



IRENA newsletter

LETTER FROM THE DIRECTOR-GENERAL

This is an exciting time to be at the centre of global discussions and planning for the world's energy future. In January 2013, the International Renewable Energy Agency (IRENA) is embarking on an exciting new phase of its work to promote the widespread adoption and sustainable use of renewable energy worldwide. The third session of the Assembly of IRENA, on 13-14 January, is set to confirm IRENA's role as the leading voice, advisory resource and networking hub for policy-makers, investors and the whole dynamic movement for energy sustainability based on renewable resources and technologies.

FOREWORD

With delegates, including heads of state, ministers and senior officials from around 150 countries coming to Abu Dhabi, the Assembly has become a key occasion for setting the agenda and layout of the necessary action plans for the world's transition to clean, sustainable energy. We are helping to show the way with a global roadmap for renewable energy deployment, REMAP 2030, which highlights ways to achieve the goals of the UN Secretary-General's Sustainable Energy for All (SE4ALL) initiative, including to double the share of renewable energy in the world's energy mix by 2030.

The Assembly will also mark the activation of the Global Renewable Energy Atlas, an online resource-mapping tool on the IRENA website, and the completion of the first round of country reports based on IRENA's Renewables Readiness Assessment (RRA) process. Other discussions will cover policy development to spur investment in the sector, the increasing cost competitiveness of renewables, and tariff-based mechanisms to encourage renewable deployment in the current, difficult economic climate. As Director-General, I will report on the implementation of

the Agency's 2012 budget and work programme, as well as presenting our plan for 2013 and proposed medium-term strategy.

The Assembly illustrates IRENA's emergence as the pre-eminent international institution in this fast-growing sector. It also opens Abu Dhabi Sustainability Week, a series of high-level events in our host city that will also help to shape the future of renewable energy worldwide. IRENA's involvement includes a booth with a busy schedule of briefings at the World Future Energy Summit, participation in the South America - Arab Countries (ASPA) energy meeting, and engagement in numerous other discussions.

Last year, IRENA set out to become the global voice for renewable energy. Now that vision has become a reality. IRENA is positioned to become a truly global hub, where policy-makers work to bring about the reality of a world powered by renewables.

Adnan Z. Amin

Director-General, IRENA

GLOBAL ATLAS GOES LIVE

The Global Renewable Energy Atlas, the world's first open-access international atlas of renewable energy resources, is going live on 13 January on the IRENA website. On the same day, a number of additional countries will join the initiative by signing the Global Renewable Energy Atlas Statement of Interest during the third session of IRENA's Assembly.

The Global Atlas is the product of the largest-ever initiative to assess renewable energy potential, bringing together data and maps from leading technical institutes and private sector companies. At the outset, it will chart solar

and wind resources and will expand to cover other forms of renewable energy in 2013 and 2014. The Internet-based platform is designed to help investors and policymakers with a broad overview of available resource options at the outset of any renewable energy project. IRENA's Director-General, Adnan Z. Amin, characterized it as "a powerful new tool in international efforts to double the share of renewables in the global energy mix by 2030."

Earlier, this key project for IRENA, was discussed enthusiastically at the Rio+20 Conference in June 2012. Other international partners in the Global Atlas project include the Clean Energy Ministerial (CEM), the Energy Research Centre (ERC) of the UK, ParisTech (France), the National Renewable Energy Laboratory (NREL) of the US, and the Energy Sector Management Assistance Program (ESMAP) of the World Bank.

QATAR SIGNS ON FOR GLOBAL ATLAS

On 4 December, on behalf of Qatar, H.E. Issa Shahin Al Ghanim, Director of Strategic Planning and Policy of Qatar Petroleum and H.E. Fahad Bin Mohammed Al Attiyah,

Chairman of the Qatar National Food Security Programme, signed a Statement of Interest to contribute to IRENA's groundbreaking Global Renewable Energy Atlas.

"Across the Gulf, governments and businesses are turning towards renewable energy – with potentially transformative effects," said Adnan Z. Amin, IRENA Director-General. "The vision shown by Qatar, the UAE, Saudi Arabia and other GCC countries sends a powerful message: investing in renewable energy makes clear economic sense today, and has enormous potential for the future."

GUIDE LAUNCHED FOR NATIONAL POLICY MAKERS ON RENEWABLE ENERGY

IRENA has issued a handbook to help countries build their clean energy capacity and meet their obligations under the United Nations Framework Convention on Climate Change (UNFCCC). The handbook on Nationally Appropriate Mitigation Actions, or NAMAs, was released on 29 November on the occasion of COP 18, the UN Climate Change Conference in Doha, Qatar. NAMAs are



The Global Atlas presentation at Rio+20

fast emerging as a valuable instrument capable of enabling countries to reduce CO₂ emissions. Following such guidelines could also help to unlock funding for renewable energy development.

