainable Hydropower

Official Launch of the Hydropower Sustainability Assessment Protocol

The Hydropower Sustainability Assessment Protocol (HSAP) was officially launched at the 2011 World Congress on Advancing Sustainable Hydropower in Iguassu, Brazil. HSAP is a comprehensive and globally-applicable tool for sustainability assessment of hydropower projects. Assessments rely on objective analysis and documented evidence to create a sustainability profile against some 20 topics depending on the relevant project stage, and covering all aspects of sustainability. The results of an assessment are presented in a standardized structure, allowing transparent communication and rapid interpretation.

The Protocol is the result of intensive work from 2008 to 2010 by the Hydropower Sustainability Assessment Forum (HSAF), a multi-stakeholder body with representatives from governments, social and environmental NGOs, commercial and development banks, and the hydropower sector, represented by the International Hydropower Association (IHA). The development process of the Protocol involved field trials in 13 countries and stakeholder engagement in 28 countries.

In 2008, the German Federal Ministry for Economic Cooperation and Development (BMZ) was invited to join the HSAF and mandated the GIZ (then GTZ) Sector Project “Policy Advice for Sustainable Hydropower” to be an observer to the Forum.

For more information visit: http://hydrosustainability.org

top

REN21 Renewables 2011 Global Status Report

Continued Global Growth of Renewable Energy in 2010

The REN21 Renewables 2011 Global Status Report released last week shows that the renewable energy sector continues to perform well despite continuing economic recession, incentive cuts, and low natural-gas prices.

In 2010, renewable energy supplied an estimated 16% of global final energy consumption and delivered close to 20% of global electricity production. Renewable capacity now comprises about a quarter of total global power-generating capacity. Including all hydropower (estimated 30 GW added in 2010), RE accounted for approximately 50% of total added power generating capacity in 2010. In 2010, existing solar water and space heating capacity increased by an estimated 25 gigawatts-thermal (GWth), or about 16%. The report was commissioned by REN21 and produced in collaboration with a global network of research partners. You can download the report from www.ren21.net/... and visit the Renewables Interactive Map at www.map.ren21.net.

top

- Renewable energy supplied an estimated 16% of global final energy consumption
- Solar PV more than doubled thanks to declining costs
- Global Investments in Renewables Up Over 30% to a Record 1 billion
- Emerging and Developing Economies Increase Share of Policies, Investment, Supply and Use
- REN21 re-launches Renewables Interactive Map

GIZ

GIZ at Carbon Expo

Despite the on-going political uncertainties, Carbon Expo 2011 (Barcelona, 1-3 Juni 2011) attracted more than 2,600 attendees from over 110 countries. In the thick of it, GIZ's CDM Country Manager Project on behalf of the German Federal Ministry for the Environment presented its work in its partner countries at the GIZ booth in the German Pavilion. The country managers from Brazil, India, the MENA region and Uganda and the coordinator from Germany, together with almost a dozen other GIZ representatives, joined the debates around the biggest question marks climate and carbon finance are facing today: Who should pay and what for? In the light of dwindling carbon markets, new instruments such as nationally appropriate mitigation actions (NAMAs) and low-emission development strategies (LEDS) are attracting the interest of the carbon community. Participants agreed that Energy plays a key role for the success of both instruments. Regarding the question of funding, Executive Secretary of the UNFCCC Secretariat Ms Christiana Figueres highlighted that the blending of financial instruments from climate and carbon finance is at the heart of the matter, especially in the context of financing NAMAs in developing countries.

top

Vienna Energy Forum 2011

BMZ Side Event – Towards a Definition of Energy Access

Defining energy access is an eclectic endeavor. This was clearly shown at the official side event "Towards a definition of energy access" of the German Federal Ministry for Economic Cooperation and Development at the Vienna Energy Forum on 22 June 2011.

With ambitious targets for energy access set on national and international level, like the UN call for universal access by 2030, a better understanding on what energy access really means is needed as well as on the appropriate indicators to measure progress.

Yet, there is no one-size-fits-all definition but rather a multiple set of definitions with a number of different elements. Likewise, the approaches to tackle energy poverty vary widely. But whether the approaches encompass on-grid electrification or off-grid solutions (including clean cooking energy) there was an agreement that measuring energy access has to consider national development priorities and the specific needs of people and that supply and demand side considerations need to be integrated.

Another outcome of the session was that more work needs to be done on defining standards for productive use of energy and that – given the various levels of aggregation in the definition of energy access indicators (e.g. project level, national, international) - it should be aimed at finding meaningful ways of combining the different approaches.

All in all, the definition and measurement of energy access will be crucial for the future design and implementation of energy programmes and it will influence how energy programmes are linked to other development cooperation initiatives.

top

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