IRENA's NAMAs Handbook demonstrates how the guidelines can help developing countries to remove barriers to renewable energy deployment. "NAMAs present an opportunity for many developing countries for a transition to sustainable energy production and consumption," said Hugo Lucas, IRENA's Director of Policy Advice and Capacity Building.

The handbook includes three case studies that illustrate the potential of NAMAs in countries of varying size: Peru, Kenya and Grenada. IRENA and the Spanish Office of Climate Change launched the handbook jointly at a joint side-event at COP 18 with over 100 participants in attendance for a panel discussion on NAMAs. "For a small island country like Grenada, NAMAs present an opportunity for an energy transition, where the benefits are not on climate change mitigation but on energy security, and employment



IRENA Handbook on Renewable Energy Nationally Appropriate Mitigation Actions (NAMAs) for Project Developers and Policy Makers



creation," said Hugh Sealy, Associate Professor of the St. George's University of Grenada. "Grenada has the ambition to go from 99 per cent fossil to 100 per cent renewable.

IRENA AT COP18 RENEWABLE ENERGY IN THE GULF

Representatives from the Gulf Cooperation Council (GCC) countries and international experts talked about the region's growing strategic focus on renewable energy at a meeting organised by IRENA in cooperation with the Kingdom of Saudi Arabia and the Fraunhofer Institute for Solar Energy Systems. The discussion, held on the margins of the 18th Conference of the Parties (COP18) to the UNFCCC (26 November - 8 December), highlighted the increasing importance of renewable energy in facilitating a sustainable future. The Gulf, in particular, has a key role to play in the transition to a diversified energy system, with its vast solar and other renewable resources.

In order to meet growing domestic demand and to promote sustainable energy use, all GCC countries have set renewable energy targets, and a growing number of large-scale solar projects are being developed across the region. «Many of our utilities and the policy makers are not aware of the cost of renewables. We see a huge drop in prices. Awareness is really one of the main things we have to start working on. We need to ensure a fair evaluation of projects», commented Dr Thani Al Zeyoudi, of the UAE's Ministry of Foreign Affairs' Directorate of Energy and Climate Change (DECC).

The meeting showed how investment in renewable energy offers Gulf countries a pragmatic path to reducing per capita CO₂ emissions, which are currently among the highest in the world. Renewable energy also bolsters economies throughout the entire value chain – from research and development, to manufacturing, to on-the-ground power projects. To support such discussions, IRENA released its newest set of "Renewable Energy Country Profiles" for the Middle East, the latest in a series of regional profiles that include Africa, the Pacific, Latin America and the Caribbean.



And NAMAs could be the definitive source of finance for this energy transition."

Such guidelines help with selecting the right models and replicating successful approaches to renewable energy. "Countries that have succeeded in developing renewable energy on a large scale have followed a comprehensive programmatic approach," said panelist Axel Michaelowa, Senior Founding Partner at Perspectives, adding: "There are two key issues for successful NAMAs: country engagement and money; indeed a finance source is the most important aspect and the one currently missing, but that guaranteed, NAMAs can really be a catalyst for policy changes."

CONFERENCE OF ENERGY MINISTERS IN AFRICA

Adnan Z. Amin, IRENA Director-General attended the second regular session of the African Union (AU) Conference of Energy Ministers of Africa (CEMA) held in Addis Ababa, Ethiopia, from 12-16 November. Speaking at the opening ceremony, the Director-General said that rapid African economic and population growth demands a new energy system, and that renewable energy can sustain Africa's economic rise and lift millions of people out of poverty. During his visit, he met with African ministers and other high-level attendees of the Conference.

IRENA'S FOURTH COUNCIL

Delegates convened in Abu Dhabi on 12-13 November for the fourth meeting of the IRENA Council, to chart the future of international renewable energy policy and set the agenda for 2013 and beyond.

The Council meeting was attended by representatives from all 21 Council members, and a total of 71 delegations. Council discussions included the consideration of the Director-General's 2012 progress report; the draft Work Programme and Budget for 2013; the final draft of IRENA's Medium-term Strategy; Council composition, election and rotation; as well as other programmatic and institutional matters. The Council was preceded on 10-11 November by meetings of the Policy and Strategy Committee, the Administration and Finance Committee, and a meeting with the Facilitators on Council composition, election and rotation.

With 160 countries currently engaged as Members or applicants, the Agency's membership continues to grow. "IRENA is positioned to become a truly global hub, where policy-makers work to fulfil the potential of a world powered by renewables," said Adnan Z. Amin, Director-General of IRENA.

Dr. Sultan Ahmad Al Jaber, the UAE Special Envoy for Energy and Climate Change, added: "At only two years old, IRENA is already reporting tangible impacts on policy evolution and access to finance and technological data. The outcomes – as well as the proposed interventions for 2013 – presented at this meeting of the Council demonstrate that from its unique base in the UAE, IRENA is a key international catalyst for the world's diversification into renewable energy."

Further topics discussed by IRENA's Members included the first call for proposals for the IRENA-Abu Dhabi Fund for Development loan facility, which is a new US\$350m, seven-year concessional loan facility for projects in developing countries; the design of the Global Renewable Energy Atlas, a resource mapping project; development guidelines for renewable energy projects; tariff-based mechanisms to encourage renewable energy deployment; and strategies for implementing the Global Renewable Energy Roadmap 2030, which highlights ways to achieve the goals of the UN Secretary-General's Sustainable Energy for All (SE4ALL) initiative, including to double the share of renewable energy in the world's energy mix by 2030. The Council also established the agenda for the third session of the IRENA Assembly in January 2013.

TECHNOLOGY PROJECT GUIDELINES AND NAVIGATORS

On the sidelines of the fourth Council meeting, IRENA Members discussed the Renewable Energy Technology Project Development Guideline Initiative (REDGuide). The REDGuide initiative has three components: a project guideline, an interactive project navigator, and an interactive financial navigator. The Guideline provides users with the tools, case studies, and best practices needed to develop renewable energy projects. The Project Development Guideline aims to make the project development process more transparent in order to generate bankable project proposals, and thereby help to accelerate deployment of renewable energy technologies worldwide. Participants at the meeting highlighted the importance of including

project development experts, financial institutions, and utilities in the early stages of guideline development in order to enable proper matchmaking and ensure necessary coordination. They also suggested an IT platform to improve communication and provide financing information. The modalities of engagement will be elaborated further by the IRENA Secretariat in the coming months.

IRENA-ADFD CONCESSIONAL LOAN FACILITY

On 11 November, IRENA began accepting applications through its website for concessional loans under a newly opened USD 350 million, seven-year facility from the Abu Dhabi Fund for Development (ADFD). The new IRENA-ADFD facility was announced in June during a reception

honoring United Nations Secretary-General Ban Ki-moon at the Rio+20 Conference.

The ADFD pledged USD 350 million in 2009 as part of the United Arab Emirates bid to host the IRENA headquarters. Funds will be distributed in USD 50 million cycles, with up to USD 15 million per project. The financing mechanism will support projects of strategic importance for developing countries to promote growth and sustainable development through the deployment of renewable energy technologies. The emphasis is on projects that are not only innovative but also replicable in other countries. To qualify, projects must be government-backed.

Highlighting the importance of increased engagement and investment in the field of renewable energy, IRENA

THE MALTA COMMUNIQUÉ

At the end of the two-day Renewables and Islands conference in Malta on 6-7 September 2012, representatives of island countries and territories adopted a communiqué calling for accelerated renewable energy uptake. The Malta Communiqué also calls on IRENA to assist islands in a variety of ways. These include establishing a Global Renewable Energy Island Network to provide a knowledge pooling and sharing platform, assisting in the formulation of business cases for renewables deployment with the involvement of the private sector, identifying available financing mechanisms and supporting the development of innovative financing models, and assessing the suitability

of relevant technologies for different island environments while providing advice on technology choices.

The Communiqué stresses the importance of assessing renewable energy potential, developing project guidelines to address island-specific topics and methodologies for integrating renewables in sustainable tourism, transport and other industries and services on islands, and advising on renewable energy applications for water management. Sustainable strategies based on renewable resources can help small island developing states become productive players in the constantly evolving global energy landscape.

Participants in the Renewables and Islands conference in Malta.



Director-General Adnan Z. Amin noted that “significant investments are required to support the increased deployment of renewable energy. IRENA is joining hands with the ADFD to support projects of strategic importance for developing countries through the provision of soft loans and concessional financing in order to pave the way to a sustainable energy future, based on renewable energy.”

Dr Sultan Ahmed Al Jaber, Chief Executive of Masdar and UAE Special Envoy for Energy and Climate Change, said: “I would like to commend the Abu Dhabi Fund for Development for supporting IRENA in delivering on its mandate and enabling it to encourage the implementation of renewable energy projects in developing countries.” He added: “This further highlights Abu Dhabi’s commitment to universal access to sustainable energy.”

ISLAND STATES PLEDGE TO ADOPT RENEWABLE ENERGY STRATEGY

Island states can learn from each other’s experiences in solving energy problems and even show the rest of the world ways to achieve the transition to a higher share of renewables in the energy mix. While most islands currently depend for the majority of their energy needs on imported fossil fuels, which are expensive and subject to volatility of price and supply, some island states have decisively overcome particular energy challenges by turning to renewables.

DEPUTY DIRECTOR-GENERAL APPOINTED

Frank Wouters was appointed Deputy Director-General of the International Renewable Energy Agency (IRENA) in September 2012. He possesses over 20 years of international experience in the field of renewable and sustainable energy, mainly in the private sector. Mr. Wouters, a Dutch national, holds a Master’s degree in Mechanical Engineering. He recently played a lead role in the formulation of Abu Dhabi’s renewable energy policy.



On 6-7 September, IRENA, in cooperation with the Government of Malta, convened a global gathering of island countries and territories to discuss strategies for sustainable energy development based on renewable sources and technologies. Some 123 participants from 48 countries, including 15 at ministerial level, along with representatives from the private sector, attended the Renewables and Islands conference in St Julian’s, Malta, where they discussed the expansion of renewable energy deployment to ensure a safer and more prosperous future.

The conference featured panel presentations and discussions on the implications of the UN Conference on Sustainable Development (UNCSD, or Rio+20) for island development and renewable energy. A session on best practices and challenges provided the opportunity for participants to share case-study experiences from different regions.

Comparative isolation, small market size, and reliance on fuel imports leave islands highly exposed to volatile fuel prices. Small Island Developing States, such as those in the Pacific, Indian Ocean and Caribbean regions are particularly vulnerable. Increased use of renewable resources and technologies would strengthen energy security, generate employment and boost social and economic well-being, the island ministers and representatives agreed.

Island ministers and representatives resolved to build on the outcome of the Rio+20 Conference on Sustainable Development through increased use of renewable resources and technologies to strengthen energy security, generate employment and boost social and economic well-being. Renewable energy, including solar, wind, hydro, geothermal and ocean energy, as well as biofuel, can be generated locally, with solutions tailored for the circumstances of each island, participants agreed.

BARBADOS DECLARATION

In May, delegates from Small Island Developing States (SIDS) in the Pacific, Caribbean and Atlantic, and Indian Ocean, Mediterranean, and South China Sea convened for the SIDS High-Level Conference on Sustainable Development for All (SE4All) in Bridgetown, Barbados. The participants unanimously adopted the Barbados Declaration, which calls for initiatives and commitments in support of sustainable development and renewable energy and for IRENA to increase support to SIDS in their efforts to deploy renewables.

SUSTAINABILITY DEPENDS ON RENEWABLE ENERGY

Adnan Z. Amin, IRENA Director-General, addressed the United Nations Secretary-General's High-Level Event on Sustainable Energy for All (SE4ALL) in New York on 24 September. Mr. Amin is part of the High-Level Group guiding the initiative, which calls for doubling the share of renewable energy in the global energy mix, among other complementary objectives.

During his speech, the Director-General outlined how renewable energy has the ability to move the world onto a more secure and sustainable energy path. Mr. Amin went on to identify the major trends emerging in renewable energy today, which will affect the industry in the future, and stressed that renewable energy deployment can only succeed if there is a compelling business case.

On 17 September, Mr Amin took part in the European Union's Informal Meeting of Energy Ministers in Nicosia, Cyprus, where he called for continued European support for the global transition to renewable energy. The meeting brought together energy ministers from EU Member States and the European Economic Area, and provided for an informal exchange of views on the continent's energy future, including post-2020 strategy on renewable energy and trans-European energy infrastructure.

Previously, on 27 August, Mr Amin met Germany's Federal Minister for the Environment, Nature Conservation and Nuclear Safety, Peter Altmaier, to discuss IRENA's activities, the global promotion of renewables and the transformation of the German energy system.

The meeting was part of the Director-General's first official visit to Germany, where he addressed the annual Ambassadors Conference at the Foreign Office. Highlighting IRENA's role, Mr Amin engaged in discussions on European common energy policy, global energy investment needs and how Germany can continue pioneering the deployment of renewables worldwide.

He also gave a keynote speech in London on the future of renewables at the Financial Times Global Energy Leaders' Summit. The two-day event, addressing the question "Doom or Boom? Energy Security in Uncertain Times", attracted energy industry leaders, innovators, financiers and policy-makers from across the globe.

RENEWABLE ENERGY DEPLOYMENT CREATES JOBS IN RURAL AREAS

Reaching the United Nations goal of providing sustainable energy for all by 2030 would create up to 4 million direct jobs in the off-grid electricity sector alone, IRENA research shows. Decentralised renewable energy solutions would create jobs in rural areas and provide energy access to remote communities.

A report published by IRENA in June 2012, shows that small-scale renewable energy technologies are well adapted to the rural context, as the bulk of skills required can be developed locally, limiting reliance on foreign expertise. The report, entitled "Renewable Energy Jobs and Access", examines job creation in the context of rural access to energy, which to date has received scant attention. It presents twelve original case studies from Central America, Sub-Saharan Africa and Asia involving a variety of renewable energy technologies, including biogas, solar, small-scale hydropower and improved cookstoves. The report is intended to help policy makers design and implement successful rural energy strategies.

RENEWABLE TECHNOLOGIES CAN COMPETE ON COST

A new report to be launched at IRENA's third Assembly on 13-14 January 2013 confirms that renewable energy has become increasingly competitive in the last two years, with a virtuous circle of falling costs, increased deployment and rapid technological advances boding well for a global energy transition. "Renewable Power Generation Costs in 2012: An Overview" is the most current, comprehensive analysis available of the costs and performance of renewable power generation. The report analyses 8,000 medium- to large-scale renewable generation projects, showing that renewables are increasingly the most competitive option for new electricity grid supply and swift grid extension, as well as already being the most economically feasible solution for off-grid power supply.

Still, deployment continues to be hindered by outdated perceptions that renewable technologies are too expensive and difficult to implement. IRENA is launching the Renewable Costing Alliance, bringing together government agencies, financial institutions, equipment manufacturers, project developers, utilities, and research institutions, to continue collecting data.

IRENA previously launched studies covering solar photovoltaics (PV), concentrating solar power (CSP), wind power, hydropower and bioenergy for power generation at its third Council meeting, held in Abu Dhabi in June 2012. “A renewable revolution is underway. These papers show that the rapid deployment of renewable power generation technologies, and the corresponding rapid decline in costs, are sustaining a virtuous circle,” said IRENA’s Director-General, Adnan Z. Amin.

Solar PV costs, for example, have declined dramatically, with crystalline silicon PV module costs falling by over 60% in the last two years to as little as USD 1/Watt. Concentrating solar power (CSP) and solar PV are competing, but also complementary, technologies.

Around the world, large quantities of agricultural and forestry wastes go underutilised. Using them as a feedstock to provide power and heat can cost less than electricity from the grid. Hydropower is a mature technology and the levelised cost of electricity (LCOE) is generally low.

In locations with good wind resources, onshore wind has become a highly competitive power generation option. The cost of electricity from the best sites in North America was competitive with or cheaper than gas-fired generation, even in the so-called “golden age of gas”.

FINANCE NEEDED FOR LARGE AND SMALL RENEWABLE ENERGY PROJECTS IN AFRICA

Africa needs ambitious financing for renewable energy projects of all sizes in order to stimulate investment, maintain rapid economic growth and provide universal energy access around the continent.

Addressing a panel session on energy and water finance for Africa during the World Energy Forum in Dubai on 22-24 October, Frank Wouters, IRENA’s Deputy Director-General, said Africa could achieve widespread prosperity by concentrating on renewable energy projects for rapid expansion of electrical services.

“In order to meet its rapidly growing energy needs within the next two decades, Africa requires vast investments in new energy projects, from large investments to feed national power systems, to innovative, localised off-grid solutions to bring power to people and areas that are currently not served,” he said. “Renewables offer great busi-

ness opportunities to meet these energy needs.” Mr. Wouters cited the IRENA-ADFD funding facility for innovative renewable energy projects in developing countries, for which IRENA started receiving applications in November. “We want to ensure that funds reach projects in developing countries that, along with being renewable-based and sustainable, are innovative and replicable, so that good practices will in turn spread to other projects and countries,” Mr Wouters added.

AFRICA’S ENERGY OPPORTUNITY

“Africa’s energy poverty holds tremendous opportunities for the successful and sustainable deployment of renewable energy solutions, and by empowering the renewable energy sector in Africa, there is potential to find sustainable energy solutions for the world,” said IRENA’s Deputy Director-General, Frank Wouters.

He was addressing a gathering of members of the Economic Community of West African States (ECOWAS) at the end of October, in the lead-up to the first International Off-Grid Energy Conference in Accra, Ghana.

About 60 per cent of Africa’s population currently lives in rural areas, without access to modern energy. Extending the electrical grid to these less densely populated areas is not cost-effective, and as a result, the rural electrification rate is actually declining as the population grows, Mr Wouters said. The rural electrification rate stands at just 14 per cent, and annual investment in grid extension and maintenance is only a quarter of what is required.

Large grid-connected projects are needed to support Africa’s industrial growth, as are decentralised off-grid solutions to expand energy access, he added. The main demand centres – the cities – need a growing amount of power, which could be met with a combination of large, cost-effective sustainable hydropower, sustainable biomass, wind farms, geothermal power systems and solar.

A report from IRENA on Prospects for the African Power Sector found that nearly two-thirds of the additional capacity needed by 2030 has yet to be built. The continent therefore has a unique challenge – to leapfrog the traditional fossil fuel path to development, and to instead choose a path powered by clean, secure and sustainable sources of power. Renewable energy technologies draw on resources that Africa possesses in abundance.

AFRICA'S RENEWABLE FUTURE

IRENA's extensive work on Africa over the last two years has come together in a new report, entitled "Africa's Renewable Future: The Path to Sustainable Growth", to be released at IRENA's third Assembly on 13-14 January. Africa's rapid economic growth requires massive investments in energy.

But the continent could fuel most of its future growth as well as expand energy access, strengthen energy security and reduce environmental damage by investing heavily in renewable energy, the report contends. This report showcases examples of successful energy policies in Africa and points to ways IRENA can help to accelerate the energy transition.

At present, Africa accounts for 15 per cent of the world's population but for only 5 per cent of global primary energy use. Some 590 million people on the continent have

no access to electricity. On the sidelines of the Rio+20 conference in June 2012, during a meeting co-hosted with the government of Mozambique, IRENA highlighted the role of renewable energy in meeting the growing energy demand in Africa. The event brought together some 300 policy- and decision-makers, and included ministerial participation from 14 countries.

Discussions at the high-level side event centered on how renewables offer Africa an opportunity to leapfrog beyond 20th century development models based on fossil fuels: the continent has vast untapped potential in hydropower, solar, wind, sustainable biomass and other renewable energy resources.

Renewable energy provides rural electrification opportunities, and offer the promise of energy access to clean, secure and affordable energy to communities that currently lack electricity.

INTERNATIONAL OFF-GRID RENEWABLE ENERGY CONFERENCE

The International Off-Grid Renewable Energy Conference (IOREC) was held on 1-2 November 2012 in Accra, Ghana – the first global conference dedicated to off-grid renewable energy. Off-grid solutions – or local generating systems separate from the national electrical grid – promise to bring electricity to millions of people in energy-poor areas, including rural areas in developing countries, and offer a tremendous opportunity for new investments based on renewable technologies.

Organised by IRENA, in partnership with the ECOWAS Regional Centre for Renewable Energy and Energy Efficiency (ECREEE) and the Alliance for Rural Electrification (ARE), the conference brought together stakeholders from across the rural electrification value chain to promote dialogue between the private and public sectors, with the particular focus on the potential for off-grid in Africa.

IOREC attracted over 350 delegates from 80 countries, including representatives from rural electrification agencies and ministries in charge of renewable energy development from around 30 African countries. Speakers from 23 countries, from the public and private sectors, highlighted successes in off-grid rural electrification

through renewables worldwide. Discussions covered policies, regulations, financing and technologies conducive to the scaling up of off-grid renewable energy-based rural electrification, in particular through private sector projects.

IOREC highlighted the potential for off-grid renewables to fill the demand-supply gap with distributed generation to supplement grid supply; the importance of growth strategies based on pragmatic targets addressing local conditions; and the critical role of enabling regulatory frameworks, or "ecosystems" to scale up rural electrification. Market distortions, for example due to kerosene subsidies, as well as unrealistic promises of grid extension, continue to hinder off-grid renewables.

Even so, several innovative business models have succeeded, with both the private and public sectors playing an important role. Local banks can contribute significantly by providing credit to households and businesses for cleaner energy solutions. Governments need to raise awareness about relative life-cycle costs, which make off-grid renewable technologies a good choice for productive uses, not only for lighting.

SCHOLARS



SCHOLARSHIPS NURTURE PROFESSIONAL NETWORK

This year, with the generous support of the government of the United Arab Emirates, 20 highly accomplished applicants were awarded IRENA scholarships for study at the Abu Dhabi-based Masdar Institute of Science and Technology (MI). These new IRENA scholars alongside those selected in the previous academic year will receive first-hand information on renewable energy topics from world-renowned energy experts, and will gain a unique opportunity to join the growing network of renewable energy professionals. Newly admitted MI students were introduced to IRENA's vision and mission during an orientation session in early September.

The second annual lecture series began at the MI on 13 November, with Dr. David Renné, President of the International Solar Energy Society (ISES) and former Principal Project Leader at the National Renewable Energy Laboratory (NREL) and was followed by a lecture on 4 December, by Prof. Dr. Ad van Wijk, Co-Founder of Ecofys and former Chairman of the Board of Econcern. Additional lectures for IRENA scholars are to be held in 2013. The 2013-2015 IRENA Scholarship Programme is open for applications until the 31 May 2013.

GLOBAL SOUTH-SOUTH DEVELOPMENT EXPO (GSSD)

A Brazilian initiative to promote biofuels in Mozambique, put forward by IRENA as an example of knowledge transfer worth emulating, won the prize for leadership at a global development conference on 23 November. IRENA helped innovative partnerships between developing countries to showcase their experience at the Global South-South Development (GSSD) Expo 2012 in Vienna, Austria, highlighting the potential for growth based on renewable energy.

Panellists Cesar Cunha Campos and Marcos Matos of the Brazil's Getúlio Vargas Foundation (FGV) presented the feasibility studies that Brazil is undertaking with Mozambique on biofuel and food production, simultaneously addressing two key development concerns. FGV went on

to win the South-South Cooperation Award for Leadership, awarded for promoting concrete solutions and inclusive partnerships for development.

The Brazilian foundation is working with Mozambique to undertake biofuel and food production feasibility studies to enable the sustainable production of biofuels, while also contributing to the overall development of the farming sector. The studies consider both the environment and social needs while identifying land suitable for food and bioenergy crops. Developing domestic biofuel in Mozambique will create access to a secure and clean source of energy, while reducing exposure to prices for imported fuel.

"Over the next generation, we need to undertake a massive investment in energy in Southern countries, in ways appropriate for their specific challenges," said Adnan Z. Amin, IRENA's Director-General, at the opening

ceremony of the GSSD Expo 2012. “This means unleashing Southern creativity, fostering Southern cooperation, and supporting Southern business.”

The United Nations Industrial Development Organisation (UNIDO) hosted the 19-23 November conference, which included a “solutions forum” for sustainable energy organised by the United Nations Development Programme (UNDP) in partnership with IRENA. The UNDP-IRENA forum highlighted six examples of successful south-south cooperation to expand sustainable energy use. Panellists with first-hand involvement presented innovative programmes that aim to advance the global development agenda and improve livelihoods in the Global South.

In another IRENA-sponsored presentation, Kwasi Boateng explained how his Ghana-based company, Wilkin Solar, made use of a business model originating in India to stimulate the rural market for renewable energy over the past year. He benefited from discussions on enabling entrepreneurship at an IRENA meeting in Bangalore, India, in 2011, he said.

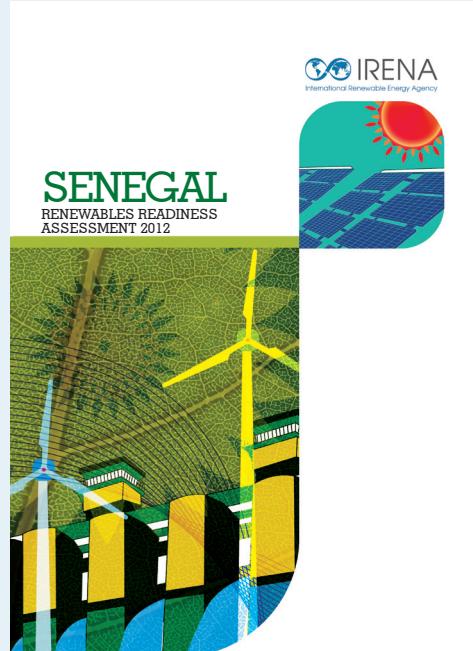
RENEWABLE ENERGY ROADMAP TO 2030

IRENA continues to bring together policymakers and experts from across the world to map out the path for achieving ambitious global targets for renewable energy deployment. The Global Renewable Energy Roadmap – or REMAP 2030 – explores potential pathways and the actions required to achieve the aspirational target of doubling the share of renewables in the global energy mix by 2030, as defined under the UN Secretary-General’s Sustainable Energy for All (SE4ALL) initiative. As part of this initiative, IRENA organised a workshop on 14 November to discuss progress to date and to present how IRENA will be engaging Members and other stakeholders in the further development of the roadmap. The workshop, the second in the REMAP initiative, was attended by participants from 16 countries, who commented on the significance of IRENA’s proposed REMAP 2030 process. It followed the first REMAP workshop on 5 September in St. Julian’s, Malta.

RENEWABLES READINESS ASSESSMENT REPORTS

At the end of 2012, IRENA completed the first four reports in its Renewables Readiness Assessment (RRA) series, following the completion of the assessment process in Senegal, Mozambique, Kiribati and Grenada. The RRA – a country-led process carried out with assistance from IRENA – helps participating countries accelerate their renewable energy deployment by highlighting where action is needed, identifying potential partners, and encouraging focused bilateral and multilateral discussions. More broadly, an RRA is designed to contribute to national and regional renewable energy action plans as well as to promote the sharing of knowledge and good practices between countries.

Kiribati held a workshop on the RRA process on 1-3 October with IRENA, resulting in the identification of important gaps and concrete recommendations to address those gaps. Another RRA workshop following in Muscat, Oman, on 2-3 December, jointly organised by the Public Authority of Electricity and Water and IRENA, with a view to conducting an assessment and developing renewable energy plans in the local context.

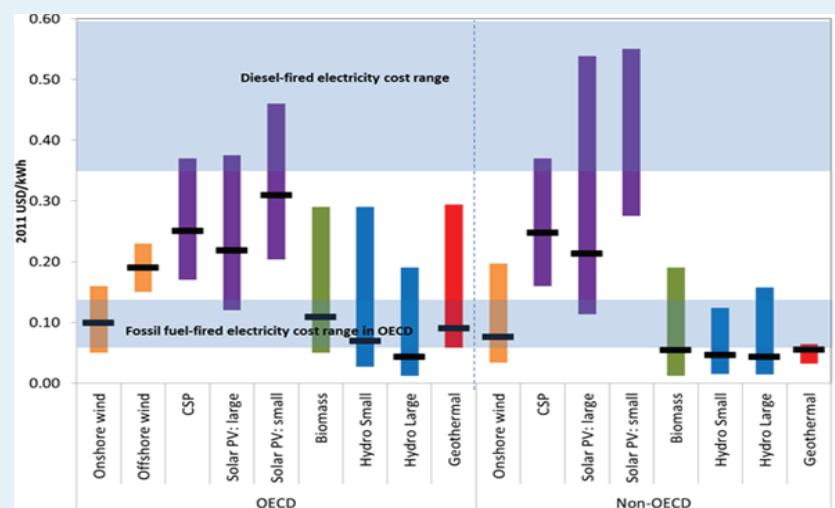


RENEWABLE POWER GENERATION COSTS IN 2012: AN OVERVIEW

Dramatic recent and projected falls in cost are making renewable energy competitive with fossil fuels in countries across the world, and the least-cost option in a growing number of markets. For example, solar energy has already become cheaper than diesel generation, with clear benefits for communities which live in areas far away from the electricity grid. The public debate around renewable energy, however, continues to suffer from an outdated perception that renewable energy is not competitive, forming a significant and unnecessary barrier to its deployment. IRENA's Renewable Power Generation Costs in 2012: An Overview, published in January 2013, is the most current, comprehensive analysis of the costs and performance of renewable power generation today, which analyses 8,000 medium- to large-scale renewable power generation projects.

Renewables account for almost half of new electricity capacity installed and costs are continuing to fall. The rapid deployment of renewables, working in combination with high learning rates, has produced a virtuous circle that is leading to significant cost declines and helping to fuel a renewable revolution. In 2011, additions included 41 GW of new wind power capacity, 30 GW of solar photovoltaic (PV), 25 GW of hydropower, 6 GW of biomass, 0.5 GW of concentrated solar power (CSP) and 0.1 GW of geothermal power.

The levelised cost of electricity (LCOE) is declining for wind, solar PV, CSP and some biomass technologies, while hydropower and geothermal electricity produced at good sites are still the cheapest way to generate electricity. Renewable technologies are now the most economic solution for new capacity in an increasing number of countries and regions. Where oil-fired generation is the predominant power generation source (e.g. on islands, off-grid and in some countries) a lower cost renewable



solution almost always exists. Renewables are also increasingly the most economic solution for new grid-connected capacity where good resources are available. As the cost of renewable power drops, the scope of economically viable applications will increase even further.

30 YEARS OF POLICIES FOR WIND ENERGY: AN OVERVIEW

IRENA's landmark 30 Years of Policies for Wind Energy: An Overview, written in collaboration with the Global Wind Energy Council (GWEC) and published in January 2013, charts 30 years of wind-friendly policies, answering questions about which set of policy and regulatory schemes worked, and also why they failed. Focusing on 12 leading markets – Brazil, China, Denmark, Germany, Greece, India, Ireland, Italy, Portugal, Spain, the UK and the US – it is the most comprehensive analysis of wind energy policy yet produced.

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